2017

PINELLAS COUNTY HAZARDOUS MATERIALS

RESPONSE TEAM AGREEMENT

PINELLAS COUNTY
EMS & FIRE ADMINISTRATION
12490 Ulmerton Road
Largo, FL 33774

Table of Contents

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM AGREEMENT

THIS INTERLOCAL AGREEMENT ("Agreement") is entered into this 12TH day of DECEMBER, 2017, by and between the City of St. Petersburg, a Florida municipal corporation ("Contractor"), and the Pinellas County Board of County Commissioners ("County") (individually, "Party", collectively, "Parties").

RECITALS

WHEREAS, in order to protect the residents of Pinellas County from exposure to the dangers of various hazardous substances it is essential to continue to develop the capability, expertise and resources to handle situations where such exposures could occur, and the Cities of Largo, Pinellas Park, St. Petersburg, and Seminole, Palm Harbor Special Fire Control and Rescue District (the "Provider Agencies") and County desire to work in conjunction to create the capability to respond throughout Pinellas County to any situation where there is a release of hazardous materials or the risk of such a release, and have, for a number of years, worked together in the operation of the Pinellas County Hazardous Materials Response Team ("PCHMRT").

NOW THEREFORE, in consideration of the mutual covenants expressed herein, and for other good and valuable consideration, receipt of which is hereby acknowledged, the Parties agree as follows:

ARTICLE I

THE AGREEMENT

SECTION 101. RECITALS AND PURPOSE. The foregoing recitals are hereby incorporated and made part of this Agreement. The purpose of this Agreement is to define the obligations and responsibilities of the Parties hereto with respect to the provision of Pinellas County Hazardous Materials (Hazmat) Response services in the County.

SECTION 102. COOPERATION. The Parties shall cooperate and use all reasonable efforts, pursuant to the terms of this Agreement, to facilitate the terms of this Agreement. Accordingly, the Parties further agree in good faith to mutually undertake resolution of disputes, if any, in an equitable and timely manner so as to limit the need for costly, time-consuming, adversarial proceedings to resolve such disputes.

SECTION 103. CONTRACT DOCUMENTS. The following Appendices are attached to and made part of this Agreement:

Appendix A. Funding Schedule

Appendix B. PCHMRT Vehicles

Appendix C. Equipment

Appendix D. Supply Inventory

Appendix E. Provider Agencies Contacts

Appendix F. Drone Program

Appendix G. Reimbursement Form

Apppendix H. Pinellas County Hazardous Materials Response Team Standard Operating Procedures Manual

SECTION 104. SCOPE OF SERVICES. In exchange for funding from the County as outlined herein, the services to be performed by Contractor under this Agreement include the following:

(a) Make available one Hazmat support company comprised of Contractor's

personnel who are trained as hazmat team members and are on duty to respond to any upgraded hazmat incident in an appropriate hazmat vehicle.

(b) Rescue of patients during an incident for the best possible outcome in order to protect the health, safety and improving the quality of life of the community by providing hazmat services as per the SOP.

Such services shall be provided in accordance with the terms and conditions of this Agreement. In case of a conflict with this Section 104, the specific terms and conditions of this Agreement shall govern and prevail over this Section 104.

ARTICLE II

DEFINITIONS

SECTION 201. WORDS AND TERMS. Unless the context otherwise requires, capitalized terms used herein shall have the following meanings ascribed to them:

"Automatic Aid/Closest Unit Response Agreement" means the agreement by and between every political subdivision and fire control district within Pinellas County dated October 16, 1990.

"CAD" means the computer aided dispatch system.

"Continuing Hazmat Education" means (1) the minimum required continuing hazmat education required for Hazardous Material Technicians to maintain certified status within the State of Florida; and (2) education for individuals who have a specific deficiency that must be corrected to maintain or restore their status within the EMS System.

"Contractor" means the City of St. Petersburg.

"Disaster" means an occurrence of a severity and magnitude that normally results in death, injuries and/or property damage and that cannot be managed through routine procedures and resources of the EMS System.

"EMS System" means the network of organizations and individuals, including, but not limited to the EMS Authority, ambulance contractor, ALS first responder services providers, EMS Advisory Council, Medical Control Board and Medical Director, established to provide emergency medical services in Pinellas County.

"Field Personnel" means Hazardous Materials team members employed by Contractor.

"Fiscal Year" means the year commencing on October 1st of any given year and ending on September 30th of the immediately-succeeding year.

"Hazardous Material Services" mean the services needed for containment, mediation and/or rescues involving any situation where there is a release of hazardous materials or the risk of such a release.

"Hazardous Material Standard Operating Procedures" or "SOP" means the then current established procedures to be followed in carrying out a given operation or in a given situation. Such procedures shall be developed by the Parties and may be amended only upon mutual agreement of the Parties. The current version is attached hereto as Appendix H.

"Hazardous Material Technician" or "Technician" means any member of the PCHMRT having successfully completed 160 hour technician class and passed the state certification exam.

"Party" or "Parties" means either the County or the Contractor or both, as the context of the usage of such term may require.

"Pinellas County Hazardous Materials Response Team" or "PCHMRT" means those Field Personnel of the Provider Agencies that have the capability and expertise to respond throughout Pinellas County to any situation where there is a release of hazardous materials or the risk of such a release.

"Provider Agencies" means Cities of Largo, Pinellas Park, St. Petersburg, and Seminole, and Palm Harbor Special Fire Control and Rescue District.

"Regional 9-1-1 Center" means the communications center and related telephone, radio and data systems operated and maintained by Pinellas County as the countywide public safety answering point for the purpose of receiving 9-1-1 calls from citizens; providing emergency medical dispatch following the priority dispatch protocols; providing for the dispatch of all basic life support (BLS) and advanced life support (ALS) first responder vehicles to EMS System incidents; and providing for ongoing communications via radio and wireless data systems.

"Run Cards" means the Regional 9-1-1 Center's computer aided dispatch software database that, based upon the location of the hazmat incident and a predetermined listing of Hazardous Material Service vehicles which the Provider Agencies have

determined to be the closest by travel time or most appropriate in ranked order as per section 404.

"Safe Useful Life" means the period during which a vehicle is expected to be useable for the purpose for which it was acquired. With respect to tractor trailer combination, fifteen (15) years frontline, five (5) years reserve; with respect to medium/heavy duty chassis and all other vehicles, ten (10) years frontline, five (5) years reserve.

"State" means the State of Florida.

"State of Emergency" means a Disaster or other incident which has been declared by proclamation of the State, County or a municipality in the County, to be of such severity as to warrant institution of special legal conditions authorized by Chapter 252, Florida Statutes.

SECTION 202. TERMS GENERALLY. Whenever the context may require, any pronoun shall include corresponding masculine, feminine and neuter forms. The words "include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation", except as the context may otherwise require. The words "agree", "agreement", "approval" and "consent" shall be deemed to be followed by the phrase "which shall not be unreasonably withheld or unduly delayed", except as the context may otherwise require.

ARTICLE III intentionally omitted

ARTICLE IV

DUTIES AND RESPONSIBILITIES OF CONTRACTOR

SECTION 401. TRAINING AND CONTINUING EDUCATION.
Contractor shall ensure its personnel assigned to the PCHMRT attend 24 out of 48 available hours of Continuing Hazmat Education training as follows:

(a) New members assigned to the PCHMRT that have started but not completed the Technician level training will be classified as operations level and will attend the remaining Technician level and bi-monthly trainings necessary to achieve Technician level.

(b) Technician level training will consist of a Florida State Fire College approved hazmat technician training class. These classes will be held on an as needed basis.

(c) Continuing Education will consist of attending at minimum, 24 hours of the regularly scheduled 48 hours of bi-monthly training.

Training will consist of classroom based training and/or distance learning methods as determined by the Parties.

SECTION 402. PERSONNEL.

(a) Response with trained personnel. Contractor shall ensure that the minimum staffing levels of trained Technicians are on duty to respond to any hazmat incident in an appropriate hazardous material vehicle. Minimum staffing levels are as follows: Largo to provide two (2) personnel, Pinellas Park to provide two (2) personnel, St. Petersburg to provide four (4) personnel, Seminole to provide two (2) personnel and Palm Harbor Special Fire Control and Rescue District to provide two (2) personnel. In the event of a long-term hazmat incident, Contractor may call back its off-duty personnel to assist.

(b) Rights and Duties of Contractor Personnel. Personnel assigned by a Contractor to the PCHMRT, who are performing their duties pursuant to this Agreement outside of their jurisdiction, shall have the same powers, duties, rights, privileges and immunities as if they were performing their duties in the jurisdiction in which they are normally employed, provided however, such powers are limited to, and are to be exercised by such personnel only while, performing duties pursuant to this Agreement.

(c) Training and Qualifications. All Field Personnel employed by the Contractor in the performance of work under this Agreement shall be trained and qualified at a level consistent with the standard established by the PCHMRT SOP for hazmat Incidents and shall hold appropriate credentials in their respective hazmat profession. Field Personnel whose education and training are not current shall not be permitted to participate in hazardous material responses as a Technician.

(d) Drone Program. Drone program shall be operated by Contractor's Field Personnel trained for operating drones as per Appendix F. Contractor shall specify those

Field Personnel to receive the required specialized training as per Appendix F. Contractor shall only use County owned drones for this Agreement.

(e) Hazmat Command Staff. Contractor shall designate a staff level position as a hazmat command staff member who will be responsible for:

1. Responding to hazmat incidents and overseeing response, mitigation and containment in accordance with hazmat SOP's and in coordination with incident command.
2. Monitoring Contractor's Field Personnel to ensure compliance with hazmat SOP's.
3. Monitoring Contractor's Field Personnel to ensure they maintain an appropriate level of hazmat competence based on the required training, that training requirements are met and that members provide services in a manner that is professional and courteous.
4. Attending and actively participating in hazmat related meetings.
5. Participating in budget development of the PCHMRT, including identifying areas for improvement or gaps in team capability.
6. Coordinating with County administrative staff to manage contract compliance of the PCHMRT.
7. Participating with the County on hazard vulnerability and risk assessments regarding emergency support function (ESF) 9 issues.

SECTION 403. STATE OF EMERGENCY ASSISTANCE, HAZARDOUS MATERIAL EMERGENCY AND MUTUAL AID.

(a) State of Emergency Assistance within Pinellas County. Immediately upon notification by the County of a State of Emergency within Pinellas County, Contractor shall commit such resources given the nature of the State of Emergency and shall assist in accordance with applicable plans and protocols mutually agreed upon by the Parties. When Contractor ceases providing assistance with the State of Emergency, Contractor shall resume normal operations as rapidly as is practical and notify the County's authorized representative that Contractor is able to resume normal operations considering exhaustion of personnel, need for restocking and other relevant considerations

(b) State of Emergency Assistance Outside of Pinellas County. Contractor shall manage any State of Emergency assistance or mutual aid response outside of Pinellas County in a manner which does not prevent Contractor from rendering services in accordance with this Agreement.

SECTION 404. AUTOMATIC AID/CLOSEST UNIT RESPONSE. Upon notification by the Regional 9-1-1 Center of a hazmat incident, Contractor shall provide Hazardous Material Services in accordance with the Automatic Aid/Closest Unit Response Agreement. The hazardous material vehicle which is predetermined to be the closest to the emergency scene, by the Run Cards, shall be dispatched without regard to district or jurisdictional boundaries. In the event that the Automatic Aid/Closest Unit Response Agreement is terminated, Contractor shall provide Hazardous Material Services in accordance with the then current Run Cards for all hazmat incidents. Contractor's authorized representative will periodically, or at the request of the County, update their Run Cards to insure their accuracy and coordinate any changes with any other affected Provider Agency.

SECTION 405. HAZMAT INVENTORY CONTROL AND SUPPLIES.

(a) Inventory Control. The Provider Agencies and County shall establish and implement inventory control procedures for the stocking and use of hazmat supplies. Contractor shall maintain inventory records that identify all hazmat vehicle supplies, and will keep supplies secured so that access is limited to only authorized personnel. The Provider Agencies shall adhere to inventory control procedures that the County may require, as long as they are reasonable and prudent.

(b) Supplies Consumed at Hazmat Incidents. The Provider Agencies are responsible for providing, as soon as practicable after an incident, to the County, the following in order for the County to seek reimbursement as per County Code of Ordinances, Chapter 58, Article III, Sec. 58-62.

1. List of supplies consumed to include quantity, description, size, color, make and model number, etc., for each hazmat incident.
2. Date.
3. Business name.

4. Address.
5. Address where incident occurred.
6. Telephone number.
7. Contact name.
8. Incident number.

SECTION 406. UTILIZATION OF REGIONAL 9-1-1 CENTER.
Regional 9-1-1 Center. The Provider Agencies shall utilize the Regional 9-1-1 Center for the dispatch of all Hazardous Material Services vehicles to hazmat incidents. The Provider Agencies shall utilize the Regional 9-1-1 Center's radio and data systems to include, but not limited to, computer aided dispatch (CAD) software, mobile communications terminal software, and the County's public safety and intergovernmental voice and data radio system.

The Provider Agencies shall provide and maintain all fire station alerting systems, base stations, pagers, fire station computers and peripherals, all mobile and portable radios except as provided in Section 503, and mobile communication terminals and radio modems to communicate with the Regional 9-1-1 Center's radio and data system following the County's technical specifications.

County shall provide and maintain, at no cost to the Provider Agencies, all necessary broadband networking from fire stations to the Regional 9-1-1 Center's data system, and access to the County's 800MHz High Performance Data (HPD) system following the County's technical specifications.

County shall provide a mutually agreed upon appropriate planning phase, cost analysis, changes in the County's technical specifications, and implementation plan for any future upgrades or system changes.

SECTION 407. CERTIFICATION. Contractor shall maintain records of their personnel's certifications. County shall be responsible for payment of any fees associated with hazmat certification and/or recertification using funds provided under this Agreement.

SECTION 408. ACCURATE INFORMATION. Any news releases, statements, or public information given by the Contractor or County personnel to the public or the media that pertain to the PCHMRT shall accurately portray the response team as the Pinellas County Hazardous Materials Response Team.

ARTICLE V

DUTIES AND RESPONSIBILITIES OF COUNTY

SECTION 501. VEHICLES AND EQUIPMENT.

(a) Obligation to Provide Vehicles. At all times during the term of this Agreement, County shall provide and fund the hazmat vehicles, and their replacement, described on Appendix B. Vehicle specification and selection will be made by County and Contractor and shall be "mission capable" depending on the type of incident.

(b) Maintenance of Vehicles and Fuel. County shall be responsible for the maintenance and repair of County owned hazardous material vehicles and for furnishing maintenance, equipment, supplies, repairs, spare parts, replacement vehicles and fuel. County shall maintain records of maintenance and fuel in order to document that hazardous material vehicles are maintained and used in accordance with this Agreement. The Contractor will use its best efforts to keep County vehicles secure in a covered facility.

(c) Equipment. With the exception of equipment owned and maintained by Contractor, County shall furnish and maintain all hazmat equipment required to be provided by the County pursuant to Appendix C. Capital equipment purchases are subject to separately budgeted and approved County funding. County shall also be responsible for the cost of replacing utilized hazmat supplies.

(d) Communications Equipment.

1. County will ensure all frontline hazmat vehicles are equipped with GPS enabled mobile data terminals (MDT) running mobile computer aided dispatch software, upon approved funding. The MDT's shall be installed in the hazardous material vehicles by the County and remain County property. County shall be responsible for replacing such equipment at the end of its reasonable useful life, as determined by the County.

2. County has provided, or shall provide and maintain, as applicable, radios assigned to hazmat vehicles as per Appendix C. The radio equipment shall be installed in the hazardous material vehicles by the County and remain County property. County shall be responsible for replacing such equipment at the end of its reasonable useful life, as determined by the County.

3. County shall be responsible for such equipment, as provided for in this Section 501 (e) hereof. Contractor shall be responsible for the replacement of hazmat communication equipment that is lost, stolen or damaged due to Contractor's negligence. County shall be responsible for all routine maintenance of such equipment. The County shall be responsible for the replacement of any hazmat communication equipment that is lost, stolen or damaged due to a cause other than Contractor's negligence.

SECTION 502. HAZMAT SUPPLIES. The County shall provide and replace, as necessary, without cost to Contractor, the hazmat supplies used by Contractor on hazmat incidents under this Agreement. The County shall coordinate delivery or pick-up of all supplies as needed or as convenient. The County shall not be responsible for costs of replacing supply items lost, stolen, damaged or unaccounted for due to Contractor's negligence but the County shall be responsible for the costs of replacing supply items lost, stolen damaged or unaccounted for due to a cause other than Contractor's negligence. The County will work cooperatively with the Provider Agencies to develop inventory controls and an expiration tracking mechanisms.

SECTION 503. HAZMAT EQUIPMENT AND MAINTENANCE. The County shall provide all equipment listed in Appendix C including adequate spare equipment but excluding equipment normally utilized for firefighting operations. Contractor agrees to continue using the current equipment over its useful life. Said equipment will be maintained by the County and repaired or replaced at the end of its reasonable useful life as determined by the County. The Contractor shall be responsible for costs of replacing equipment items lost, stolen, damaged or unaccounted for due to Contractor's negligence but the County shall be responsible for the costs of replacing inventory items lost, stolen damaged or unaccounted for due to a cause other than Contractor's negligence.

SECTION 504. HAZARDOUS WASTE COLLECTION. All hazardous waste or materials from all hazmat incidents remain the responsibility of the incident owner or the agency having jurisdiction. The County is in no way liable for any hazardous waste that the Contractors collect during a hazmat incident. Contractors shall follow applicable procedures for the collection of hazardous waste

SECTION 505. HAZMAT REPORTING SYSTEM EQUIPMENT. County shall provide, as applicable, one (1) notebook computer or tablet for each hazardous material vehicle on Appendix C. The equipment shall be utilized by the Contractor for the purpose of hazardous materials investigation and completing electronic hazmat reports. Only County authorized software and peripherals may be utilized to ensure a highly reliable and coordinated system. County provided hazmat reporting system equipment shall remain property of the County. Contractor shall be responsible for the replacement of all field equipment for the hazmat reporting system (e.g., notebook computer or tablet) that is lost, stolen or damaged due to Contractor's negligence. The County shall be responsible for the replacement of field equipment for the hazmat reporting system that is lost, stolen or damaged due to a cause other than Contractor's negligence. County shall be responsible for maintaining such equipment and replacing it at the end of its reasonable useful life, as determined by the County. The County may provide equipment and software for Contractor funded hazmat vehicles, if not, the Contractor will be responsible for such equipment for Contractor Funded Vehicles at its discretion.

SECTION 506. SPECIAL OPERATIONS COORDINATOR. County will provide a special operations coordinator to the PCHMRT. The coordinator shall be a command staff member and act as the liaison between the Parties. Duties of the coordinator will include, but are not limited to, supply and equipment procurement and/or repairs, budget preparation, inventory maintenance and controls, training coordination, invoice processing, keeping of meeting agendas and minutes, contract management, fleet management, liaison to state for specialty teams, grant management, asset management and representation on various regional committees.

ARTICLE VI

INSURANCE AND INDEMNIFICATION

SECTION 601. MINIMUM INSURANCE REQUIREMENTS. Contractor shall be self-insured or shall pay for and maintain at least the following insurance coverage and limits listed below. Insurance coverage and limits shall be evidenced by delivery to the County of: a certificate of insurance executed by the insurer(s) listing coverage and limits, expiration dates and terms of policies and all endorsements whether or not required by the County, and listing all carriers issuing said policies; and, a certified copy of each policy, including all endorsements. Where applicable, Contractor shall submit to County a letter from Contractor's Risk Manager stating that Contractor is self-insured, or the amount of insurance per claim and per occurrence, any gap and the amount of excess insurance up to its coverage. Notwithstanding anything to the contrary contained in this Agreement, Contractors do not waive any immunity from or limitation of liability it may be entitled to under the doctrine of sovereign immunity or Section 768.28 Florida Statutes. The following insurance requirements shall remain in effect throughout the term of this Agreement (unless Contractor is self-insured, in which case Contractor shall not be required to comply with the following insurance requirements):

(a) Provide Workers' compensation insurance as required by Florida Law.

(b) Provide commercial general liability, employers' liability and commercial vehicle liability insurance that reflects the limits of liability for governmental entities in accordance with Section 768.28(5), F.S., should the State Legislature change these limits, coverage consistent with the revised limits shall be obtained.

(c) Professional Liability Insurance, including errors and omissions, with minimum limits of $1,000,000 per occurrence; if occurrence form is available; or claims made form with "tail coverage" extending three (3) years beyond the ending date of this Agreement. In lieu of "tail coverage" the Contractor may submit annually to the County a current certificate of insurance proving claims made insurance remains in force throughout the same three (3) year period. This coverage is subject to statutory and regulatory requirements of Federal, State or local law.

(d) Personal and/or Bodily Injury including death and property damage liability

Insurance with minimum limits of $1,000,000 Combined Single Limit insurance in excess of all primary coverage.

SECTION 602. ADDITIONAL INSURANCE REQUIREMENTS. To the extent that Contractor maintains insurance policies rather than being self-insured, each insurance policy shall include the following conditions by endorsement to the policy:

(a) Each policy shall require that forty-five (45) days prior to expiration, cancellation, non-renewal or any material change in coverage or limits, a notice thereof shall be given to County. Contractor shall also notify County within twenty-four (24) hours after receipt of any notices of expiration, cancellation, non-renewal or material changes in coverage received by said Contractor from its insurer.

(b) Companies issuing the insurance policy, or policies, shall have no recourse against County for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Contractor.

(c) The County shall be endorsed to the required policy or policies as an additional insured, exclusive of professional liability insurance. The additional insured clause covers the actions of the Contractor while providing services under the terms of this Agreement.

(d) The policy clause "Other Insurance" shall not apply to any insurance coverage currently held by the County, to any such future coverage, or to County's Self-Insured Retention of whatever nature.

SECTION 603. LIABILITY. Contractor and County agree to be fully responsible for their own acts of negligence or their respective agents' acts of negligence when acting within the scope of their employment, and agree to be liable for any damages resulting from said negligence. Nothing herein is intended to serve as a waiver of sovereign immunity or the limits of liability contained in Section 768.28, Florida Statutes, by the Contractor or County. Nothing herein shall be construed as consent by Contractors or County to be sued by third parties in any manner arising out of this Agreement. Contractor is not liable for any causes of action arising out of the negligence of the County, its employees or agents, or arising out of the negligence of any persons or entities

contracted by, appointed by, or approved by the County to provide services related to this Agreement (including but not limited to Provider Agencies, the Ambulance Contractor, Medical Control Board and Medical Director). This Section 603 shall survive expiration or earlier termination of this Agreement.

ARTICLE VII
COMPENSATION AND OTHER FINANCIAL PROVISIONS

SECTION 701. COMPENSATION.

(a) Training funds. County will reimburse the Contractor in accordance with Appendix A to pay the reimbursement of overtime and backfill cost for PCHMRT members successfully completing training as identified in Section 401. At the time of renewal, compensation will be reviewed for increase or decrease based on actual reimbursement costs and pending available budgeted funds. These funds will also be used for reimbursement of overtime and backfill costs for command staff personnel, that normally work a shift schedule, for the time spent on PCHMRT duties performed outside of their normally scheduled shift. It is the Contractor's responsibility to submit reimbursement forms, per Appendix G, within twenty (20) calendar days from the last date of training. Funds budgeted in any Fiscal Year will not be carried over to succeeding Fiscal Years

(b) Medical examination funds. County will reimburse the Contractor up to $15,200 in any Fiscal Year for Hazmat medical examination costs. Reimbursement will be calculated at no more than $400 per person for up to 38 PCHMRT members. It is the Contractor's responsibility to submit reimbursement documentation within twenty (20) calendar days from the date Contractor paid the invoice to their medical provider for medical examinations. Funds budgeted in the current fiscal year will not be carried over to succeeding fiscal years.

(c) UAS funds. County will provide reimbursement of overtime and backfill costs up to, but not to exceed $6,000, in any Fiscal Year for UAS participating Contractor's team members successfully completing training as per Appendix F. Contractor shall submit invoices to the Authority utilizing Appendix G within twenty (20) days following the last day of each month. Contractor shall be reimbursed monthly in arrears. County will decide the amount of participating Provider Agencies that are needed. Selection of each UAS participating Provider Agency shall be agreed upon by all Parties. Drone program is based on available budgeted funds.

(d) Capital for Hazmat Vehicle Replacement. County will provide funding for County funded hazmat vehicles. Vehicles will be replaced utilizing Fleet Management's Vehicle Replacement Plan.

(d) Reimbursement of Incident Materials. The County will seek recovery of funds for Hazmat response from those individuals or entities responsible for hazardous material incidents according to County Code Section 58-62.

(e) Travel Funds. Upon approval of the Director of EMS & Fire Administration, the County will provide up to $10,000 each Fiscal Year, to pay the reimbursement of travel expenses for PCHMRT members from Provider Agencies attending training or professional conferences. Such funds for travel expenses will be limited to lodging, transportation, registration fees and taxi or bus fares in accordance with the County's then current travel policy and Florida Statutes Section 112.061. Payment of such costs shall paid by County when training is arranged by such. If training is arranged by Contractor, payment of such costs shall be in arrears and supported by invoices and receipts. Per diem/subsistence will not be paid by the County.

1. Travel must be accomplished by the most economical means available.

2. Travel requests must be submitted thirty (30) days in advance. Upon approval by the Director of EMS & Fire Administration at his or her sole discretion, the County shall pay the travel expenses (subject to the then current County policies) incurred by the Contractor for training and education of team members. Payment of such costs will be made upon presentation of supporting invoices/receipts. Travel expenses incurred will be reimbursed in accordance with Section 112.061, Florida Statutes.

SECTION 702. RESERVED

SECTION 703. ADDITIONAL VEHICLES

Contractor-Funded. Contractor and County understand that PCHMRT is a unified, integrated system requiring the cooperation of all providers in the Hazardous Material System. To insure coordinated implementation of any improvements to the Hazardous Material System and to insure the integrity of the Hazardous Material System, if Contractor desires to operate additional hazardous material vehicle(s) as a contractor funded vehicle, Contractor will obtain approval from the County in writing prior to operating the contractor funded vehicle. Contractor may elect to cease operation of a contractor funded vehicle at its sole discretion. Contractor is responsible for all costs

associated with staffing, equipping and operating such contractor funded vehicles. The County shall provide supplies for authorized Contractor funded vehicles.

SECTION 704. AUDITS AND INSPECTIONS. At any time during normal business hours, and as often as may reasonably be deemed necessary, representatives of the County may observe Contractor's operations or vice versa. Parties shall make available to the other Parties for their examination, its records with respect to all matters covered by this Agreement, and Parties may, at their own cost and expense, audit, examine, copy, and make excerpts or transcripts from such records, and may, at their own cost and expense, make audits of all contract, invoices, materials, payrolls, inventory records, records of personnel, daily logs, conditions of employment, and other data related to all matters covered by this Agreement to the extent permitted by law.

Each Party's right to observe and inspect operations or records in other Party's business office shall, however, be restricted to normal business hours, and reasonable notification shall be given the Party in advance of any such visit.

Records relating to contract activities shall be retained for a period of three (3) years from final payment in each year.

All representatives of all Parties who observe operations or audit or examine the other Parties records shall conduct themselves in a polite manner; complete any training required by law; and not interfere with Parties employees' duties. Audits and inspections shall be done to the extent permitted by law.

SECTION 705. FISCAL NON-FUNDING. Notwithstanding any other provision of this Agreement to the contrary, in the event sufficient budgeted funds are not available for a new Fiscal Year, the County shall notify Provider Agencies in writing within five (5) days of the determination of such occurrence and this Agreement shall terminate on the last day of the current Fiscal Year without penalty or expense to the County.

SECTION 706. NOT TO EXCEED CAP. Any and all compensation, payment, or reimbursement of any kind to the Provider Agencies provided for in this Article VII or elsewhere in this Agreement in any Fiscal Year shall not exceed the specific amount of

the approved budget adopted through the County's governing body's budgetary process for services or reimbursement to the Provider Agencies provided under this Agreement for such Fiscal Year. It is recognized by the Parties that no payment may be compelled or made without a budget amendment approved by the County for any compensation that exceeds the total compensation authorized through the County approved budget. The Parties recognize that in the event of a Disaster, it may be necessary for the County's governing body to utilize the emergency powers of Chapter 252, Florida Statutes, to authorize a budget amendment modifying such approved budget to provide funds for compensation or reimbursements necessitated by such emergency expenditures. It is further agreed and understood among the Provider Agencies that the County may not compel the Provider Agencies to incur expenses beyond the County's approved budget amount until such time as a budget amendment raising such budget is approved.

ARTICLE VIII

TERM AND TERMINATION

SECTION 801. TERM. The initial term of this Agreement shall be for five (5) years, commencing upon October 1, 2017 and ending at midnight September 30th, 2022, unless this Agreement is earlier terminated as provided for in this Agreement. This Agreement may be renewed for an additional five (5) year period following the initial term, provided that the Parties mutually agree in writing to such renewal which is subject to County and Contractor approval by July 1, 2022. References in this Agreement to "Term" shall include the initial term of this Agreement and all renewals thereof. The effective date of this Agreement shall be retroactive to October 1, 2017 for reimbursement purposes.

SECTION 802. TERMINATION.

(a) By County for Cause. This Agreement may be terminated by the County for cause upon twenty (20) days written notice to the Contractor in breach. For purposes of this section 802(a), "cause" shall mean a material breach by Contractor of any term, covenant or warranty contained in this Agreement; provided, however, that in the case of a breach of any term, covenant or warranty, the County shall provide written notice of such breach and the Contractor shall have the opportunity to cure such breach within

twenty (20) days of receipt of such notice or within such additional period of time mutually agreed upon by the Parties.

(b) By Contractor for Cause. This Agreement may be terminated by Contractor for cause upon twenty (20) days written notice to the County. For purposes of this section 802(b), "cause" shall mean a material breach by the County of any term, covenant or warranty contained in this Agreement; provided, however, that in the case of a breach of any term, covenant or warranty, Contractor shall provide written notice of such breach and the County shall have the opportunity to cure such breach within twenty (20) days of receipt of such notice, or, within such additional period of time mutually agreed upon by the Parties.

(c) By County or Contractor without Cause. This Agreement may be terminated without cause by the Contractor or the County upon six (6) months written notice to the other Parties.

SECTION 803. DISPOSITION OF ASSETS.

(a) Assets Paid For By County. Upon termination of this Agreement, Contractor shall return to County, for the use and benefit of the taxpayers, all assets purchased with funds provided to Contractor under this Agreement for the services provided under this Agreement with the County. County will assume any obligation on such assets which was incurred in accordance with the terms of this Agreement.

(b) Assets Paid For By Contractor. Any assets which were purchased solely with funds other than those provided by County to a Contractor under this or any preceding Agreement shall remain the property of the Contractor.

(c) Assets Paid For By Both Contractor and County. In case of any asset purchased with funds of both the Contractor and the County, Contractor and County shall determine the fair market value of such asset and then shall pro-rate such fair market value according to the respective interest of the Contractor and the County. In the event Contractor desires to retain said asset, Contractor shall pay to County an amount equal to County's interest in said asset. In the event that County desires to retain said asset, County shall pay to Contractor an amount equal to Contractor's interest in said asset. If neither the Contractor nor the County desires to retain said asset, then the asset will be sold at public sale to the highest bidder and the net proceeds distributed according to the respective interest of each of the Contractor and the County.

(d) Date to Return Assets. The return of any assets and/or funds in lieu of assets as described in this §803 above, shall be executed and completed upon the effective date of termination as specified in the termination notice.

SECTION 804. RESOLUTION OF DISPUTES. To the extent that Contractor and County cannot, after good faith attempts, resolve any controversy or dispute that may have arisen under this Agreement or §701, Contractor and County shall appoint an ad-hoc committee consisting of one representative from the County, one representative from the Contractor, and one mutually agreed upon representative from the Pinellas County Fire Chiefs Association, to facilitate a timely and effective resolution. The ad-hoc committee shall meet as often as necessary under the circumstances in an attempt to resolve the controversy or dispute. The committee shall review each Party's submittal of its interpretation of the Agreement and may

request additional information as necessary. The committee shall complete its review within sixty (60) days of the date that the committee is notified of the controversy or dispute (unless the Parties mutually agree to extend this period of time) and submit any recommendation to the Pinellas County Administrator and Contractor. All recommendations and other actions of the committee shall be non-binding. After the committee has submitted its recommendation to the Pinellas County Administrator and Contractor, either Party may thereafter refer the matter to non-binding mediation in the State of Florida. If the Parties do not agree upon a representative for the committee, if either Party chooses not to engage in mediation or if the Parties engage in mediation but mediation fails to resolve the dispute, either Party may pursue its legal remedies, including, but not limited to, filing a complaint (including but not limited to a complaint for injunctive relief) in the appropriate court possessing competent jurisdiction.

ARTICLE IX

MISCELLANEOUS

SECTION 901. NON-DISCRIMINATION IN EMPLOYMENT. The Parties will not discriminate against any applicant for employment because of age, race, color, religion, gender, sexual orientation, marital status, disability, genetic information, national origin, or any other protected category. The Parties agree that applicants will be employed, and that employees are treated during employment, (e.g. layoff or termination, promotion, demotion, transfer, rates of pay and compensation, and selection for training, including apprenticeship), without regard to age, race, color, religion, gender, sexual orientation, marital status, disability, genetic information, national origin, or any other protected category.

SECTION 902. NOTICES. All notices, consents and agreements required or permitted by this Agreement shall be in writing, and, as applicable, shall be transmitted by registered or certified mail, return receipt requested, with notice deemed to be given upon receipt; postage prepaid, and shall be addressed as follows:

If to County: Director, Pinellas County EMS & Fire Administration
12490 Ulmerton Road – Suite 134
Largo, Florida 33774

If to Contractor: See Appendix E

SECTION 903. ENTIRE AND COMPLETE AGREEMENT. This Agreement, as amended, and all Appendices hereto, constitute the entire and complete agreement of the Parties with respect to the services to be provided hereunder. This Agreement, unless provided herein to the contrary, may be modified only by written agreement duly executed by the Parties with the same formality as this Agreement.

SECTION 904. OTHER DOCUMENTS. Each Party agrees to execute and deliver any instruments and to perform any acts that may be necessary or reasonably requested in order to give full effect to this Agreement.

SECTION 905. APPLICABLE LAW. Florida Law shall govern the validity, interpretation, construction and performance of this Agreement.

SECTION 906. WAIVER. Unless otherwise specifically provided by the terms of this Agreement, no delay or failure to exercise a right resulting from any breach of this Agreement shall impair such right or shall be construed to be a waiver thereof, but such may be exercised from time to time and as often as may be deemed necessary. Any waiver shall be in writing and signed by the Party granting such waiver. If any representation, warranty or covenant contained in this Agreement is breached by either Party and thereafter waived by the other Party, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach under this Agreement.

SECTION 907. SEVERABILITY. In the event that any provision of this Agreement shall, for any reason, be determined to be invalid, illegal, or unenforceable in any respect, the Parties hereto shall negotiate in good faith and agree to such amendments, modifications, or supplements of or to this Agreement or such other appropriate actions

as shall, to the maximum extent practicable in light of such determination, implement and give effect to the intentions of the Parties as reflected herein.

SECTION 908. CONTRACTOR IS INDEPENDENT CONTRACTOR. The Parties agree that throughout the term of this Agreement, and during the performance of any obligations hereunder, Contractor is an independent contractor in all respects and shall not be the agent, servant, officer, or employee of Pinellas County.

SECTION 909. NO THIRD-PARTY BENEFICIARIES, ASSIGNMENT. This Agreement is not intended, nor shall it be construed, to inure to the benefit of any third person or entity not a party hereto, and no right, duty or obligation of the Contractor under this Agreement, shall be assigned to any person, private association or corporation, not-for-profit corporation, or public body without the prior written consent of the County.

SECTION 910. HEADINGS. Captions and headings in this Agreement are for ease of reference and do not constitute a part of this Agreement.

SECTION 911. COUNTERPARTS. This Agreement may be executed in more than one counterpart, each of which shall be deemed an original.

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IN WITNESS WHEREOF the parties hereto, by and through their undersigned authorized officers have caused this Agreement to be executed on this 12th day of December, 2017.

ATTEST:
KENNETH BURKE, CLERK

by: _____
Deputy Clerk

PINELLAS COUNTY
By and through its Board of County Commissioners

by: _____
Chairman

APPROVED AS TO FORM
OFFICE OF COUNTY ATTORNEY
By _____
Attorney

IN WITNESS WHEREOF the parties hereto, by and through their undersigned authorized officers have caused this Agreement to be executed on this _____day of _____, 2017.

Countersigned:

CITY OF ST. PETERSBURG, FLORIDA

by: _____

Print: Gary G. Cornell

Title: City Administrator

APPROVED AS TO CONTENT AND FORM
FOR CITY OF ST. PETERSBURG ONLY:

by: _____
City Attorney (designee)

Attest:

by: Cathy E. Davis (Acting)
City Clerk

APPENDIX A – FUNDING SCHEDULE

Fiscal Year	Provider Agencies	Training Reimbursement Section 701(a)
17/18	**Largo** **Pinellas Park** **Seminole** **Palm Harbor** **St. Petersburg**	**$56,400** **$56,400** **$56,400** **$56,400** **$56,400**
18/19	**Largo** **Pinellas Park** **Seminole** **Palm Harbor** **St. Petersburg**	**$60,600** **$60,600** **$60,600** **$60,600** **$112,800**
19/20 and subsequent years	**Largo** **Pinellas Park** **Seminole** **Palm Harbor** **St. Petersburg**	**$64,800** **$64,800** **$64,800** **$64,800** **$112,800**

APPENDIX B – HAZMAT VEHICLES

ASSET	DESCRIPTION	VEHICLE ID	REPLACEMENT DISPOSITION	YEAR
112343	2016 Sprinter Com Van	H38	Replace in kind	*
111640	2007 Ford F550	U38	Replace in kind or surplus at end of useful life.	*
TBD TBD	2017 International and 2017 Mickey Trailer	H33	Replace in kind	*
112863 95765	2010 Freightliner and 1985 Hackney Trailer	H66	Replace in kind	*
112872 112859	2010 Freightliner and 2009 Mickey Trailer	H30	Replace in kind	*

- **No vehicles/trailers are due for replacement during life of this Agreement.**

PPENDIX C - EQUIPMENT

5

Asset Number	Item Name	Description	Make / Manufacturer	Model / Serial Number
81356	Economy Glove Box	Glove Box w/ Bellows gloves - plexiglass	Bel-Art	H500250310
81357	Haz Kat Kit	Chemical ID Kit	Haztech Systems, Inc.	200282
81398	Radiation Pager	Radiation Pager / UASI # 97698 2003 slb	Sensor Tech	2533
81399	Radiation Pager	Radiation Pager / UASI # 97699 2003 slb	Sensor Tech	2534
81400	Radiation Pager	Radiation Pager / UASI # 97697 2003 slb	Sensor Tech	2532
108712	Radiation Pager	Radiation Pager / UASI # 97707 2003 slb	Sensor Tech	2542
108713	Radiation Pager	Radiation Pager / UASI # 97709 2003 slb	Sensor Tech	2544
108733	Weather Pak 400	Weather Station /RDSTF (sister to 108753)	Coastal Envir	9409
108747	Rit Pak 2	Rapid Intervention Pak / RDSTF	Scott	50900069Q
108753	Weather Pak 400	Weather Station /RDSTF (sister to 108733)	Coastal Envir	9421
109189	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020461DA
109191	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0509020405DA
109192	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020504DA
109197	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020484DA
109708	SIRIUS	MSA SIRIUS Handheld MultiGas Detector	MSA	A3-2789
109885	Toughbook - MDT	Panasonic Toughbook Laptop MDT	Panasonic	8HKSB90248
112116	TruDefender Fti	TruDefender FTI	Thermo	FW1863
112117	FirstDefender RM	First Defender RM	Thermo	RM3998
112120	Hot Water Heater	Part of the Decon system		
117527	Squeeze tool	Huskie pipe crimper	Huskie	09Z014
120443	Radio	XTS-2500	Motorola	205CNZ2458
120461	Radio	XTS-2500	Motorola	205CNZ2454
120462	Radio	XTS-2500	Motorola	205CNZ2455
120463	Radio	XTS-2500	Motorola	205CNZ2456
120464	Radio	XTS-2500	Motorola	205CNZ2457
E109114	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154506
E109115	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154688
E109116	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP153688
E109142	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154718
E109129	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP155291
E109140	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154679
E109151	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154770
E109152	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154006
E109156	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP153775
No #	Cooling Fan	Cooling Fan - UASI # PC 99197	Schaefer Ventilation	CS-110L
No #	APD 2000	WMD Dectector 2002 TE-CX-0001 purchased by St Pete w/05DS-2N-13-00-16-317 05 UASI SLB THIS IS A ST PETE ASSET	Environmental Technologies	1441
No #	TVA-1000B	Thermo Vapor Analyzer	Thermo Electron Corp	611516351
No #	Go Pro 3 Black	Go Pro 3 Black	Go Pro	

130

Asset Number	Item Name	Description	Make / Manufacturer	Model / Serial Number
54558	RR Car Puller	Railroad Car puller	Alden	M16492
54900	B - Kit	Chlorine B-Kit - 1 ton cylinder	Indian Springs	B-7134
81358	HazCat Kit	Chemical ID Kit	Haztech Systems, Inc.	200280
97789	Mop up kit	Wildland fire 6 person mop up kit		
108719	Radiation Pager	Radiation Pager / UASI # 97706 2003 slb	Sensor Tech	2541
108720	Radiation Pager	Radiation Pager / UASI # 97690 2003 slb	Sensor Tech	2525
108722	Radiation Pager	Radiation Pager / UASI # 97708 2003 slb	Sensor Tech	2543
108723	Radiation Pager	Radiation Pager / UASI # 97692 2003 slb	Sensor Tech	2527
108729	TVA1000B	Toxic Vapor Analyzer / TVA 1000B / DOJ 1999-2001 slb	ThermoElectron Corp.	523812972
108734	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020445DA
108736	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020485DA
108745	Rit Pak 2	Rapid Intervention Pak / RDSTF	Scott	50900067Q
108752	HEPA VAC 15	15 Gallon HM Vaccum / RDSTF	Air Systems	AV 15
108754	HAZMATCAD	Hazardous Materials Checmical Agent Detector / RDSTF	MSA	80528014
109159	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0509020375DA
109175	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020486DA
109177	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0509020370DA
109179	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020527DA
109181	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0509020404DA
109182	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020487DA
109185	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020482DA
109186	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED05100020478DA
109188	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0509020393DA
109193	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020407DA
109194	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020477DA
109195	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020490DA
109199	T.I.C.	Thermal Imaging Camera / RDSTF	Scott	EIC00218
109201	Survey Meter	RAD Survey Meter / RDSTF	Ludlum	2241-3 / 225820
109711	SIRIUS	MSA SIRIUS Handheld MultiGas Detector	MSA	A3-2779
109852	Convert a com	Converta a com	Motorola	F073124471
109858	SIRIUS	Multigas Detector UASI # 106891 2004 slb	MSA	A3-5839
109880	Modem	Modem	Motorola	
109905	MDT	Panasonic Toughbook Laptop MDT	Panasonic	9DKYA64522
112124	Vetter	Vetter leak seal kit	Vetter	
112859	Mickey Trailer	2009 16 bay Mickey beverage trailer refurbished with all new doors	Mickey	5CWRA31191H0093889
112872	Freightliner Tractor	2010 Freightliner M2/Crew-cab Truck/Tractor	Freightliner	1FUBCYBS0ASAN8869
117526	Squeeze Tool	Huskie PS 62B Squeeze tool	Huskie	09z034
117529	Portable A/C	Kwikcool Portable A/C unit	Kwikcool	6010
117543	Mask fit tester	Mask fit tester	OHD	86101693H
120445	Radio, Portable	Motorola radio	Motorola	721CJX5015
120446	Radio, Portable	Motorola radio	Motorola	721CJX5016
120447	Radio, Portable	Motorola radio	Motorola	721CJX5017
120448	Radio, Portable	Motorola radio	Motorola	721CJX5269
120449	Radio, Portable	Motorola radio	Motorola	721CJX5271
120450	Radio, Portable	Motorola radio	Motorola	721CJX5275
120451	Radio, Mobile	Motorola radio	Motorola	527CNZ1320
121196	Mini Vetter	Vetter leak seal kit	Vetter	6141189

30 cont'd.

E109113	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154730
E109119	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154702
E109121	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154505
E109122	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154694
E109128	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154717
E109130	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155058
E109131	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155056
E109132	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155205
E109134	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP153694
E109135	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP153779
E109141	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP153750
E109145	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155225
E109148	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154633
E109149	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155331
E109155	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP153944
E109158	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155077
E109160	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155261
E109161	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155214
E109164	Scott Air Bottle	4504 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154680
E109167	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP153767
E109166	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP153749
E109168	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154682
E109169	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154486
E109171	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155224
E109172	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155270
E109173	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP154684
E109174	Scott Air Bottle	4500 p.s.l. Scott Air Bottle / RDSTF	Scott	OP155287
No #	Cooling Fan	Cooling Fan - UASI	Schaefer Ventilation	CS-110L
No #	DMC 2000 S	DOCIMETER / RDSTF	MGP Instrument	674907
No #	Go Pro 3 Black	Go Pro 3 Black	Go Pro	

133

Asset Number	Item Name	Description	Make / Manufacturer	Model / Serial Number
54901	C - Kit	Chlorine C-Kit - Tank Cars	Indian Springs	C-2671
81250	Radio	Motorola MCS2000 - vehicle	Motorola	722AZC0518
81300	Portable Radio	XTS3000 w / vehicle charger	Motorola	326ABG1256
81354	Economy Glove Box	Glove Box w / Bellows gloves - Plexiglas	Bel-Art	H500250310
81359	Haz Kat Kit	Chemical ID Kit	Haztech Systems, Inc.	200281
87052	Volvo Tractor	H 33 - Volvo tractor - 1997 4VLZBKFD7VR476640	Volvo VE D7-260	155477
87053	HM Utility Trailer	H 33 - Utility Trailer - 1997 1M9RC171XVH043379	Mickey	1864-97
87064	Generator	1997 - 7kw generator assigned to 87053 - Utility trailer	Power Tech	CG72458
95766	Car Mate Trailer	White Trailer - CM818C-CT	Carmate	5A3C818D12L001119
108715	Radiation Pager	Radiation Pager / UASI # 97696 2003 slb	Sensor Tech	2531
108739	Sems Base Unit	SCBA Reciever / RDSTF	Scott	B12050459
108744	Rit Pak 2	Rapid Intervention Pak / RDSTF	Scott	50900078Q
108750	Drager CDS	HM Simultest / Q1000	Drager	ARWB-0050
108756	Pump	Air Actuated Pump	SanDpiper	PolyPro 939679
109176	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0509020402DA
109178	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020526DA
109183	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0509020403DA
109190	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020406DA
109853	SafeSite PP 7	Wireless Detection System / UASI # 106892 2004 slb - PP #7	MSA	L07-2644695-004
109854	SafeSite PP 8	Wireless Detection System UASI # 106893 2004 slb - PP # 8	MSA	L07-2644695-003
109855	SafeSite PP 9	Wireless Detection System UASI # 106894 2004 slb - PP # 9	MSA	L07-2644695-002
109856	SafeSite PP 10	Wireless Detection System UASI # 106895 2004 slb - PP # 10	MSA	L07-2644695-001
109859	SIRIUS	Galaxy Kit UASI # 106887 2004 slb	MSA	B3-4384
109872	SafeSite	SafeSite Wireless Belt Bridge UASI # 107002 2004 slb	MSA	925-9115
109882	Modem	Motorola HPD 1000 data modem	Motorola	153CJT0025
109883	Toughbook - MDT	Panasonic Toughbook Laptop MDT	Panasonic	8HKSB90162
E109117	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP155089
E109123	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP155217
E109127	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154692
E109137	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154725
E109143	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP153709
E109147	Scott Air Bottle	4502 p.s.i. Scott Air Bottle / RDSTF	Scott	OP155316
E109150	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154678
E109162	Scott Air Bottle	4503 p.s.i. Scott Air Bottle / RDSTF	Scott	OP155244
E109163	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154648
E109165	Scott Air Bottle	4501 p.s.i. Scott Air Bottle / RDSTF	Scott	OP155226
No #	DMC 2000 S	DOCIMETER / RDSTF	MGP Instrument	674902
No #	DMC 2000 S	DOCIMETER / RDSTF	MGP Instrument	674901
No #	SIRIUS	SIRUS		A2-2319
No #	SIRIUS	SIRUS		A2-2303
No #	D610	DELL		CNOC4708-48643-59K-6009
No #	Suit Tester	Level A Chemical Suit Tester - UASI # PC ~~99173~~	DuPont - Tychem	R0502145518
No #	APD 2000	WMD Dectector 2002 TE-CX-0001 donated to PH from Tarpon Springs 1/2012	Environmental Technologies	1314
No #	Go Pro 3 Black	Go Pro 3 Black	Go Pro	

38

Asset Number	Item Name	Description	Make / Manufacturer	Model / Serial Number
74673	Heat Tracer	Infared Heat Tracer	ScotchTrack	32418
81263	Mobile Radio	Motorola MCS2000	Motorola	722AZA0774
81264	Mobile Radio	Motorola MCS2000	Motorola	722AZA0775
81343	APD 2000	WMD Detector - Smith's Detection	Environmental Technologies	1450
81360	Haz Kat Kit	Chemical ID Kit	Haztech Systems, Inc.	200302
81368	TVA	Toxic Vapor Analyzer / TVA 1000B	Thermo Env. Inst.	75920-831
81373	Laptop Computer	Dell Inspiron 8500	Dell	CN-00U838-12961-383-2613
81389	Weather Station	Portable Weather Station - Hazmat Weather Log	RainWise	12333 & 12334
87364	Ford Communication Vehicle	H38 - Communication vehicle - 1998 1FDXE40F4XHA18603	Ford E-450 / MobilTech	117673
87365	Generator	H38 - 7 kw generator	Power Tech	C183930E
108724	Radiation Pager	Radiation Pager / UASI # 97693 2004 slb	Sensor Tech	2528
108725	Radiation Pager	Radiation Pager / UASI # 97694 2004 slb	Sensor Tech	2529
108728	Hapsite	Head Space Sampling System / ODP UASI # 99392, 99393, 99395, 99398, 99399 2004 slb 05-DS-2N-08-62-01-456 2004	Hapsite	G5HS14E00502
108730	Radiation Pager	Radiation Pager / No UASI # on unit slb	Sensor Tech	25331
108731	Radiation Pager	Radiation Pager / No UASI # on unit slb	Sensor Tech	25330
108732	Radiation Pager	Radiation Pager / No UASI # on unit slb	Sensor Tech	25329
108740	Sems Base Unit	SCBA Reciever / RDSTF	Scott	B26060602
108743	Rit Pak 2	Rapid Intervention Pak / RDSTF	Scott	50010036Q
109184	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0509020390DA
109187	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020408DA
109709	SIRIUS	MSA SIRIUS Handheld MultiGas Detector	MSA	A3-2796
109790	Propane Flare	Manual Propane Flare - PFM-16	Red Dragon	
109865	Convert-a-com	Motorola Convert-a-com	Motorola	F082427459
109867	Portable Radio	Motorola Portable Radio XTS5000	Motorola	721CJP1998
109902	Laptop Computer	HP 8710 laptop	HP	CND90161D4
111640	HM Utility Vehicle	F550 - XL Super Duty 2007 - UASI # 102845 2005 slb	Ford	1FDAF57P27EB39636
117528	Squeeze Tool	Huskie PS 62B Squeeze tool	Huskie	09z009
E109125	Scott Air Bottle	4502 p.s.i. Scott Air Bottle / RDSTF	Scott	OP155223
E109126	Scott Air Bottle	4501 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154687
E109133	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP155240
E109136	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154574
E109139	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154789
E109142	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP154718
E109154	Scott Air Bottle	4500 p.s.i. Scott Air Bottle / RDSTF	Scott	OP153969
No #	Hapsite	Gas Spectrometer - UASI # PC 99396 slb 12-1-09 old # 109111	Inficon - Hapsite	J5HS18AO1155
No #	Laptop Computer	Dell 610 Lattitude / Hapsite - UASI # PC 99393 old # 109112 ...48643-567-7147	Dell	F8L5Q71
No #	Hapsite Heater	Headspace Heater w/ Concentrator Tubes - UASI # PC 99394	Inficon - Hapsite	930-252-G1
No #	Hapsite Getter Pump	Getter Pump - UASI # PC 99397	Inficon - Hapsite	930-425-P1
No #	DMC 2000 S	DOCIMETER / RDSTF	MGP Instrument	676179
No #	Radiation Portal	Johnson Portal Monitor	Johnson	1517
No #	CDC Survey Kits	2 each radiation survey kits LARGO ASSET	CDC	10048 & 10049
No #	Identifinder	Identifinder LARGO ASSET		3574-1151
No #	Go Pro 3 Black	Go Pro 3 Black	Go Pro	

H66

Asset Number	Item Name	Description	Make / Manufacturer	Model / Serial Number
61121	Chlorine A Kit	Chlorine A Kit	Indian Springs	A-6780
68110	Submarine	Salvage recovery vessel -	Quality Cont.	
81387	Sensidyne HM III Kit	Colormetric WMD Test Kit	Sensidyne	
81390	Radio	XTS 5000	Motorola	721CFG0780
81391	Radio	XTL 5000	Motorola	500CFE2059
81393	Radiation Pager	Radiation Pager / UASI #	Sensor Tech	2538
81396	Radiation Pager	Radiation Pager / UASI #	Sensor Tech	2537
95765	HM Utility Trailer	H66 - Hackney Trailer -		1HHVTX215FE000463
108714	Radiation Pager	Radiation Pager / UASI #	Sensor Tech	2535
108721	Radiation Pager	Radiation Pager / UASI #	Sensor Tech	2526
108735	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0509020401DA
108737	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020483DA
108742	Sems Base Unit	SCBA Reciever / RDSTF	Scott	B18050568
108746	Rit Pak 2	Rapid Intervention Pak /	Scott	50900065Q
108753	Weather Pak	Portable Weather Station / UASI 05-DS-2N-08-62-01-	Fisher	9421
109180	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0510020489DA
109196	SCBA NEX-GEN	Air Pack Frame / RDSTF	Scott	RED0210020479DA
109198	T.I.C.	Thermal Imaging Camera /	Scott	EIC00219
109710	SIRIUS	MSA SIRIUS Handheld	MSA	A3-2778
109857	SIRIUS	Multigas Detector UASI #	MSA	A3-5838
109874	Hazcat	Hazcat Kit	Haztech Systems, Inc.	Basic Kit
109879	Modem	Motorola		
109886	MDT	Panasonic Toughbook	Panasonic	8HKSB90253
112115	LCD	LCD 3.3		
112863	Freightliner Tractor	2010 Freightliner M2/Crew -	Freightliner	1FUBCYBS7ADAN8870
117525	Squeeze tool	Huskie pipe crimper	Huskie	09Z001
120466	Radio	Motorola XTS5000	Motorola	721CEJ1089
E108751	HEPA VAC 2.5	2 Gallon HM Vaccum / AV	Air Systems	PO5J95261
E109118	Scott Air Bottle	4500 p.s.i. Scott Air Bottle /	Scott	OP154686
E109120	Scott Air Bottle	4500 p.s.i. Scott Air Bottle /	Scott	OP155323
E109124	Scott Air Bottle	4500 p.s.i. Scott Air Bottle /	Scott	OP155050
E109138	Scott Air Bottle	4500 p.s.i. Scott Air Bottle /	Scott	OP154811
E109144	Scott Air Bottle	4500 p.s.i. Scott Air Bottle /	Scott	OP154782
E109146	Scott Air Bottle	4500 p.s.i. Scott Air Bottle /	Scott	OP154774
E109153	Scott Air Bottle	4500 p.s.i. Scott Air Bottle /	Scott	OP154924
E109157	Scott Air Bottle	4500 p.s.i. Scott Air Bottle /	Scott	OP153683
E109170	Scott Air Bottle	4500 p.s.i. Scott Air Bottle /	Scott	OP154681
No #	Hazmat ID	Hazmat ID command sys w /laptop & repeat ir old #	Smiths Detection	012710106F
No #	Cooling Fan	Cooling Fan - UASI # PC ~~99198~~	Schaefer Ventilation	CS-110L
No #	DMC 2000 S	DOSIMETER / RDSTF	MGP Instrument	674989
No #	Exploranium	Hanheld Gama Spectrometer old # 108726	Exploranium	GR 135 NCD / 4522
No #	Go Pro 3 Black	Go Pro 3 Black	Go Pro	

APPENDIX D - SUPPLIES

Description	UOM	Qty	Description	UOM	Qty	Description	UOM	Qty
AR-AFFF foam	gal	100	Chlorine seals, A	ea	1	Medical bag	ea	1
Table, folding	ea	1	Chlorine seals, B	ea	1	Skimmer, pool	ea	1
Chairs	ea	6	Chlorine seals, C	ea	1	PCB screening kits	ea	4
Bench	ea	1	Wrench, bung	ea	1	Pesticide test kits	ea	4
Decon tent	ea	1	Siphon hose	ea	4	Tape, Hazmat scene	ea	1
Visquien, 10' X 100', 4 mil	roll	1	Broom, push	ea	2	Shovel, non-sparking	ea	1
Hose, garden, 50'	ea	2	Broom, corn	ea	2	Squeegee	ea	1
Cones, traffic	ea	12	Canopy, 12' X 12'	ea	1	Lock out tag out kit	ea	1
Privacy kits	ea	12	Boom, 8' x 4"	ea	10	Lights, scene	ea	1
Brush, decon	ea	1	TIC	ea	1	Soda ash, 5 gallon pail	ea	1
TSP	ea	2	Meter, Ammonia	ea	1	Saw horses	ea	2
Sprayer, 2.5 gallon	ea	1	White board	ea	2	Dyke & plug compound	ea	2
Pool, decon	ea	4	Tedlar bags, 3 ltr	ea	12	Raid 8 kits	ea	5
Pail, 5 gallon with lid	ea	6	Tedlar bags, 1 ltr	ea	12	M256A kit	ea	1
Evidence cans, 1 gallon	ea	6	Bio 20/20 kit	ea	5	Ammonia	gal	1
Evidence cans, quart	ea	6	M9 paper	roll	1	Vinegar	gal	1
Can, garbage, 30 gal	ea	1	M8 paper	roll	1	Blankets, disposable	ea	10
Tyvek jump suit, L	ea	12	Spillfyter strips	ea	12	Tools, assorted	ea	1
Tyvek jump suit, XL	ea	12	Draeger tubes, asst.			Hot stick	ea	1
Tyvek jump suit, XXL	ea	12	Draeger pump	ea	1	Body bag	ea	1
Boots, Tingley asst. sizes	ea	10	Copan swabs	ea	12	Decon conveyor	ea	1
Gloves, Nitrile	ea	12	SCBA, SEMS unit	ea	1	Sulphur Dioxide Seals A	ea	1
Gloves, Silver Shield	ea	12	Meter, Radiation, Canberra	ea	6	Sulphur Dioxide Seals B	ea	1
Tape, Chem	ea	6	Meter, Radiation, Ludlum	ea		Sulphur Dioxide Seals C	ea	1
Tape, Duct	ea	6	Pager, Radiation	ea				
Goggles	ea	6	SCBA, air packs with bottles					
Booties, Tyvek	ea	24	SCBA, bottles, spare					
Mask, N95	ea	12	Camera, Go Pro	ea	1			
Mercury Clean up kit	ea	1	Camera, 35 mm	ea	1			
Radios, Icom (state mutual aid)	ea		PH paper	ea	1			
Suit, level B, XL	ea	6	Peroxide test strips	ea	1			
Suit, level B, XXL	ea	2	Fluoride test strips	ea	1			
Suit, level C, XL	ea	6	Extension cord	ea	1			
Suit, level C, XXL	ea	2	Cool mist fan	ea	1			
Gloves, cryogenic	ea	2	Sodium bicarbonate, 5 gal. pail	ea	2			
Gloves, Neoprene	ea	6	Grounding kit	ea	1			
Gloves, Butyl	ea	6	ICS vests, asst	ea	1			
Gloves, Nitrile, 4 mil (EMS)	box	1	ICS clipboards	ea	1			
Gloves, Nitrile	ea	6	ICS vests, hazmedic	ea	1			
Gloves, PVC	ea	6	Hazcat kit	ea	2			
Gloves, Viton	ea	6	Shovel	ea	2			
Suit, Level A, L	ea	2	Ladder, step	ea	1			
Suit, Level A, XL	ea	2	Broom, handles	ea	2			
Suit, Level A, XXL	ea	2	Wood plugs, asst	kit	1			
Oil, vegetable, 48 oz	ea	10	Vacuum	ea	1			
Hazcat kit	ea	1	Extinguisher, asst	ea	1			
Gas can, 5 gal	ea	6	Compressor	ea	1			
Pan, catch	ea	2	Litters, patient	ea	2			
Absorbent, cellulose	bag	10	Sked	ea	1			
Absorbent, Abzorbit	bag	10	Bleach	ea	1			
Sleeves, pipe clamp, asst. sizes			Soap	ea	1			
Drum, overpack 30 gallon	ea	1	Clamp, gas line, Huskie	ea	1			

APPENDIX D – SUPPLIES, CONT'D

Drum, overpack 55 gallon	ea	1	RIT bag	ea	1
			A/C unit	ea	1
Cribbing, asst. sizes			SCBA, masks		
Bags, burlap	ea	12	PAPR, Scott	ea	4
Chlorine kit, A	ea	1	Filters, Scott P100	ea	24
Chlorine kit, B	ea	1	Filters, Scott 45132	ea	6
Chlorine kit, C	ea	1	Binoculars	ea	1
Sulfur dioxide seals, A	ea	1	Pump, transfer	ea	1
Sulfur dioxide seals, B	ea	1	Decon, shower	ea	1
Sulfur dioxide seals, C	ea	1	Clamp, dome lid	ea	1

APPENDIX E – PROVIDER AGENCIES

City of Largo
P.O. Box 296
Largo, FL 33779

Palm Harbor Special Fire Control District
250 West Lake Road
Palm Harbor, FL 34694

City of Pinellas Park
P.O. Box 1100
Pinellas Park, FL 33780

City of Seminole
9199 113th Street North
Seminole, FL 33772

City of St. Petersburg
455 8th Street South
St. Petersburg, FL 33701

APPENDIX F – DRONE PROGRAM

PURPOSE:

To establish guidelines for safe, efficient and lawful aerial operation of a small unmanned aircraft systems (sUAS) aka drone(s) at emergency incidents in accordance with 14 CFR Part 107 by those qualified to operate the drone fully in accordance with said regulations and other applicable laws.

GENERAL POLICY:

Location.

- Drone and its support equipment will be housed at a special operations fire station to be determined by the Director of Pinellas County EMS & Fire Administration and Contractor's Fire Chief.

Request for Drone.

- Incident command shall request deployment of the drone through 911 emergency communications department (911). 911 shall dispatch the unit and special operations personnel will respond pending appropriate flight personnel are available and the pilot in command (PIC) evaluates the mission for safe operation. The PIC is authorized decline any mission that cannot be completed safely.

Team Composition.

- Drone shall be operated with a minimum of two members consisting of the pilot in command and visual observer/
    - **Pilot in Command (PIC):** The PIC will function as the team leader and fly the sUAS. PIC may also supervise non-certificate holders (Persons Manipulating the Flight Controls) flying the drone as long as the PIC has the ability to immediately take direct control of the sUAS.
    - **Person Manipulating the Flight Controls (PMFC):** Any person being directly supervised by the PIC where the PIC can immediately take control of the sUAS.
    - **Visual Observer (VO):** The visual observer(s) is responsible for the visual observation of the sUAS while in flight to ensure that the PIC is aware of any conditions which will affect the safety of the flight.
- **Team Qualifications:**
    - **PIC:** Must either hold a remote pilot airman certificate with a sUAS rating or be under the direct supervision of a person who does hold a remote pilot certificate.
        - To qualify for a remote pilot certificate, a person must:

      Demonstrate aeronautical knowledge by either passing an initial aeronautical knowledge test at an FAA-approved knowledge testing center; or

      Hold a part 61 pilot certificate other than student pilot, complete a flight review within the previous 24 months, and complete a small UAS online training course provided by the FAA. Part 61 pilot certificate holders may obtain a temporary remote pilot certificate immediately upon submission of their application for a permanent certificate

PMFC and VO: Flight crew positions shall have knowledge of the sUAS, its capabilities and general aeronautical knowledge in order to support the PIC during sUAS operations.

- **Training:**
  - **PIC:** Pinellas County will provide training materials for the PIC to sit for the aeronautical knowledge test. Training shall consist of any of the following delivery methods: self-study, online, text book and/or in-person training.
  - **PMFC and VO:** Pinellas County will provide the resources utilized by the PIC, and the PMFC and VO shall review and show comprehension to the extent where the PIC is comfortable with their knowledge and assistance while flying.
- **Documentation:**

  Flight Log: PIC is responsible for filling out a flight log notebook documenting any repair, modification, overhaul, and/or replacement of a component, time in flight, weather conditions, sUAS issues and crash details.
- **Funding:** See 701C
- **Privacy:** sUAS will not capture or retain imagery of private property or persons where doing so would violate a reasonable expectation of privacy.
- **FAA Regulations:** All sUAS operations will follow all FAA rules and regulations to ensure safe operation of all parts of the sUAS program.

APPENDIX G – REIMBURSEMENT FORM

SPECIAL OPERATIONS TRAINING REIMBURSEMENT FORM

Agency	
Course Name	
Date/Time/Shift	
Location	
Training Hours	

	Student Name	Rank	Straight Time (ST) Overtime (OT) Backfill (BF)	Backfill Name	Rank	Hours Worked	Hourly Rate w/ benefits	Total Cost
1							$ -	$ -
2							$ -	$ -
3							$ -	$ -
4							$ -	$ -
5							$ -	$ -
6							$ -	$ -
7							$ -	$ -
8							$ -	$ -
9							$ -	$ -
10							$ -	$ -
11							$ -	$ -
12							$ -	$ -
13							$ -	$ -
14							$ -	$ -
15							$ -	$ -
16							$ -	$ -
17							$ -	$ -
18							$ -	$ -
19							$ -	$ -
20							$ -	$ -
21							$ -	$ -
22							$ -	$ -
23							$ -	$ -
24							$ -	$ -
25							$ -	$ -

TOTAL Reimbursement Amount: $ -

Print Name & Title ***Submitted By - Authorized Signature*** ***Date***

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM

STANDARD OPERATING PROCEDURES MANUAL

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM

STANDARD OPERATING PROCEDURES MANUAL
TABLE OF CONTENTS

Adopted 2/10/2000; **Effective 5/01/2000; Updated 4/30/02, 9/2006, 11/2008, 10/2011**

ATTACHMENTS

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
100 SERIES STANDARD OPERATING PROCEDURE
No. 100-1

SUBJECT: TEAM MISSION STATEMENT

The mission of the Pinellas County Hazardous Materials Response Team is to provide the County with specially trained personnel to respond to nuclear, biological, and chemical incidents upon request. The rescue of victims, hazard mitigation, technical guidance, and advanced medical support are the primary functions of the team.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
200 SERIES STANDARD OPERATING PROCEDURE
No. 200-1

SUBJECT: ORGANIZATION

1.0 The Pinellas County Hazardous Materials Response Team (PCHMRT) is the coordinated function of several agencies, to provide the rescue of victims, hazard mitigation, technical guidance, and advanced medical support. The PCHMRT operates under the sanction of Pinellas County through the County's Department of Public Safety Services.

1.1 Command of the PCHMRT is under a Team Commander designated by the Pinellas County Fire Chief's Association. Participating departments shall designate a Staff Hazardous Materials Officer, who will, along with the Team Commander, serve as the Team Command Staff. This Staff Officer shall also serve as that department's Hazmat Coordinator. All Hazmat Team functions shall be performed through this person. Additional Staff Officers may be assigned to the team, with approval of the Team Commander, from other County agencies. The Commander shall designate an Assistant Team Commander.

1.2 The Team Command Staff is charged with daily management of the Team. This management system is accomplished by utilizing a five-year methodology for assessment and satisfaction of short and long-range goals and objectives. The Command Staff meets monthly to improve service delivery and manage overall team functions. Additionally, it has been a policy of this management team to re-examine the Team's overall status and operations, at a minimum of every five- (5) years. The Standard Operating Procedures are then updated, as required, to accomplish procedural modifications, which the Staff has identified, through a quality improvement process utilizing input and feedback received from the team membership.

1.3 Specially designated Hazardous Materials Team units are assigned to fire stations # 5, 29, 33, 38, and 66, and will be staffed and respond on an "as needed" basis by PCHMRT members assigned there as per agreements between the county and the departments. Participating fire departments are Seminole, Pinellas Park, Largo, Palm Harbor and St. Petersburg, and additionally the Pinellas County Sheriff's Office, and Pinellas County Public Safety Services.

1.4 Budgeting and purchasing efforts are handled by the Pinellas County Department of Public Safety Services. Policy and planning are managed by a steering committee consisting of Fire Chiefs of the participating fire departments, the Director of Pinellas County Public Safety Services, and the Team Commander.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
200 SERIES STANDARD OPERATING PROCEDURE
No. 200-2

SUBJECT: NOTIFICATION

2.0 **THE HAZMAT RESPONSE TEAM** is designed to support ongoing operations already in progress at a hazardous materials incident. Request for response of PCHMRT will originate from the Incident Commander of the local jurisdiction. The incident commander will request the response through the Emergency Communications Dispatch Center.

2.1 INITIAL DISPATCH PROCEDURE:

2.1.1 Verbal assistance/guidance for small non-hazardous incidents (minor mitigation).
2.1.2 Response: Single Hazmat unit response and/or Hazmat command officer notification or consultation.
2.1.3 Incidents involving, but not limited to large leaks, unknown chemicals, injuries, small spills causing, or with the potential to cause environmental damage, or materials generating plume clouds.
2.1.4 Responses:

North of Ulmerton Road:

Hazmat 29	(2 personnel - minimum staffing)
Hazmat 33	(2 personnel - minimum staffing)
Hazmat 38	(2 personnel - minimum staffing)
Hazmat 66	(2 personnel - minimum staffing)
Command Staff	

South of Ulmerton Road:

Hazmat 5/E5	(4 personnel - minimum staffing)
Hazmat 29	(2 personnel - minimum staffing)
Hazmat 33	(2 personnel - minimum staffing)
Hazmat 38	(2 personnel - minimum staffing)
Command Staff	

Second Alarm

PCHMRT units not already dispatched.

Notification of DC5, DC29, DC35, DC38, DC41 and DC65 requesting the remainder of on-duty Hazmat personnel.

Third Alarm

Tampa Fire Department HMRT

Fourth Alarm

Hillsborough County HMRT

Call back of all off-duty PCHMRT personnel.

2.2 MUTUAL AID RESPONSE

2.2.1 PCHMRT participates as one of the Regional Response Teams for the State of Florida.

2.2.2 Prior to response the "**On Call"** Haz Mat Staff Officer shall be notified to verify the request and ensure appropriate response according to SOP 8.1.2.3.

2.2.3 The team will be divided into two response groups in order to respond with appropriate equipment and personnel while maintaining capabilities within Pinellas County. Those personnel certified at the 160 hour technician level or equivalent shall be the priority personnel to respond. The following outlines response groups depending on unit and personnel availability:

2.2.3.1 Initial immediate response shall consist of the following apparatus and personnel which is to include at least 1 Haz Mat Medic and 1 Tox Medic.

H5	(minimum of 5 personnel)
H66	(minimum of 3 personnel)
HM Officer on call	(minimum of 1 personnel)
Additional Personnel	(minimum of 7 personnel within 1 hour)

OR

2.2.3.2 Remaining response units for Pinellas County:

H29	(minimum of 3 personnel)
H33	(minimum of 3 personnel)
H38	(minimum of 2 personnel)
Next HM Officer	(minimum of 1 personnel)
Additional Personnel	(minimum of 7 personnel within 1 hour)

2.2.4 See Attachment B for departmental and personal needs for a deployment.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
300 SERIES STANDARD OPERATING PROCEDURE
No. 200-3

SUBJECT: REPORTING AND RECORDS RETENTION

3.0 Reporting is an important part of the operation of the Pinellas County Hazardous Materials Response Team.

3.1 Reporting requirements for the hazardous materials team is listed here.

3.1.1.1 .

3.1.2 All incidents warrant use of the computerized Hazmat reporting form:

3.1.2.1 All incidents of consultation or actual field operations shall be reported.

3.1.2.2 This report shall be executed as described in Attachment F (not yet complete).

3.1.2.3 This report shall be executed in its entirety, utilizing each section and/or page as is needed. While the team member may deem some parts of the report as unnecessary, the member should realize that this form meets reporting needs required by other agencies or laws and shall be executed as accurately as possible. Responsibility for the completion of this report shall fall to the senior team member or command officer assigned to or responding to the request for assistance.

3.1.2.4 Responsibility for the completeness and accuracy of the report shall fall to the Hazmat Group commander or consulting officer. Any supporting documentation and photographs shall be conveyed to Pinellas County Public Safety Services within 15 calendar days. Digital photographs taken at Hazmat scenes may be transmitted via appropriate media. Pinellas County Public Safety Services will maintain a file, by incident number, for all additional information submitted.

3.1.2.5 All incidents of actual or potential exposure of a team member shall be reported to the person-in-charge at Pinellas County Public Safety Services immediately.

3.2 Records shall be retained in a manner consistent with the Pinellas County's Records Retention Policy and under the guidance of Pinellas County's Department of Records Management.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
300 SERIES STANDARD OPERATING PROCEDURE
No. 300-1

SUBJECT: TRAINING REQUIREMENTS FOR HAZMAT TECHNICIAN

1.0 Training requirements for hazardous materials technicians shall comply with the Latest Revision of *Florida State Emergency Response Commission 'Florida Guidelines for Hazardous Materials Training'*, as amended (Attachment A).

1.1 Requirements for donning a fully encapsulated suit and entering a hazardous atmosphere include:

1.1.1 Certification at the technician level as prescribed for in 300-1, 1.0
1.1.2 Satisfactory completion of the required physical examination and corresponding approval by the physician every year.
1.1.3 Verbal and/or written approval by the employee's department coordinator.

1.2 The Command Staff requires each team member to complete twenty-four (24) hours of approved training at the technician level each calendar year to maintain proficiency and technician-level certification.

1.2.1 Members that do not achieve a satisfactory degree of continuing education are subject to removal from active Hazmat duty.
1.2.2 Attend advanced training sessions as assigned or determined by your department Hazmat coordinator and/or the Hazmat Team Command Staff.

1.3 The Hazardous Materials Team has become a specialized portion of the fire department. So that the level of knowledge and skill of the Hazmat Team are maintained at a high level, the following minimum standards shall become effective on October 1, 2006.

1.3.1 Fire Department personnel that aspire to join the Hazmat Team are required to complete State of Florida 160 hour Haz Mat Technician Course and State Test.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
300 SERIES STANDARD OPERATING PROCEDURE
No. 300-2

SUBJECT: QUALIFICATIONS FOR HAZMAT INSTRUCTOR

2.0 Training requirements for hazardous materials trainers shall comply with the *Florida State Emergency Response Commission Florida Guidelines for Hazardous Materials Training*, as published in July 1994, and subsequent updates, as amended (Attachment A).

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
300 SERIES STANDARD OPERATING PROCEDURE
No. 300-3

SUBJECT: GUIDELINES FOR HAZMAT OFFICER

3.0 Training requirements for hazardous materials incident commander shall comply with the Latest Revision of the *Florida State Emergency Response Commission Florida Guidelines for Hazardous Materials Training,* , as amended (Attachment A).

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
300 SERIES STANDARD OPERATING PROCEDURE
No. 300-4

SUBJECT: GUIDELINES FOR HAZMAT INCIDENT COMMANDER

4.0 Training requirements for hazardous materials incident commander shall comply with the Latest Revision of the *Florida State Emergency Response Commission Florida Guidelines for Hazardous Materials Training*.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
300 SERIES STANDARD OPERATING PROCEDURE
No. 300-5

SUBJECT: REQUIREMENTS FOR DRIVER/OPERATOR(S) OF COUNTY HAZ MAT APPARATUS

5.0 Training requirements for hazardous materials team Driver/Operators (or potential D/O's) as a minimum shall consist of the following:

5.0.1 Annual review of all members Motor Vehicle Records (MVR's) to be conducted by Pinellas County Risk Management.

5.0.2 All Driver/Operators (or potential D/O's) shall have a current Emergency Vehicle Operator Certification (EVOC).

5.0.3 All Driver/Operators (or potential D/O's) of the Tractor Trailer Apparatus shall have completed an eight (8) hour class specific to this type of apparatus.

5.0.3.1 All Driver/Operators (or potential D/O's) of the Tractor Trailer Apparatus shall complete four (4) hours of refresher training annually after initial certification.

5.1 All emergency units shall operate within Florida Statutes, Chapter 316.072 for response safety regulations.

5.2 Nothing within this policy shall preclude each participating department from implementing or enforcing policy that is more stringent or restrictive.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
400 SERIES STANDARD OPERATING PROCEDURE
No. 400-1

SUBJECT: ENFORCEMENT OF ORDINANCES AND STATUTES

1.0 Law enforcement members of the Pinellas County Hazardous Materials Team will review and evaluate all incidents and complaints forwarded to law enforcement. Complaints received from the Pinellas County Hazardous Materials Response Team will be evaluated by use of radio communications or telephone to determine if law enforcement should respond, and if a criminal investigation should be initiated. Those complaints or incidents that warrant further investigation will be assigned to one of the law enforcement units - HM401, HM402, HM403, and/or HM404 for follow-up.

1.1 Law enforcement will respond to the scene of a hazardous materials spill or environmental crime when requested by:

1.1.1 Pinellas County Hazardous Materials Response Team

1.1.2 Other local law enforcement agencies or fire departments only after the Pinellas County Hazardous Materials Response Team has determined the need for assistance or at the request of the incident commander**.**

1.1.3 When responding to the scene of a hazardous materials incident or environmental crime, law enforcement may make an emergency response (lights and siren) per department protocol.

1.1.4

1.2 Upon arrival at a hazardous materials scene, law enforcement will:

1.2.1 Assist with crowd control

1.2.2 Assist in evacuation and/or sheltering-in-place

1.2.3 Coordinate the activities of the hazardous materials team with law enforcement and/or other local police agencies on scene

1.2.4 Interview all witnesses present at the scene and conduct the necessary criminal investigation, to include but not limited to:

1.2.4.1 The issuance of a county ordinance violation

1.2.4.2 Issuance of a notice to appear for a misdemeanor violation

1.2.4.3 Referral to the State's Attorney Office for the prosecution of a felony violation.

1.2.5 Assist the Pinellas County Hazardous Materials Response Team if needed in the capacity of a team member at the technician level and/or the incident command level.

1.2.6 Pinellas County Sheriff's Office law enforcement personnel will not conduct the collection of samples and evidence unless properly trained and equipped for the collection and preservation of samples for prosecution. If such is needed, the assistance of the proper agency or authority will be requested to assist with collection, preservation, and analysis of samples for prosecution. The Florida State Department of Environmental Protection (DEP), the United States Environmental Protection Agency (EPA), and/or any other said authority may be contacted for such assistance.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 500-1

SUBJECT: PATIENT CARE/EMS PROTOCOLS

1.0 In order to maintain effective and coordinated operations throughout Pinellas County, the Pinellas County Hazardous Materials Response Team acknowledges the need to work within the existing operational practices of the Pinellas County Medical Director's Office Medical Operations Manual. In order to facilitate that relationship, we hereby adopt the Medical Operations Manual (MOMs Manual) for the Pinellas County Emergency Medical Service.

1.1 Paramedics that have been trained and certified for use of the Hazmat protocols or Level III Paramedics shall take direction from the MOMs Manual, Chemical Treatment Protocols – Haz-medic**.**

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-1

SUBJECT: INCIDENT COMMAND

1. PCHMRT will operate in accordance with the National Incident Management System identified in the Florida Incident Field Operations Guide (FOG) along with the Fire Department 600 Series Standard Operating Procedures. ***Also see Pinellas County 600 Series SOP 600-01.***

1.1 The senior emergency response official responding to an emergency shall become the individual in charge of the site-specific Incident Management System (IMS). (1910.120 q 3)

1.2 The Incident Commander (IC) at an emergency will call for the PCHMRT when the situation warrants. The Hazardous Materials Team shall work within the framework of the ICS as a Group, with the Incident Commander retaining overall command of the incident.

1.3 The Hazmat Group Officer shall assign and utilize the following divisions of labor:

1.3.1 Research: responsible for the information gathering about the product(s) involved
1.3.2 Entry: responsible for the actual entry and mitigation of the incident.
1.3.3 Decon: responsible for the decontamination of the personnel, tools and equipment used.
1.3.4 Medical: responsible for the medical checks and rehab of entry personnel, and the coordination of the transfer of exposed and/or rescued civilians to EMS.
1.3.5 Safety: responsible for watching the overall operations to assure safe practices are being observed.
1.3.6 Liaison: responsible for coordinating activities between agencies (i.e.: FD, PCSO, EPA, etc.).

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-2

SUBJECT: RESPONSE AND PLACEMENT

2. This section provides guidance for units as they respond and position for operation at emergency scenes. (ALSO SEE 600.13 – SINGLE UNIT RESPONSE)

2.1 Response: Units shall respond in "emergency status" (red lights and sirens functioning) to all dispatches unless advised to do otherwise or as established by SOP. If Hazmat units are to respond non-emergency, then the traffic preemption device shall be operating and apparatus shall follow the route affording them the quickest total travel time but shall not exceed safe speed considering conditions and posted speed limit when emergency status. All personnel shall remain seated and wear provided restraints. Drivers must use the utmost care and pay extra attention to safety when moving. All emergency units shall conform to Florida Statutes, Chapter 316.072 for response safety regulations. Responding units shall maintain radio contact on the appropriate channel with Dispatch and advise when on-scene.

2.2 All Hazardous Materials Response Team Units dispatched to an incident must be kept intact as one unit to fulfill team responsibilities. It is the responsibility of the Hazmat Group officer and the PCHMRT Officers to insure that this requirement is being met during all phases of a "working" Hazardous Materials Incident

2.3 Standard Company Placement/Functions:

2.3.1 The first arriving PCHMRT unit will select a staging location for all other Hazmat units. The first unit will be required to select a staging locating that will account for the following criteria.

2.3.1.1 Stage upwind, uphill.
2.3.1.2 Announce staged location.
2.3.1.3 A safe location (based upon the potential for toxic vapors or explosion).
2.3.1.4 Have adequate access to the scene.
2.3.1.5 Be out of the way of other units that are operating in the area.
2.3.1.6 Position vehicles facing away from the scene for immediate/emergency departure.

2.3.2 If a Staging Area has been established prior to PCHMRT arrival, all Hazmat units should respond to this area. **The first arriving Hazmat unit should evaluate the staging area to ensure that it meets the team's criteria.** Upon arrival, inform the Staging Officer that PCHMRT engines and/or other supporting units (i.e.: E5, S38) are not available as companies for non-hazardous materials functions.

2.3.3 If the PCHMRT Staging location becomes untenable (dangerous) upon arrival or during the course of the incident, it shall be moved and Command advised of the relocation effort.

2.3.4 The first arriving Hazmat unit shall meet with Command to receive a situation status and begin to formulate a plan.

2.3.5 The second arriving Hazmat unit, with assistance from remaining personnel from the first unit on scene, shall begin to set up a dressing area for an entry and/or recon team. Shall also begin to set up a decon area.

2.3.5.1 Consider an emergency decon area for possible firefighter or civilian rapid decon.

2.3.5.2 Work with the first due unit to identify product/problem as quickly as possible.

2.3.5.3 Once product is identified, announce such to all on scene and responding Hazmat units and specifically H38 and the Hazmat Group Officer.

2.3.6 Remaining responding/arriving Hazmat units shall report to the Hazmat Group Officer for assignment and support of already operating Hazmat companies.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-3

SUBJECT: SAFETY

3. This SOP sets forth the minimum requirements for operations at emergency incidents as related to the safety and health of responding personnel.

3.1 ORGANIZATION

3.1.1 Emergency operations and other situations that present similar hazards, including training exercises, shall be conducted in a manner so as to recognize hazards and prevent accidents and injuries.
3.1.2 The Incident Commander shall be responsible for the overall safety of all personnel and all activities occurring at the scene.
3.1.3 The Hazmat Group Officer shall be responsible for assigning a Hazmat trained Safety Officer to be responsible for monitoring the safety needs of the PCHMRT.

3.2 GENERAL INCIDENT SAFETY REQUIREMENTS

3.2.1 The Hazmat Group Officer shall insure an adequate number of responding personnel to safely conduct incident operations. Operations shall be limited to those that can be safely performed by personnel available at the scene.
3.2.2 Whenever personnel are operating in positions or performing functions that include special hazards or that would subject them to immediate danger of injury in the event of equipment failure or other sudden event, back-up personnel shall be standing by with equipment to provide assistance and/or rescue.
3.2.3 When inexperienced personnel are working at an incident, more experienced officers or personnel shall provide direct supervision.
3.2.4 When personnel are operating in positions or performing functions that involve an immediate risk of injury, qualified ALS personnel shall be placed in a standby position with medical equipment and transport capability as soon as possible.

3.3 SPECIFIC INCIDENT SAFETY REQUIREMENTS

3.3.1 When personnel are operating in an area that places them in potential conflict with motor vehicle traffic:

3.3.1.1 Apparatus should be positioned to protect personnel from traffic while directing exhaust emissions away from the incident area.
3.3.1.2 Vehicle warning lights shall remain activated until leaving the scene.
3.3.1.3 Reflective markers or cones should be placed to re-direct traffic flow or close roadways.
3.3.1.4 Personnel shall wear a garment with fluorescent retro-reflective materials.

3.3.2 Drivers shall utilize at least one spotter positioned at the rear of the apparatus anytime the vehicle is backing.

3.3.3 De-energizing electrical hazards shall be limited to the operation of breakers or removal of fuses. Hazmat Team personnel shall not remove electric meters, either residential or commercial.

3.3.4 Areas or zones identified as hazardous to either civilian or emergency response personnel should be conspicuously marked in the following manner:

3.3.4.1 **FIRE LINE - DO NOT CROSS** 3" wide **yellow** tape with black letters. Used to identify non-accessible areas to civilians. Procedure: Place around incident perimeter as directed by Command. Command's approval needed to remove the tape.

3.3.4.2 **DANGER - DO NOT ENTER** 3" Wide **red** tape with black letters. Used to identify areas deemed **unsafe for entry** by on scene officer's i.e.: weak floor or road, falling glass, etc. NO PERSONNEL TO CROSS BARRIER TAPE WITHOUT APPROVAL FROM INCIDENT SAFETY OFFICER. Procedure: Place across doorways, windows or other highly visible areas. Safety Officer to approve removal.

3.3.4.3 **HAZARDOUS MATERIALS - DO NOT ENTER:** 3" wide **red** tape with black letters used by PCHMRT to identify limited access areas at hazardous materials incidents. ACCESS LIMITED TO PCHMRT AND THOSE AUTHORIZED BY THE Hazmat GROUP OFFICER. Removal to be authorized by the Hazmat Group Officer.

3.4 EMERGENCY RETREAT PROCEDURE

3.4.1 Purpose: The **Emergency Retreat Procedure** is a county-wide procedure to enable personnel to be quickly withdrawn in the event of a potentially dangerous or rapidly deteriorating situation. Building collapse, cave-in, explosion, plume cloud shift, BLEVE's and hostile actions are a few examples, which may require this procedure.

3.4.2 Procedure: Any Command Officer, Group/Division Officer, Company Officer, or Fire Rescue personnel who notice a life-threatening situation may initiate the retreat by use of the following radio transmission:

"Emergency retreat" == "All Personnel Retreat" == "All Personnel Retreat."

3.4.2.1 Following this transmission, the person who initiated the retreat will report to Command over the radio, the situation which he deems life threatening; then, as soon as possible, face to face with the Commander.

3.4.2.2 Dispatch, upon hearing the Emergency Retreat transmission, will activate the Emergency Retreat Tone, a high pitched tone of fifteen (15) seconds duration on the tactical channel.

3.4.2.3 Apparatus operators, upon hearing the Emergency Retreat transmission will sound their air horns for fifteen (15) seconds.

3.4.2.4 Upon hearing the Emergency Retreat transmission, alert tone, or air horn signal, all personnel at the scene of an emergency will, **without delay**, return to their apparatus for a roll call. All Command Officers will return to the Command Post. Immediately following the procedure Command will have control over the tactical channel to confirm roll calls of units. All units will refrain from radio traffic.

3.4.2.5 The role call may be delayed in situations where it is necessary to move vehicles to a new, safer location. In such situations, roll call shall be conducted as soon as all personnel have fallen back to the retreat position/s, and it is practical to do so.

3.5 **SUMMARY**: The three-step retreat procedure notifies all personnel as follows:

1 - Radio transmission of "Emergency Retreat"
2 - 15 second alert tone by Dispatch
3 - 15 second air horn blast

The Emergency Retreat can be halted or reinitiated **only** by Command.

3.6 ***Also see Attachment A – General Safety and Health for Hazardous Materials Response***.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-4

SUBJECT: PERSONAL PROTECTIVE EQUIPMENT

4. Personal protective equipment (PPE) shall be selected and used in the proscribed manner which will protect employees from the hazards and potential hazards they are likely to encounter as identified during the site characterization and analysis. (1910.120 g 3)

4.1 SUIT TYPE AND MANUFACTURER

The PCHMRT currently uses a limited use entry suit. The criteria for suit material shall be established and monitored by PCHMRT Command Staff.

4.2 SELECTION AND USE

4.2.1 Suit level selection shall be made, based on known product information. If there is no positive identification made, or multiple products may be present, the highest level of suit shall be utilized. The following suit nomenclature shall be utilized:

4.2.1.1 Level A - To be selected when the greatest level of skin, respiratory, and eye protection is required.

4.2.1.1.1 Positive pressure, full face-piece self-contained breathing (SCBA), or positive pressure supplied air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH).
4.2.1.1.2 Totally encapsulating chemical-protective suit.
4.2.1.1.3 Coveralls, optional, as applicable.
4.2.1.1.4 Long underwear, optional, as applicable.
4.2.1.1.5 Gloves, outer, chemical-resistant.
4.2.1.1.6 Gloves, inner, chemical-resistant.
4.2.1.1.7 Boots, chemical-resistant, steel toe and shank.
4.2.1.1.8 Hard hat (under suit), optional, as applicable.
4.2.1.1.9 Disposable protective suit, gloves and boots (depending on suit construction, may be worn over totally encapsulating suit.) ***note*: it is permissible to wear firefighting bunker gear under Level A garments to serve as protection when dealing with a flammable substance.

4.2.1.2 Level B - To be selected when the highest level or respiratory protection is necessary but a lesser level of skin protection is needed.

- 4.2.1.2.1 Positive pressure, full face-piece self-contained breathing (SCBA) or positive pressure supplied air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH).
- 4.2.1.2.2 Hooded chemical-resistant clothing (overalls and long-sleeved jacket; coveralls; one or two-piece chemical-splash suit; disposable chemical-resistant overalls).
- 4.2.1.2.3 Coveralls, optional, as applicable.
- 4.2.1.2.4 Gloves, outer, chemical-resistant.
- 4.2.1.2.5 Gloves, inner, chemical-resistant.
- 4.2.1.2.6 Boots, outer, chemical-resistant, steel toes and shank.
- 4.2.1.2.7 Boot-covers, outer, chemical-resistant (disposable), optional, as applicable.
- 4.2.1.2.8 Hard hat, optional, as applicable.
- 4.2.1.2.9 Face shield, optional, as applicable.

4.2.1.3 Level C - To be selected when the concentration(s) and type(s) of airborne substance(s) is known and the criteria for using air purifying respirators are met.

- 4.2.1.3.1 Full-face or half-mask, air purifying respirators (NIOSH approved).
- 4.2.1.3.2 Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls).
- 4.2.1.3.3 Coveralls, optional, as applicable.
- 4.2.1.3.4 Gloves, outer, chemical-resistant.
- 4.2.1.3.5 Gloves, inner, chemical-resistant.
- 4.2.1.3.6 Boots, outer, chemical-resistant, steel toe and shank.
- 4.2.1.3.7 Boot-covers, outer, chemical-resistant (disposable), optional, as applicable.
- 4.2.1.3.8 Hard hat, optional, as applicable.
- 4.2.1.3.9 Escape mask, optional, as applicable.
- 4.2.1.3.10 Face shield, optional, as applicable.

4.2.1.4 Level D - A work uniform affording minimal protection, used for nuisance contamination only.

- 4.2.1.4.1 Coveralls.
- 4.2.1.4.2 Gloves, optional, as applicable.
- 4.2.1.4.3 Boots/shoes, chemical-resistant steel toe and shank.
- 4.2.1.4.4 Boots, outer, chemical-resistant (disposable), optional, as applicable.
- 4.2.1.4.5 Safety glasses or chemical splash goggles
- 4.2.1.4.6 Hard hat, optional, as applicable.
- 4.2.1.4.7 Escape mask, optional, as applicable.
- 4.2.1.4.8 Face shield, optional, as applicable.

4.3 TRAINING AND PROPER FIT

All personnel shall be trained and become familiar with the particulars of the currently provided suits. Multiple sizes are available in most cases.

4.4 DONNING AND DOFFING

Suits shall be donned by manufacturer guidelines. The entry team leader shall coordinate assisting entry team members into their suits, as needed. Use of a minimum of 2 support personnel per entry team member is recommended.

4.5 INSPECTION

4.5.1 All suits shall be stored in a protective bag or similar cover. When a suit is prepared for use, it shall be inspected for the following items:

4.5.1.1 Physical damage
4.5.1.2 Test log with date tested
4.5.1.3 The entry team leader and his support personnel shall inspect the donned suit using a checklist prior to leaving the dressing area.

4.6 IN-USE MONITORING

The entry team leader shall ascertain and track air-monitoring levels, for the purpose of assuring the integrity of the suits during use.

4.7 EQUIPMENT LIMITATIONS

Entry suits are only as effective as their weakest part, which is the window. Do not overlook any part of the suit.

4.8 DECONTAMINATION AND DISPOSAL

4.8.1 Suits that enter the hot zone, and come in <u>contact</u> with a known or unknown product shall be deemed unusable and shall be disposed of through accepted methods.
4.8.2 Suits that are donned, but do not enter the hot zone, or come in contact with a product in any manner, shall be tested utilizing the manufacturer's testing procedure and upon meeting those requirements, may be placed back in service.
4.8.3 A log of the testing dates shall be maintained on the suit and/or suit packaging for reference. The manufacturer permanently attaches the log sheets to each suit container. Responsibility for testing a suit shall fall to the member placing the suit back in service.
4.8.4 Upon disposal of a suit, the log shall be returned to the Pinellas County Department of Public Safety Services.

4.9 MAINTENANCE AND STORAGE

4.9.1 Each suit shall be maintained in accordance with the manufacturer's instructions as relates to the following:

4.9.1.1 Cleaning
4.9.1.2 Testing
4.9.1.3 Repair
4.9.1.4 Replacement
4.9.1.5 Storage
4.9.1.6 Record keeping/log sheet
4.9.1.7 Age
4.9.1.8 Chemical contamination/breakthrough
4.9.1.9 Decontamination

4.10 ***Also see Attachment A – Selection and Use of Specialized Chemical Protective Ensembles.***

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-5

SUBJECT: ADVERSE WEATHER CONDITIONS

5. The Pinellas County Hazardous Materials Response Team shall operate in compliance with the Pinellas County 600 standard operating procedures as they relate to adverse weather. ***Also see Pinellas County 600 Series 600-05.***

5.1 General information: Report severe weather conditions immediately to dispatch and the District Chief. The safety of personnel and the public shall be the first priority of officers commanding units in the field. Attention to debris, downed power lines, drainage collection, and blocked access is required. Damage to equipment and apparatus due to weather must be documented.

5.2 Specific Weather Situations:

5.2.1 **Heavy Rain**: Heavy rain shall not affect hazardous materials operations unless the material being cleaned up is sensitive to water contact. Action must be taken to keep the material from running off into sewers, canals, or retention ponds.

5.2.2 **Lightning**: Unless the spilled material must be dealt with immediately, crews shall not place themselves in jeopardy while conducting operations during severe lightning storms.

5.2.3 **Wind**: Personnel operating in winds of 30 miles per hour (m.p.h.) or higher shall wear protective clothing and helmets. Only critical hazardous materials operations are to be performed when wind speed exceeds 45 m.p.h. If surface wind velocity reaches 55 M.P.H., all hazardous materials team operations shall cease and all units shall return to quarters.

5.2.4 **Hail**: There will be no hazardous materials operations conducted during hailstorms.

5.2.5 **Tornadoes**: When observing a tornado or funnel cloud in the field, companies shall move away in right angles to the direction of the storm's travel, if at all possible. If proximity to the tornado prevents escape, the apparatus shall be abandoned and personnel shall seek shelter and stay together.

5.2.6 F**looding**: There will be no hazardous materials team activity in areas that are currently being affected by a flood, until such time as the water recedes, and/or the Hazmat command staff determines that Hazmat Team operations can be conducted safely.

5.3 Hurricane Weather Situations: All hazardous materials team units will remain in their respective stations during severe tropical storm or hurricane weather conditions. The hazardous materials command staff shall communicate briefly on sub-channels, before severe weather makes landfall, to formulate alternative response plans. Command staff will remain with their respective departments and will not be assigned to the county EOC.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-6

SUBJECT: HAZARD ASSESSMENT

6.0 RESPONSE: During response, hazardous materials team units shall attempt to obtain as much information as possible regarding the nature of the incident. Such information may be provided by dispatch or by agencies already on the scene and may include:

6.0.1 Name of materials involved - have spelling confirmed
6.0.2 Type of facility or location
6.0.3 Exposures and life safety considerations
6.0.4 Type of container/s
6.0.5 Size and/or rate of the spill or leak
6.0.6 Activity of the spilled material - fuming, reacting, etc.
6.0.7 Topography of the area
6.0.8 Current and expected weather conditions
6.0.9 Interventions already instituted by on-scene agency, if any

6.1 RESEARCH: All relevant information shall be relayed to units capable of providing adequate research. This shall be accomplished, as soon, as is possible since prioritizing further actions to be taken will rely heavily on the outcome of research efforts.

6.1.1 Reference materials used to perform research will be dictated by incident-specific circumstances. A minimum of two (2) separate resources should be consulted, when possible. Further specific guidelines regarding research are found in section 600-20.
6.1.2 While en route, the research team may forward information regarding isolation distances, medical treatments, or any other pertinent information to the incident commander.

6.2 SITE CONTROL: As soon as the type of material involved and their chemical properties are known, work areas shall be established. The nomenclature of these areas shall be:

6.2.1 Hot Zone Geographical location of potential Exposure
6.2.2 Warm Zone Physical limits of an area used for the reduction of contamination
6.2.3 Cold Zone A region where there is no potential for exposure to a hostile substance or to any product directly resulting from its release or loss of control.
6.2.4 The intent of this SOP is to initially establish hot and warm zones in a location that is free from potential chemical exposure. Criteria used to establish these zones and their shape and dimensions will vary depending upon chemical properties, terrain, weather conditions, and a number of other factors. In general, the following factors should be considered when establishing work zones:

6.2.4.1 Explosion potential
6.2.4.2 Flammability
6.2.4.3 Toxicity
6.2.4.4 Radioactivity levels

6.2.4.5 Potential for escalation of the size of the leak or release such as catastrophic failure of a tank or control device
6.2.4.6 Limitations imposed by physical characteristics of the location
6.2.4.7 Exposure potential due to current or future weather conditions
6.2.4.8 Exposure related to the terrain or topography of the leak or release

6.2.5 In incidents where the hazardous material is unknown or when there are no measurable levels, work zone dimensions and locations must be established based upon information available to the Hazmat team.

6.3 ZONE DEFINITIONS

6.3.1 HOT ZONE (exclusion zone) - this is the area where contamination does or could occur. The following guidelines will be used to determine the outer perimeter of the exclusion zone:

6.3.1.1 Detonation/deflagration hazard - the minimum recommended exclusion distance with these materials is 3000 feet.
6.3.1.2 Flammability hazards - perimeter is established where measured concentration meets or exceeds 10% of LEL concentration.
6.3.1.3 Toxicity - perimeter is established at a point where the lower limit of the STEL, TWA, LC50, IDLH, or TLVC is measured.
6.3.1.4 Oxygen (O_2) level - perimeter is established at a point where the oxygen (O_2) level is less than 19.5% or greater than 23.5%.
6.3.1.5 Radioactivity - establish perimeters where radiation levels of 1 mR/hr are detected.

6.3.2 WARM ZONE (contamination reduction corridor) - this is the transition area between the hot zone and the cold zone. The contamination reduction corridor is within this zone. The following guidelines are used to establish the outer perimeters of this zone:

6.3.2.1 Flammable hazard - perimeter to be established at a point where measured LEL is less than 10%.
6.3.2.2 Toxicity - perimeter is set at a point where levels are within the limits of PEL (permissible exposure limit), TWA (time weighted average over 8 hours), REL (recommended exposure level), or TVLC (threshold limit value ceiling).
6.3.2.3 Oxygen (O_2) levels within this zone must be between 19.5% - 23.5%.
6.3.2.4 Radioactivity - no detectable levels, above background, shall be present.

6.3.3 COLD ZONE (support zone) - ideally, this area will not contain measurable levels of any potential contaminants.
6.3.4 All zone perimeters should be clearly marked by using line tape, cones, or any other indicators that will provide visual delineation of the hazard control zones.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-7

SUBJECT: COMMUNICATIONS & DISPATCH

7.0 In order to maintain effective dispatch and radio communications, the Pinellas County Hazardous Materials Response Team acknowledges the need to work within the existing operational practices of the Pinellas County Emergency Communications Center system. In order to facilitate that relationship, we adopt the Standard Operating Procedures of the 911/Fire-EMS Dispatch Center, specifically, Phase IV, "Fire Department Operations SOP: Training Manual", as the Communications SOP of the Pinellas County Hazardous Materials Response Team. ***Also see Pinellas County 600 Series 600-07.***

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-8

SUBJECT: MUTUAL AID RESPONSE

8.0 The Pinellas County Hazardous Materials Response Team was created and exists to serve the citizens and visitors of Pinellas County. With the foregoing understood every request for mutual aid, which may involve potential life safety for any person, shall be honored and handled without delay.

8.1 The Fire Chiefs of the participating departments have established mutual Aid Response Policies. The Pinellas County Hazardous Materials Response Team will respond to requests for assistance from public safety agencies outside of Pinellas County. Requests for assistance may come directly to the Emergency Communications Center (ECC), individual fire departments, or to command staff individuals.

8.1.1 Prior to the dispatching of any hazardous materials units, the following must be verified:

8.1.1.1 Location of the incident
8.1.1.2 Type of assistance requested
8.1.1.3 Call back number, unit or person in command.

8.1.2 Once the above information has been confirmed, the following will apply:

8.1.2.1 Dispatch and respond the closest hazardous materials unit(s) and page the on-call Hazmat officer and the hazardous materials team commander. All pertinent information will be relayed to responding unit(s).
8.1.2.2 Depending on the assistance needed, additional Hazmat units will be sent, or specific units special-called to the incident.
8.1.2.3 The Director of Pinellas County Department of Public Safety Services shall be notified by the Dispatch Center when a Pinellas County Hazardous Materials Response Team unit is dispatched to a location outside of the borders of Pinellas County.
8.1.2.4 The on-call hazmat officer or hazardous materials commander will make contact with Public Safety Services to provide a briefing.

8.1.3 Hazmat units will have to operate on the mutual aid channel when leaving the county. Units at a scene shall utilize the talk around frequency for inter-unit traffic. Because of the possible loss of radio communications upon leaving Pinellas County, phone contact may have to be established between local staff and the Hazmat units on the mutual aid call.

8.1.4 Responses to jurisdictions outside of Pinellas County may require the Hazardous Materials Response Team personnel and units to support ongoing functions. This may require operating outside of standards or guidelines. If this is the case, the operations may continue as long as the operations or functions are safely performed.

8.1.5 If at any time the team personnel feel that additional equipment or personnel is needed, they may request it through the Hazmat team command staff and the incident commander.

8.1.6 When a Pinellas County Hazardous Materials Response Team unit responds outside of the county, the requesting agency shall replenish expendable supplies used. Additionally, the receiving agency shall be responsible for payment and provision of incident-specific supplies that a Pinellas County Hazmat Team unit may require to analyze and/or mitigate a particular situation for that agency. The requesting agency shall be responsible for payment of any invoices that arise as a result of a requested response. The requesting agency shall reimburse the Pinellas County Department of Public Safety Services, upon receipt of an official invoice.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-9

SUBJECT: COLOR CODED COMMAND VESTS

9.0 Vests shall be utilized when assigned as a group leader.

9.1 The following color standards will be observed:

9.1.1	Hazmat Group	Orange
9.1.2	Safety	Dark Green or Orange
9.1.3	Liaison	Orange
9.1.4	Research	Not applicable
9.1.5	Entry	Orange
9.1.6	Decon	Orange
9.1.7	Medical	Blue
9.1.8	Hazmat Team Member	Lime Green

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-10

SUBJECT: FLORIDA SERC HAZARDOUS MATERIALS GUIDELINES

10.1 The PCHMRT has adopted the Standard Operating Procedures developed by the Florida SERC Hazardous Materials Training Task Force. ***These policies are located within Attachment A***.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-11

SUBJECT: PINELLAS COUNTY ACCOUNTABILITY SYSTEM

11.0 PURPOSE: To enhance the safety of personnel operating on incidents by providing the Incident Commander with a system for tracking the number of units/personnel on the scene and their locations. Personal, company and incident scene accountability is of critical importance at every incident.

The accountability system shall in no way reduce the company officers primary responsibility to closely supervise crewmembers, provide for their safety and maintain communications with command.

11.1 SCOPE: The Pinellas County Accountability System is utilized by Fire and/or Emergency Medical Units on all emergency scenes in Pinellas County.

11.2 SYSTEM COMPONENTS:

11.2.1 **Individual Nametags** - a 2" x ½" hard plastic tag with Velcro backing. Each nametag will have the employee first initial and last name. A two -letter jurisdiction identifier will be on the far right edge.

- 11.2.1.1 Each employee will be issued a minimum of 3 (three) tags
- 11.2.1.2 White for Officers
- 11.2.1.3 Orange for Firefighters and Firefighter/EMTs
- 11.2.1.4 Blue for Paramedics
- 11.2.1.5 Spare tags not positioned on passports will be carried under the brim of the helmet on a piece of Velcro.

11.2.2 **Primary/Soft Passport** – The primary passport is constructed of flexible Velcro (2" x 4") with a permanently affixed unit designator at the top. A second removable unit designator tag (2" x ½") will be affixed at the bottom of the soft passport.

11.2.3 **Unit Roster/Hard Passport** – The unit roster is a hard backed piece of Velcro (2" x 4"). A permanently affixed unit designator will be at the top, a removable unit identifier (2" x ½") will be at the bottom.

11.2.4 **Apparatus Passport Drop-off Board** – The drivers door of each Engine, Truck and Squad will have a hard plastic board (8.5" x 11"). The front of the board will have Velcro attached so to receive at least six soft passports. The top of the board will be labeled with the agency name and apparatus identifier.

11.2.5 **Helmet Identifier** – If applicable to agency, each riding member will have an approximately (3"x2") unit identifier attached to the frontshield of their helmet. This helmet identifier must be in place anytime personnel are assigned or are riding a specific piece of apparatus.

11.2.6 **Unit Command Board** – The unit command board is a hard plastic board designed to hold passports and assist company officers in organizing and documenting an incident if the company officer assumes command. The unit command board will have Velcro attached to it to provide for the placement of soft passports and removable unit identifiers. Each

suppression unit will have one in their inventory if supplied by the agency. These boards can be used when company or command officers are assigned to a division/group or branch.

11.2.7 **Chief Officers Command Board** – The chief officer's command board is a large plastic board that has Velcro or magnetic attachments and large writing areas to track units and assignments for an entire incident. These boards will normally be carried in command vehicles for use by the incident commanders.

11.3 PROCEDURE:

11.3.1 At shift change or any time the riding assignments for a piece of apparatus changes, the soft/primary and the hard/unit passports shall reflect the current personnel riding that particular piece of apparatus of vehicle.

11.3.2 The soft/primary passport will be carried by the unit officer on their person. Each agency can determine the location for carrying of the soft/primary passport on the officer.

11.3.3 The hard/unit passport will be affixed to the officer's door /passenger door of the unit.

11.3.4 Staff and command personnel should have their hard/unit passport attached to their driver door.

11.3.5 The unit officer's nametag shall be placed on each passport under the permanently affixed unit identifier.

11.3.6 The driver's nametag will then be placed under the officers. If the driver is remaining outside the IDLH they will have their name placed upside down.

11.3.7 All other assigned personnel will then have their nametags attached below the driver.

11.3.8 It is the ultimate responsibility of the officer to ensure that the soft/primary passport and the hard/unit roster are accurate and up to date. Personnel assigned to the apparatus are to make sure that they are accurately accounted for on both passports.

11.4 IMPLEMENTATION AT INCIDENT

11.4.1 Implementation of the passport accountability system will occur at every incident.

11.4.2 On single company incidents, passports are to remain on the apparatus and the officer or the designated person.

11.4.3 On multi company incidents, the first arriving Haz Mat Unit will by default become the initial accountability location for the incident. The first arriving officer will place their primary/soft passport from their person onto the apparatus passport drop-off board before going to work or into the hazard/IDLH atmosphere or zone.

11.4.4 All subsequent arriving units will place their primary/soft passports at this location until Haz Mat area is established.

11.4.5 At no time should the primary/soft passport be taken into a hazard or IDLH atmosphere or zone.

11.5 HAZMAT GROUP LEADER RESPONSIBILITIES

11.5.1 The leader will maintain accountability of all on-scene Haz Mat Team Members and must coordinate accountability of Haz Mat members with Command.

11.5.2 Once the Haz Mat Group area has been establisher all passports should be collected and brought to this area.

11.5.3 The passports should be arranged in an organized manner to assist in completing PAR

checks, assignments or accounting for lost or trapped personnel/ companies.

11.5.4 Strong consideration should be given to have a Haz Mat Group Leader aide to assist in tracking personnel/companies and ensure accountability. This will allow the Haz Mat Group Leader to focus on the incident and the incident objectives.

11.6 CREW ACCOUNTABILITY

11.6.1 Accountability will work only with a strong personal commitment to the safety system.

11.6.2 Officers shall maintain an accurate tracking and awareness of crews assigned to them. This requires the Officer to be in his/her assigned area and maintain **close** supervision of assigned crews.

11.6.3 Crews arriving on the scene should remain intact when possible. A minimum crew size will be considered two or more members; and a radio is required for each crew.

11.6.4 All crews will enter together, stay together, and come out together. Under certain conditions, crews may be split, provided that: (1) doing so does not reduce the level of safety for any crew members, (2) no personnel are operating in the hazard zone alone, (3) each of the spilt crews has a portable radio and appropriate PPE, (4) the accountability officer is updated to permit accurate tracking of personnel, and (5) the Haz Mat Group Leader authorizes the change.

11.7 PERSONNEL ACCOUNTABILITY REPORT – PAR

11.7.1 The Haz Mat Group Leader or designee shall be responsible for conducting a PAR check at a minimum of every 20 minute intervals. It is important when conducting PAR checks that the units/personnel in the IDLH atmosphere, first then the balance of the units assigned to the incident.

11.7.1.1 Group/Division officers shall account for all personnel under their command and be prepared to report this when called by the Haz Mat Group.

11.7.1.2 Unit officers shall report the total number of personnel assigned to their unit and indicate the number of people operating outside of the hazard zone.

11.7.1.3 At completion of a PAR check, the time shall be noted on the appropriate worksheet that all personnel were accounted for or which personnel were not accounted for.

11.7.1.4 If any personnel cannot be accounted for, the Haz Mat Group Leader shall report the status of missing personnel as "unknown" and give the Incident Commander their last known location and NAME. Group/division officers shall then initiate search procedures within their own area. All other groups/divisions operating on that incident shall maintain their current positions and assignments unless otherwise directed by the Incident Commander. There will be an activation of the RIT/Backup Team.

11.7.1.5 A PAR check may be initiated at anytime, but some situations that occur will require that it be completed are, but not limited to:

11.7.1.5.1 Report of a member or crew missing or trapped.

11.7.1.5.2 When a unit/crew cannot be contacted in the Hazard

Zone after three consecutive attempts at radio contact and there is no visual contact.

11.7.1.5.3 Sudden hazardous change on the incident scene such as vapor release, collapse, etc.

11.7.1.5.4 Incident conditions deteriorate to a point that evacuation is ordered.

11.7.1.5.5 When the incident is declared under control.

11.8 ACCOUNTABILITY OFFICERS May be assigned by the Haz Mat Group Leader to assist with personnel tracking. This officer will be responsible for the accountability of all members of the Haz Mat Group. It is recommended that this officer be at the same location as the Haz Mat Group Leader and have access to all passports assignments.

11.9 TERMINATING THE PASSPORT SYSTEM: Passport accountability will be maintained until formal Command is terminated. Upon release from the incident, Company Officers and crew members will retrieve their passports from the Haz Mat Group Leader or the Accountability Officer.

11.10 ***Also see Pinellas County 600 Series 600-11.***

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-12

SUBJECT: REHABILITATION

12.0 DEFINITION: The rehabilitation site is an area outside of the immediate incident where crews can go for rest, nourishment, comfort, and medical evaluation

12.1 PURPOSE: This is an important function especially during periods of hot or cold weather and during incidents of long duration. One member, a paramedic when possible, should be designated as the Rehab Group, and will report directly to the Safety Officer.

12.2 REHAB PROCESS: The Safety Officer must assure that personnel go to the rehab area, which is away - uphill and upwind - from the hazards of the incident. KEEP CREWS TOGETHER AS MUCH AS POSSIBLE

12.2.1 Rehab shall be mandatory after:

12.2.1.1 The depletion of one (1) SCBA air bottle while in a chemical protective suit.
12.2.1.2 Depletion of two- (2) SCBA air bottles while not in a chemical protective suit.
12.2.1.3 The Safety Officer must monitor the working conditions and order crews to rehab based on climactic as well as conditions of activity.

12.3 REHAB PROCEDURES:

12.3.1 The Rehab area should provide an atmosphere-controlled area relative to outside or work area conditions, utilizing mechanical devices, if necessary, to hasten the recovery of team members.
12.3.2 Upon arrival at Rehab, personnel shall remove SCBA and protective gear. Removal of protective garments shall be done so as to facilitate maximum recovery for the worker.
12.3.3 All personnel will check into the rehab area and their names and unit designation will be recorded on the Rehab Group Worksheet Company Check In/Check Out Form, Form HM007. Rehab worksheets will become part of the incident record upon conclusion of the incident.
12.3.4 An ambulance should be provided near the rehab site to assist in screening personnel and to provide a climate controlled area as necessary.
12.3.5 A list of units assigned to the incident should be provided to the Rehab Group as soon as possible. If needed, Rehab should contact dispatch via an alternate channel to obtain the list of units and their arrival times.
12.3.6 Personnel in rehab will be encouraged to drink ample amounts of fluids - water, Gatorade®, Ten-K®, or some other brand of electrolytic replacement product.
12.3.7 The Rehabilitation Group Medical Worksheet, Form HM007a will be used to record Time-in to the rehab, blood pressure, pulse readings, and body temperature.

12.3.8 Qualified personnel may perform initial medical evaluation of blood pressure and pulse. Out of range vital signs shall be referred to a paramedic or the Safety Officer.

12.3.9 All personnel shall have 2 (two) sets of vital signs taken prior to release from rehab. These should be done at fifteen (15) minute intervals. Personnel will be held in REHAB if:

12.3.9.1 Pulse rate exceeds 120 beats per minute

12.3.9.2 Blood pressure is less than 90 mm/hg., systolic

12.3.10 During Rehab, support personnel can change out air bottles and service SCBA's.

12.3.11 After Rehab, personnel by unit, group, or task function, should be returned to a designated area (Command, Staging, or Group/Division) for re-assignment.

12.4 ***Also see Pinellas County 600 Series 600-12.***

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-13

SUBJECT: SINGLE HAZMAT UNIT RESPONSE/CONSULTATION

13. This section provides guidance for single units as they provide consultation to on-scene units and/or respond and position for operation at a scene.

13.1 Consultation: Any Haz Mat unit may be requested by any fire/rescue unit to provide an off-site consultation for incidents that relatively minor in nature (ie: non-leaking abandoned drums; unknown substances; suspicious powders). Consultations are conducted via phone or radio to better provide direction to field units for proper control, handling, and/or disposal of products.

13.2 Response: Units shall respond in "non-emergency status" to all single unit dispatches unless advised to do otherwise or as established by SOP. Traffic preemption device shall be operating and apparatus shall follow the route affording them the quickest total travel time. All personnel shall remain seated and wear provided restraints. Drivers must use the utmost care and pay extra attention to safety when moving. All emergency units shall conform to Florida Statutes, Chapter 316.072 for response safety regulations. Responding units shall maintain radio contact on the appropriate channel with Dispatch and advise when on-scene.

13.3 Standard Company Placement/Functions:

13.3.1 Select a proper staging location that will account for the following criteria.

13.3.1.1 Stage upwind, uphill.
13.3.1.2 Announce staged location.
13.3.1.3 A safe location (based upon the potential for toxic vapors or explosion).
13.3.1.4 Have adequate access to the scene.
13.3.1.5 Be out of the way of other units that are operating in the area.
13.3.1.6 Position vehicles facing away from the scene for immediate/emergency departure.

13.3.2 If a Staging Area has been established prior to PCHMRT arrival, all Hazmat units should respond to this area. **The first arriving Hazmat unit should evaluate the staging area to ensure that it meets the team's criteria.**

13.3.3 If the PCHMRT Staging location becomes untenable (dangerous) upon arrival or during the course of the incident, it shall be moved and Command advised of the relocation effort.

13.3.4 Unit Officer shall meet with Command to receive a situation status and begin to formulate a plan.

13.3.4.1 Should the response of other Hazmat Units be required the additional unit(s) shall report to the Hazmat Group Officer for assignment and support of already operating Hazmat companies.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-14

SUBJECT: RESPIRATORY PROTECTION

14.0 This respiratory program follows OSHA standard 1910.134. This protocol is intended for the use of positive pressure self-contained breathing apparatus (SCBA), cartridge-type respirators, and HEPA filter masks.

14.1 Every technician shall be medically certified and fit tested annually for the appropriate respirator available to be used.

14.2 Read and heed all instruction provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.

14.3 NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator packaging. It will tell you what the respirator is designed for and how much it will protect the wearer.

14.4 For quick reference, this information can be located in the NIOSH Pocket Guide to Chemical Hazards, under Recommendations for Respirators, and Table4.

14.5 Self contained breathing apparatus (SCBA) shall be utilized as follows:

14.5.1 Any time a "level A" suit entry is chosen.

14.5.2 Any atmosphere known to be oxygen deficient, or could become oxygen deficient.

14.5.3 Any atmosphere toxic, radiological, or incompatible with cartridge respirators.

14.5.4 Any atmosphere of elevated temperature, risk of flashover or backdraft.

14.5.5 Any atmosphere of unknown quality.

14.6 Cartridge respirators and HEPA filter masks shall be utilized as follows:

14.6.1 All areas being monitored for immediately dangerous to life and health (IDLH) values in parts–per-million (ppm).

14.6.2 All appropriate locations where extended operations are in effect and respirator use will allow the user a longer and/or safer working period.

14.6.3 In the Decontamination Area, as research permits. An air-purifying respirator (APR), when appropriate can facilitate greater ease of movement and longer duration of work time.

14.6.4 The Pinellas County Hazardous Materials Response Team exclusively uses the Scott full-face mask cartridge adapter.

14.6.5 The Pinellas County Hazardous Materials Response Team carries two types of cartridge, the SCOTT Air Purifying Cartridge # 045123 and the SCOTT HE/P100 Cartridge. Refer to chemical index that is packed with each cartridge to determine compatibility and length of protection using an air-purifying respirator.

14.6.6 Keep track or your respirator so that you do not mistakenly use someone else's respirator. Discard at termination of your shift.

14.7 Respirators shall not be used in the following situations:

14.7.1 Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

14.7.2 Do not wear your respirator into known oxygen-deficient atmospheres.

14.7.3 Do not wear your respirator any potentially or suspected oxygen-deficient environments.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-15

SUBJECT: RESPONSE TO SUSPICIOUS POWDERS or PRODUCTS

15.0 Specimen Collection and Shipment Guidelines

The following guidelines should be observed when responding to a potential Bioterrorism event. These steps have been designed for the purpose of providing the maximum protection for the first responders, transport personnel, laboratory personnel, and the public while preserving the analytical and legal integrity of the suspect item. The initial steps within this outline are best performed by trained law enforcement and PCHMRT personnel. The procedures involved with containment, sampling, transportation, and laboratory acceptance should be adhered to as close as absolutely possible. Exceptions to procedure should be noted on the appropriate form.

15.1 Personal Protective Equipment (PPE) Guideline

SEE FLORIDA SERC HAZMAT FOG 2011, PAGE 23

15.2 Identification and Evaluation of Suspect Item:

A. Evaluation of the suspect item should be performed by the appropriate law enforcement agency as to the credibility or risk level of the item and its potential danger to the immediate area. If the item is sealed, as in a package or letter, and cannot be ruled out as a potential explosive device, then the bomb squad must screen the item prior to it being transported to the laboratory.
B. All samples should be screened for alpha, beta, and gamma radiological contamination using an appropriately calibrated detection unit.
C. Sample collection method for on-scene initial testing.

To occur in the Hot (Exclusion) Zone

1. Member 1 must ensure procedure 15.1.A and 15.1.B are completed
2. Member 2 shall carefully, with minimal agitation, collect a minimum of 2 small product samples using DRY and STERILE Copan swab kit and place each sample swab back inside the protective tube *(SEE SAMPLING TECHNIQUE SECTION BELOW).*
3. Leave remaining product untouched until initial sample testing and threat evaluation can be completed.

To occur in the Warm (Contamination Reduction) Zone

1. Member 1 sets up a minimum of 2 different Powder Screening Test Kits
    a. 20/20 test kit (or similar)
    b. BTA Raid 8 test kit (or similar)
2. Member 2 conducts screening kit procedures and reports results to Entry Supervisor

3. If appropriate, conduct a 3rd screening utilizing either of the HazMat ID units located on H5 and H66 or the GCMS located on H38 and report results to Entry Supervisor.
4. If further testing is to be conducted proceed to Containment and Transport section of this SOP

15.3 Containment and Transport of Suspect Item:

A. If the item is small enough to fit inside a one-gallon evidence container, it shall be packaged in the following manner:

To occur in the Hot (Exclusion) Zone

1. Carefully, with minimal agitation, place the item into a sealable, plastic bag. Assure bag is properly sealed.
2. Using a hand held spray bottle containing a fresh 10 percent solution of household bleach, (9 parts water for every 1 part household bleach) spray the entire sealed bag with the bleach solution.
3. Place the decontaminated sealed bag into a second plastic bag. Assure bag is properly sealed and again saturate the second bag with the bleach solution.
4. Place the sealed bags into clean, labeled, one-gallon evidence container and seal the top securely.
5. Completely spray the entire evidence container with the bleach solution.

To occur in the Warm (Contamination Reduction) Zone

1. Once again, completely spray the entire evidence container with the bleach solution. Allow container to completely air dry (10 to 15 minutes).

To occur in the Cold (Support) Zone:

1. Complete the *Domestic Security Environmental Sample Submission Form* and submit the form and evidence container/sample to the Law Enforcement agency having jurisdiction for transport to the State Laboratory.

B. If the item is to be sent for Lab Testing and is too large to fit within a one-gallon evidence container, then additional swab samples must be taken and packaged. Please note that steps 1-5, below, can be performed prior to entering the Hot (Exclusion) Zone), since these steps are easier to perform without wearing heavy gloves and other PPE.

To occur in the Hot (Exclusion) Zone:

1. Member 1 must ensure procedure 15.1.A and 15.1.B are completed
2. Member 2 shall carefully, with minimal agitation, collect a minimum of 2 small product samples using a DRY and STERILE Copan swab kit and place each sample swab back inside the protective tube *(SEE SAMPLING TECHNIQUE SECTION BELOW).*

    a. Remove the swab from the tubule and swab the suspect area, covering a nine (9) square inch area while rotating the swab.

b. Place the swab back into the tubule and then place into a sealable plastic bag and ensure bag is securely sealed.
c. Using a hand held spray bottle containing a fresh 10 percent solution of household bleach, spray the entire, sealed bag with the bleach solution.
d. Place the decontaminated sealed bag into a second bag. Again ensure bag is securely sealed.
e. Again saturate the second sealed bag with the bleach solution.
f. Place the bags into clean, labeled, one-gallon evidence container and seal the top securely.
g. Completely spray the entire evidence container with the bleach solution.

To occur in the Warm (Contamination Reduction) Zone:

1. Once again, completely spray the entire evidence can with the bleach solution. Allow can to completely air dry (10 to 15 minutes).

To occur in the Cold (Support) Zone:

1. Complete the *Domestic Security Environmental Sample Submission Form(s)* and submit the form and evidence container/sample to the Law enforcement agency having jurisdiction for transport to the State Laboratory.

FLORIDA DEPARTMENT OF HEALTH

Rick Scott
Governor

H. Frank Farmer, Jr., M.D., Ph.D.
State Surgeon General

DOMESTIC SECURITY ENVIRONMENTAL SAMPLE SUBMISSION FORM – BIOLOGICAL

Sample Information:

Case/Alarm Number: _____
County: _____
Collection Date/Time: _____
Incident address: _____
Targeted individual's name (if any) _____

For Laboratory Use Only

Lab Sample ID Number: _____
DASH Number: _____
Other ID Number: _____

Sample description: □ Bulk powder □ Letter/envelope □ Swab □ Other: _____
Letter/package opened (if applicable) □ no □ yes □ n/a

POC for agency collecting sample:
(agency)_____(name)_____(phone)_____

POC for agency transporting sample:
(agency)_____(name)_____(phone)_____

ALL SAMPLES MUST BE SCREENED BEFORE SUBMISSION TO THE LABORATORY

Field Hazard Screens performed by: _____

*Explosives/Energetics	□ negative	Test(s) used: _____
*Chemical Hazard	□ negative	Test(s) used: _____
*Radiological Hazard	□ negative	Test(s) used: _____

***Laboratory will only accept samples screened negative for the above hazards.**

Credible Threat Assessment Criteria:

Stated or implied threat	□ no	□ yes	describe _____
Visible substance	□ no	□ yes	describe _____
Uncertain or suspicious origin	□ no	□ yes	describe _____
Person or persons exposed	□ no	□ yes	approximate number _____

Collection Site Information:

Building evacuated	□ no	□ yes
Building closed	□ no	□ yes

NOTIFICATIONS:

Notification made to BT Coordinator at LRN Reference Lab (see page 3 for contact information)
By whom? _____
Date/Time _____
Notification made to County/City Warning Point
By whom? _____
Date/Time _____

NOTIFICATION OF RESULTS:

In order to ensure timely notification, please provide contact information for someone with 24/7 availability, who will be responsible for disseminating results to other local agencies.

NAME: _____ **WORK NUMBER:** _____
24/7 TELEPHONE NUMBER: _____ **FAX NUMBER:** _____
AGENCY: _____
AGENCY ADDRESS: _____

Signature: _____ Date: _____ Time: _____ AM PM

NOTE: SAMPLE WILL BE DISCARDED 30 DAYS AFTER TESTING UNLESS OTHERWISE INSTRUCTED

Responder Incident Report attached: □ no □ yes

DH Form _____ (04/11)

FLORIDA DEPARTMENT OF HEALTH

Rick Scott
Governor

H. Frank Farmer, Jr., M.D., Ph.D.
State Surgeon General

DOMESTIC SECURITY ENVIRONMENTAL SAMPLE SUBMISSION FORM – BIOLOGICAL

Instructions for Submitting Samples for Biological Agent Testing

FOR SAMPLING AND DECONTAMINATION PROCEDURES, PLEASE VISIT WWW.BT.USF.EDU/SAMPLECOLLECTION.HTM

Environmental Samples:

1. Will be accepted by the state laboratory only after law enforcement and HazMat have performed their assessment to screen for radiological, explosive and chemical hazards.
2. Only suspected samples such as swabs, powder, contaminated paper, letters or liquid should be submitted for testing. Samples should be double-bagged and put in a container no larger than a one-gallon paint can (preferred container). Sample submission form must be completed and accompany the sample.
3. Extraneous materials such as gloves, towels, and clothing **must not** be included with the samples. Extraneous materials should be placed in a biohazard bag and disposed of locally according to state and federal guidelines.

Instructions for Completing This Form

Targeted Individual: The person to whom the letter/package was addressed.

Sample description: Please check the word which best describes the sample, i.e. Bulk powder, Letter/Envelope, Swab, Other (please describe).

POC for agency collecting sample: Print the name of the agency, the point of contact for that agency, and cell number.

POC for agency transporting sample: Print the name of the agency, the point of contact for that agency, and cell number.

Field Hazard Screens: **All samples must be screened before submission to the laboratory. At a minimum, this includes:**

- **Explosives – X-ray required for unopened packages** Colorimetric test
- **Chemicals –** Screen for corrosives, oxidizing agents, and volatile organic compounds (VOCs).
- **Radiological –** Direct alpha and beta survey

Notification of Results: **Print name and contact information for the individual who should receive notification of results as soon as laboratory testing is completed (24/7). This person should accept responsibility for disseminating results to other agencies involved in the incident.**

Signature / Date / Time: Signature of individual delivering sample.

Responder Incident Report Attached: Has the Responding Agency attached an incident report to the sample submission form?

DH Form _____ (04/11)

FLORIDA DEPARTMENT OF HEALTH

Rick Scott
Governor

H. Frank Farmer, Jr., M.D., Ph.D.
State Surgeon General

DOMESTIC SECURITY ENVIRONMENTAL SAMPLE SUBMISSION FORM – BIOLOGICAL

LRN Reference Laboratory Contact Information

The following Department of Health laboratories can accept environmental samples for biological testing. After hours telephone: 1-866-FLA-LABS (1-866-352-5227)

Department of Health
Bureau of Laboratories – Jacksonville
1217 Pearl Street
Jacksonville, FL 32202
Telephone: (904) 791-1500
Deliveries can be accepted at any time (24/7) by the **BT COORDINATOR.**
Call 904-945-4415 or 904-637-9260.

Department of Health
Bureau of Laboratories – Tampa
3602 Spectrum Boulevard
Tampa, FL 33612
Telephone: (813) 974-8000
Deliveries can be accepted at any time (24/7) by the **BT COORDINATOR.**
Page (813) 883-5929.

Department of Health
Bureau of Laboratories – Miami
1325 NW 14th Avenue
Miami, FL 33125
Telephone: (305) 324-2432
Deliveries can be accepted at any time (24/7) by the **BT COORDINATOR.**
Call (305) 409-9925 or (305) 409-9924.

Department of Health
Bureau of Laboratories – Pensacola
50 West Maxwell Street
Pensacola, FL 32501
Telephone: (850) 595-8895
Deliveries can be accepted at any time (24/7) by the **BT COORDINATOR.**
Page (888) 210-3285.

DH Form _____ (04/11)

GENERAL RESPONSE GUIDELINES PROVIDED TO ALL PINELLAS COUNTY FIRE/RESCUE DEPARTMENTS

In response to suspicious envelope calls for service, the following general procedure has been developed to assist in the proper handling of these incidents.

1. The Pinellas County Emergency Communications Center (911) will be notified of all suspicious envelopes and will dispatch units according to protocol. Call takers will attempt to screen calls to determine if there is a credible threat or not. Only if there is a credible threat (open flat letters with a substance) will an FD unit be dispatched. All non-credible threats (unopened flat letters with no substance present) will be forwarded to local law enforcement for handling. The caller will be advised not to disrupt or open the envelope and recommend that they dispose of it in an outside trash container. If the caller insists on receiving assistance or there are other suspicious elements that should be investigated the call will be transferred to local law enforcement.

    - If there is an envelope or package with a substance present and *no* medical complaint, 911 will code this as a Haz Mat Investigation, which will be a single engine response unless otherwise requested by department.
    - If there is a medical complaint, 911 will again code the call as a Haz Mat Investigation and ensure an ALS unit is dispatched. An ambulance transport unit will be sent if deemed necessary by EMS protocol or at the request of the unit on scene.
    - If there is an envelope or package with no substance present and the caller insists on getting assistance, the caller will be transferred to the appropriate law enforcement agency. Fire units will be dispatched to assist with these calls only when requested by law enforcement.

2. Upon arrival of first response units:

    - Envelope *unopened:* DO NOT TOUCH it. Simply isolate the envelope from further contact and request a single HAZMAT unit to respond. Unopened envelopes do not present a significant exposure problem. If it is absolutely necessary to handle the envelope before Haz Mat arrival, use of medical gloves, Tyvek (privacy suits), and SCBA should be utilized. There is no need for any decontamination of individuals who have not had direct contact with the letter that contains an unknown substance. Complete a medical report on each person contacting the envelope, with refusal on back.
    - Envelope *open:* There is a potential for exposure. DO NOT TOUCH the envelope. Isolate the envelope and secure the area from further contact and request a single HAZMAT unit to respond. Hand, exposed skin, and face washing may be all that is necessary. Post exposure decontamination should be limited to those with actual material on them and based on the credibility of the threat. Consideration for additional decontamination can be made to those who wish to be decontaminated for their own peace of mind. Instructions should be given to "victims" for showering at home and laundry.

- Probable contamination: DO NOT TOUCH the envelope. Isolate the envelope and secure the area from further contact and request a single HAZMAT unit to respond. Persons who have had more extensive contact with the unknown substance should be advised to disrobe, placing their clothing in a plastic bag (seal the bag after clothing is placed inside), and shower with soap and copious amounts of water indoors. Provide privacy. They should then be advised to be aware of potential symptoms. If any occur, they should seek immediate medical attention. If possible, do not touch the patient prior to showering. Wear appropriate PPE for Bloodborne pathogens when treating/transporting patient. Medical report with refusals must still be taken but only after the patient has showered.
- If you *suspect a biological*, you can expect to encounter any form of powdery substance (any color). The powder is simply the carrier. You cannot see the spores. Exposure may be from skin contact, ingestion or inhalation. According to the CDC, there is no evidence of person-to-person transmission. Spores can only be destroyed by steam or burning. Disinfectants may be used for surface decontamination. A typical disinfectant is a 0.05% solution of bleach (1 tbsp. of household bleach per gallon of water).

3. As per normal Hazmat protocol, response will be at the request of the local fire agency.

4. Suspicious packages (larger than an envelope) should be treated under bomb threat protocols until such a device has been ruled out. Normal size envelopes can also present the potential for an explosive device according to TPD.

5. Upon arrival, Haz Mat personnel will assess the situation and determine the level of PPE (as per Haz Mat Command Staff) necessary for entry and handling of material.

6. Suspected envelope should be double bagged in zip lock bags and placed in a protective evidence container. Specific Haz Mat handling and packaging protocol are found in Attachment A of this document. Hazmat personnel should only open suspected envelopes if there is no credible threat (i.e. no powder or threatening language) to rule out the possibility of a hidden credible threat inside the envelop.

7. Envelopes *without* any substance will be offered back to the owner or placed in a trash receptacle (not credible). Envelopes *with* a substance will be sealed according to Attachment A of this document (credible).

8. The local Fire/EMS agency will obtain, at a minimum, individual EMS reports with refusals from all individuals (multiple refusal sheets are not to be used) that may have had contact with the substance. Otherwise a fire report is sufficient.

9. For fire reports the TSF code to be used is 66 (ignition factor should be '00" if required). For EMS reports the TSF code is 305.

10. The now sealed container is to be turned over to Law Enforcement by PCHMRT (continuity of the chain of evidence). Container is to be handled by local Law Enforcement in accordance with their protocols. The container will be tracked by law enforcement case number.

11. HM Command staff assigned to the call will ensure FBI has been notified and consulted regarding suspected envelope and what is to be done with the container. Initial notification of the incident will be done by the 911 center.

12. State Watch Point to be notified and advise of the situation by Pinellas County Emergency Communications 911 Center (State assistance needed / not needed will be determined by the assigned HM Command staff)

13. The local Department of Health (DOH) office is to be notified of each incident through Pinellas County Emergency Communications 911 Center and advised of the disposition of the container by the assigned HM Command Staff.

14. The State DOH Lab in Tampa (Florida Department of Health, Bureau of Laboratories-Tampa, Building, 3602 Spectrum Blvd., Tampa, Florida, Emergency Beeper 813-883-5929) is to be contacted by the local DOH office and arrangements made for the container to be transported to the State facility for evaluation. Open letters with a powder will be transported to the lab at the direction of DOH. Containers are to be tracked by local Law Enforcement case numbers. Upon arrival at the lab, lab officials will assign a lab tracking number to the sample. The Law Enforcement agency will be given that lab tracking number.

15. *Law Enforcement is to transport the container,* following their guidelines, to the State DOH Lab in Tampa located at University of South Florida (maintain the chain of evidence).

16. *The State DOH Lab will run appropriate tests* on the substance and will report the results of the test to the local DOH office and the Law Enforcement Agency transporting the sample.

17. The local Law Enforcement Agency is responsible for notification of the citizen complainant of the results of the testing. The Law Enforcement Agency will advise the public of the telephone numbers to call with questions regarding their sample(s).

18. The local DOH office is responsible to notify all individuals affected of the results of the lab's testing of positive results to include, HM staff officer, law enforcement agency, and the effected citizen. The local DOH will advise all affected individuals of appropriate medical follow-up.

19. After testing, Law Enforcement is responsible for the retrieval of the evidence for further investigation purposes.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-16

SUBJECT: RESPONSE TO ACTS OF TERRORISM

16.0 In order to maintain effective and coordinated operations throughout Pinellas County, the Pinellas County Hazardous Materials Response Team acknowledges the need to work within the existing operational practices of the Pinellas County Fire Department Operations SOP. In order to facilitate that relationship, we hereby adopt the Standard Operating Procedures of the ***Pinellas County Fire Department Operations SOP, specifically, Section 600-16, "Response to Terrorism."***

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-17

SUBJECT: UNUSUAL RESPONSE

This section not yet completed.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-18

SUBJECT: HAZMAT GROUP LEADER

18.0 The following procedure is to be used as a guideline to members of the Hazmat Team who are assigned Hazmat Group Leader:

18.1 Organize and coordinate an initial meeting of on-scene Fire Department officers for a briefing.

18.2 As Hazmat units arrive, or as soon as possible, organize, and coordinate a team briefing.

18.3 At the point of the team briefing, assign personnel as specific Group Leaders:

18.3.1 Decon
18.3.2 Entry
18.3.3 Medical
18.3.4 Research
18.3.5 Safety
18.3.6 Liaison, if needed
18.3.7 Equipment, if needed

18.4 Assigned leaders shall acquire the appropriate vest and clipboard from H29. The Hazmat Group Worksheet, Form HM003 shall be utilized.

18.5 Coordinate with all Group Leaders as necessary.

18.6 Plan and lead the post-incident critique.

18.7 Compile and forward all necessary and pertinent paperwork to Pinellas County Public Safety Services.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-19

SUBJECT: SAFETY GROUP

19.0 The following procedure is to be used as a guideline to members of the Hazmat Team who are assigned Safety Group:

19.1 Attend information briefing and/or determine assignments of Group leaders. Upon assignment of Safety Group Leader, acquire vest and clipboard from H29.

19.2 The Safety Officer Worksheet, Form HM005 should be utilized to guide duties.

19.3 Throughout the incident, be prepared to overview every operation and plan. Remain mobile and work within the accepted guidelines of the Incident Management System (IMS) to overview and assure safe working conditions for all involved.

19.4 Upon completion of the incident, assure par levels and coordinate and/or assist with demobilization efforts. Monitor procedures throughout entire demobilization including clean-up efforts.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-20

SUBJECT: RESEARCH

20.0 The following procedure is to be used as a guideline to members of the Hazmat Team who are assigned Research Group Leader:

20.1 Attend information briefing and/or determine assignments of Group leaders.

During the research process

20.2.1 Use the research form (HM001) to document information found.

20.2.2 Reference at least three (3) separate sources of information, if available, to assure complete information

20.2.3 Use the following to assist in the research process:

20.2.3.1 Books from the vehicle library

20.2.3.2 Computer Data Banks

20.2.3.3 Technical Information Sources

20.2.3.3.1 CHEMTREC

20.2.3.3.2 Facility personnel

20.2.3.3.3 Product manufacturers

20.3 Throughout entry proceedings, continually monitor radio communications. Relay/update other Group leaders to best co-ordinate efforts.

20.4 Upon completion of the entry, coordinate subsequent entries or assist with demobilization efforts.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-21

SUBJECT: ENTRY

21 The following procedure is to be used as a guideline to members of the Hazmat Team who are assigned Entry Group Leader:

21.2 Attend information briefing and/or determine assignments of Group leaders. Upon assignment of Entry Group Leader, acquire vest and clipboard from H29. The Entry Team Worksheet (HM 004) shall be used.

21.3 Plan, reviews, and understands the entry plan and assesses personnel requirements.

21.4 Assign personnel to specific tasks:

21.4.1 Two (2) to Recon Team, if applicable
21.4.2 Two (2) to Primary Entry Team
21.4.3 Two (2) to Back-up Entry Team

21.5 Acquire all necessary equipment needed to accomplish the entry.

21.6 Perform a pre-entry briefing with the entry team. Include any instructions on the use of specialty equipment to be employed.

21.7 Throughout entry operations, continually perform and monitor radio communications from the entry team and relay/update other Group leaders as necessary to maintain coordination of work.

21.8 Upon completion of the entry, coordinate subsequent entries or assist with demobilization efforts.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-22

SUBJECT: DECONTAMINATION

22 Job Description and Responsibilities

22.2The Decon Team Leader shall:

22.2.1 Coordinate with the research team to determine appropriate level of decontamination and appropriate solution to be used.
22.2.2 Coordinate with entry team to determine suit and equipment being used.
22.2.3 Discuss the decontamination procedures to be utilized with his team.
22.2.4 Establish a contamination reduction corridor. Visually identify the corridor using barrier tape or other means.
22.2.5 Prepare a diagram of the decon line to brief the entry team and safety officer.
22.2.6 Oversee the setup of the decon line.
22.2.7 Assure the decon team is prepared to function.
22.2.8 Conduct a communications check with the entry team.
22.2.9 Assure that the decon team is in the proper level of protection to avoid contamination.
22.2.10 Review emergency procedures in case of injured personnel needing decontamination.
22.2.11 The Decon Team Leader shall acquire the Decon vest and clipboard from H29 and utilize the Decontamination Group Worksheet, Form HM006.

22.3Emergency Decon

22.3.1 Used when immediate decontamination is required for victims.

22.3.1.1 Station 1: Wash and Rinse

22.3.1.1.1 Remove clothes quickly wash and rinse
22.3.1.1.2 Equipment:
22.3.1.1.2.1 Decon shower, pool or viscuine rolled at the edges.
22.3.1.1.2.2 Hose Line
22.3.1.1.2.3 Soft brush

22.3.1.2 Station 2: Wrap patients for transport.

22.4Standard Decon

22.4.1 Used during normal operations

22.4.1.1 Station 1: Tool drop
22.4.1.2 Station 2: Disposable garment drop and shower
22.4.1.3 Station 3: Remove boots and suit
22.4.1.4 Station 4: Remove radio and SCBA
22.4.1.5 Station 5: Wash inner gloves and remove SCBA face-piece
22.4.1.6 Station 6: Inner clothing removal if necessary
22.4.1.7 Station 7: Medical check/rehab

22.5High Hazard Decon

22.5.1 Used for unknowns and known Level A entry situations

22.5.1.1 Station 1: Equipment drop
22.5.1.2 Station 2: Disposable drop
22.5.1.3 Station 3: Glove and boot wash
22.5.1.4 Station 4: Suit wash
22.5.1.5 Station 5: Boot and glove removal
22.5.1.6 Station 6: Chemical suit removal
22.5.1.7 Station 7: SCBA and radio removal
22.5.1.8 Station 8: Inner glove wash and removal; SCBA face-piece removal
22.5.1.9 Station 9: Inner clothing removal; field-wash and re-dress
22.5.1.10 Station 10: Medical check and rehabilitation

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-23

SUBJECT: MEDICAL GROUP OPERATIONS

23 Medical Group

23.2 The Medical Group is responsible for the pre-entry/post-entry medical screening and treatment of PCHMRT personnel. In addition to medical screening, it is the responsibility of the medical Group to provide for the rehabilitation of personnel. This may require coordination with the overall incident Rehab Group Officer and/or the Incident Commander so that fluids, cooling and other required rehab measures are anticipated and in place for members who have been subjected to physical exertion.

23.3 The Medical Group team must contain at least one (1) paramedic certified by the Pinellas County Medical Director's Office to administer Level I and Level II treatment protocols as prescribed in the Pinellas County Medical Operations Manual (MOMs). During incidents where exposure to unusual agents may require administration of specific antidotes, i.e.: cyanide exposure, then the Medical Group team must contain at least one (1) Hazmat paramedic certified to administer Level III treatment protocols as prescribed in the MOMs manual. The Medical Group Team Leader shall utilize the appropriate vest and the Entry Team Medical Worksheet, Form HM004a.

23.4 The Medical Group leader will also coordinate with research in order to obtain information regarding signs, symptoms, and treatment as they pertain to each agent involved, should an exposure occur. Medical supplies and equipment must be readily available to treat personnel in the event of an exposure.

23.5 Medical Screening

23.5.1 Medical screening shall be performed both prior to entry and after entry. Medical screening may be deferred only under circumstances of emergency rescue. The following are the minimum requirements prior to donning any personal protective equipment (PPE) or other suit for work at an incident:

23.5.1.1 Vital signs shall be taken and recorded

23.5.1.1.1 Blood pressure
23.5.1.1.2 Pulse
23.5.1.1.3 Respiratory rate
23.5.1.1.4 Assessment of general appearance

23.5.1.2 Member's name, vital signs, times and any general remarks shall be documented on the Entry Team Medical Worksheet, Form HM009.

23.5.1.2.1 This form shall be considered a legal document and shall be attached to the original Hazmat incident report and forwarded to be filed.

23.5.2 Personnel shall not be permitted to don PPE for any purpose under the following circumstances:

23.5.2.1 Systolic blood pressure greater than 150 mm/hg or less than 90 mm/hg.
23.5.2.2 Diastolic blood pressure greater than 90 mm/hg.
23.5.2.3 Heart rate greater than 100 beats per minute or an irregular pulse.
23.5.2.4 Presence of any signs of pre-existing fatigue, such as profuse sweating, pallor, etc., that may indicate to the medical Group paramedic that the member may be unfit for entry or work at the scene.

23.5.3 The Medical Group is also responsible for coordinating medical treatment in a mass casualty event. The medical Group's role in this situation is to assure proper decontamination is being done, medical signs and symptoms are relayed to research, and the proper treatment (i.e. antidotes) is being performed. The Medical Group may use Medical Control to assist in this function.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-24

SUBJECT: PIPE SQUEEZE-OFF (POLYETHYLENE PIPE)

24.0 **PURPOSE** - This procedure is designed as a guide to insure timely recognition and intervention of a gas leak and the application of the 'Huskie' Gas Clamp.

24.1 **SCOPE** - This procedure shall act as a guide for Pinellas County Hazardous Materials Response Team when responding to all gas leaks. The 'Squeeze-Off' is a technique used to control the flow of a gas or liquid in polyethylene pipe by compressing the pipe between parallel bars until the inside surfaces make contact to better control or completely stop a leak.

24.3 **CONSIDERATIONS PRIOR TO APPLICATION OF 'SQUEEZE-OFF'**

24.3.1 Perform a Risk/Benefit Analysis
24.3.2 Develop Action Plan
24.3.3 Do not use on PVC pipe over one (1) inch in diameter. This clamp should be used on residential distribution systems only
24.3.4 For PVC pipes completely severed, both ends might need to be clamped

24.3.5

Physical/Chemical properties of Natural Gas	**Physical/Chemical properties of Propane Gas**
• Flammable high pressure gas	• Liquefied petroleum gas is heavier than air
• May form explosive mixture in air	• May form explosive mixture in air
• Natural Gas is nontoxic but poses an asphyxiation risk	• Propane is nontoxic but poses an asphyxiation risk
• Routes of entry are inhalation and eye contact	• Routes of entry are inhalation, skin and/or eye and a contact hazard (frostbite)
• Ignition Temp: 842° F	• Ignition Temp: 920° F – 1020° F
• LEL-UEL: 5% - 15%	• LEL – UEL: 2.1% - 9.5%
• Flashpoint: -306° F	• Flashpoint: -156° F
• Vapor Pressure: > 1000 mm Hg	• Vapor Pressure: > 1 atm
• Vapor Density: 0.615 (air is 1) (rises rapidly)	• Vapor Density: 1.6 (air is 1) (sinks)
• Product will dissipate in air if ignition does not occur	• Product will dissipate in air if ignition does not occur

24.4 PROCEDURE

24.4.1 Eliminate ALL possible ignition sources.
24.4.2 Determine LEL 360°'s around the leak to determine Hazard/Hot Zone using appropriate reference materials, meters and weather.
24.4.3 Remove all civilians and any personnel not wearing appropriate PPE from the hazard zone.
24.4.4 Bunker gear and SCBA shall be worn at all times within the Hazard/Hot Zone.
24.4.5 A minimum of one (1) pre-connected hose line shall be in place, charged and staffed with a minimum of two firefighters in proper PPE. Connection to a water supply is preferred.
24.4.6 Determine location of leak and amount of damage to piping.
24.4.6.1 If necessary to expose the leaking pipe, soil may be removed using non sparking tools.
24.4.6.2 Determine the direction of gas flow.
24.4.6.3 For gas flow from a single direction, apply the gas clamp to the side of the pipe from which the gas flow comes from.
24.4.6.4 For gas flow from two directions, a clamp must be applied to both ends of a completely cut pipe or on either side of a split pipe. Pipe could be fed from both directions, or contain a large volume of gas due to the length of pipe.
24.4.7 **Always ground from the leaking pipe to the grounding rod.** With the bonding cable attached **only** to the clamp; engage the leaking pipe with the clamp making sure to place the clamp at least 12 inches from any fusion joint, mechanical connection or additional clamps.
24.4.9 Drive/Place grounding rod using non-sparking tools into suitable soil away from the point of the leak. Wetting the soil may assist in dispersing static energy.
24.4.10 Turn the clamp(s) into the HOLD or CLOSED position.
24.4.11 Compress the pipe at a slow rate until leak has been controlled. Do not over tighten clamp.
24.4.12 Monitor and Ventilate as appropriate.
24.4.13 If the pipe is completely cut, and once the atmosphere has been cleared, fold both ends of the pipe back on itself and apply the electrical tape to keep it folded. Remove clamp.

24.5 DISCUSSION

It is the teams' intention to use our gas clamp(s) to mitigate a situation and then be able to fold the pipe back onto itself and tape it. We can then remove our clamp and stand by for the gas company to arrive if the person in command deems it is appropriate task to perform. Consider risk vs. benefit.

24.6 REFERENCES

Clearwater Gas, Polyethylene Pipe Squeeze-Off Instructions, July 2010, Clearwater, FL 33756

Mustang Manufacturing, Huskie PS-62B Squeeze Tool Operations Manual, June 2010, Carson City, NV 89706

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-25

SUBJECT: HAZARDOUS SUBSTANCE MITIGATION

25.0 The PCHMRT shall only engage in such mitigation actions as determined to save lives or protect the property and environment of our citizens.

25.1 Upon control and /or containment of the incident the PCHMRT in conjunction with the Incident Commander shall determine the following:

25.1.1 The responsible party for cleanup and appropriate selection of a contractor.
25.1.2 If no responsible party identified, assist command with consultation with Risk Management or FDEP for contractor selection.

25.2 The Hazmat Group officer shall be responsible for the documentation of all materials utilized, for appropriate reimbursement.

25.3 Under special circumstances (i.e. reduction of economic impact to the community), PCHMRT under staff guidance may engage in operations that will assist in restoration of infrastructure and normal services of the county.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-30

SUBJECT: INSTRUMENTATION

30.0 This section includes all equipment used in the detection and monitoring of dangerous levels of hazardous chemicals. Battery, solar, or electrical current may power detection equipment. This policy includes equipment that is hand-held or permanently mounted in Hazmat vehicles. Support equipment, i.e.: cables, calibration gases, charging units, should also be part of periodic inspection and testing.

30.1 Purpose:

30.1.1 To establish daily, weekly, monthly, and/or annual testing and maintenance procedures.
30.1.2 To keep personnel aware of equipment improvements, variations, and capabilities.
30.1.3 To build confidence in equipment use and increase individual's ability to perform tasks at hand.
30.1.4 To insure readings taken during incidents are as precise and timely as possible.
30.1.5 To assure continuity within findings from various persons/units.
30.1.6 Attempt to detect unforeseen problems.

30.2 Testing

There is a prescribed warm up and testing procedure for each detection unit. This policy is intended to implement a consistent and regularly scheduled testing program. Each member assigned to the Hazmat team shall be competent in testing and using any of the team's instruments.

30.3 Responsibility

Company officers in charge of Hazmat units will ultimately be responsible for their personnel's ability to test and operate instrumentation.

30.4 Record keeping and Documentation:

30.4.1 Each instrument shall have a journal, located in the fire station office, detailing the following:

30.4.1.1 Daily, weekly, monthly equipment testing that specifies sample readings, etc.
30.4.1.2 Unit condition and status
30.4.1.3 Service record
30.4.1.4 Sensor and certification expiration dates
30.4.1.5 Other data as deemed necessary by device's manufacturer

30.4.2 Documentation of training

30.4.2.1 Training and testing shall be logged in the unit's journal.

30.4.2.2 Training shall also be logged into the team member's fire dept. training record

30.4.3 Manufacturer's documentation

30.4.3.1 The manufacturer's manual that is provided with each device shall be kept in good condition and readily available for reference.

30.4.3.2 The manufacturer's manual shall be referenced for any question as to repair, maintenance, testing and/or usage. If the manual fails to address the problem, the manufacturer should then be contacted.

30.4.3.3 Each device shall be operated within the limits and restrictions set forth by the manufacturer.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-31

SUBJECT: ABSORBANT PROCEDURES

31.0 Overview of Clean-up Activities: In general, the role of the PCHMRT focuses on emergency response and public safety. Clean-up activities are the responsibility of the responsible party (RP) and are to be done by a certified clean-up contractor. In all cases, oversight and supervision shall be retained by the PCHMRT to assure public safety and compliance with existing ordinances and codes. However, whenever possible and when it is deemed in the best interest of the County and its citizens limited clean-up activities can be done.

31.1 Diking - dike or collect escaping product as soon as possible

31.1.1 Research compatibility of product if known.
31.1.2 Use surrounding dirt for immediate need if available.
31.1.3 If product necessitates a particular material for compatibility reasons, contact Hazmat Group or the Incident Commander as soon as possible.
31.1.4 Immediately dike any run-off to limit continued exposure.
31.1.5 Direct product to a safe location. Keep in already contaminated vicinity if possible.
31.1.6 Use (any) other necessary means to dike and direct product(s) to include, but not limited to: sand, gravel, and clay.

31.2 Absorbing - If limited clean-up is to be done, absorption can be accomplished by the following means:

31.2.1 If product is compatible, use accepted cellulose, sphagnum or other equivalent organic material for absorption.
31.2.2 Other compatible products can be used if approved by Pinellas County Solid Waste.
31.2.3 Water absorption must be considered when choosing an absorbing material.

31.3 Storage/Collection - On scene units must be prepared to receive and dispose of any collected product(s).

31.4 The local Fire Department having jurisdiction should be capable of receiving and processing small amounts of hydrocarbons.

31.5 Larger amounts and/or containers of known products must be cleared through Pinellas County Solid Waste or Risk Management prior to receiving.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 600-32

SUBJECT: HAZCAT PROCEDURES

32.0 Use of the HazCat® Unknown Chemical Identification System shall be accomplished in accordance with the HazCat Chemical Identification System User's Manual, published by Sensidyne® Haztech Systems, Inc.™, revised 1994.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 700-1

SUBJECT: LIAISON OFFICER

This section not yet completed.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
600 SERIES STANDARD OPERATING PROCEDURE
No. 800-1

SUBJECT: PUBLIC INFORMATION

1.0 The Pinellas County Hazardous Materials Response Team's lead agency for public information is the Pinellas County Department of Public Affairs, supported by municipal/agency Public Information Offices of the emergency agency having jurisdiction over the incident.

1.1 Pinellas County Department of Public Affairs shall be responsible for:

1.1.1 Gathering information about the incident
1.1.2 Verifying the accuracy of information prior to release to the media/public

1.1.2.1 The Hazmat Command Staff Officers, the Hazmat Group Officer, and Emergency Management employees shall have final authority over the accuracy of any media information concerning the Pinellas County Hazardous Materials Response Team.
1.1.2.2 Municipal/agency PIO's operating at an emergency incident scene shall clear all information through one of the above-specified organizations, prior to any release to the media. The reasoning for this is to ensure accuracy of all releases as relates to hazardous materials.

1.1.3 Setting up a physical location for the PIO, away from cold zone emergency operations.
1.1.4 Coordination of media coverage/releases with all media agencies present and/or requesting information
1.1.5 At major incidents, "pool" coverage shall be coordinated with all media organizations at the scene.
1.1.6 Periodically update information as the situation evolves
1.1.7 Take and preserve photographs, videotape, and/or sound recordings when requested by the Hazmat Group Officer or his designee.

1.2 The Hazmat Group Officer or his designee shall establish a Public Information Officer as soon, as is practical at an incident.

1.2.1 The jurisdictional authority's Incident Commander may already establish the initial PIO and there may be no need to expand upon the size or scope.
1.2.2 Should conditions warrant that the PIO Group be enlarged, the Hazmat Group Officer or his designee should make every effort to coordinate these operations with the Incident Commander.
1.2.3 Pinellas County Department of Public Affairs may be notified through the County Warning Point and/or notification of the person in charge at Emergency Management.
1.2.4 The PIO can be a valuable tool for use in evacuations or shelter-in-place situations and should be utilized aggressively in such situations.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
900 SERIES STANDARD OPERATING PROCEDURE
No. 900-1

SUBJECT: VEHICLE MAINTENANCE AND REPAIR

1.0 Pinellas County Fleet Management is the repair and maintenance department for all county vehicles. All maintenance and repairs shall be conducted through Fleet Management. No other entity is authorized to perform work on these vehicles, without prior authorization from Fleet and Public Safety Services.

1.1 Vehicle Maintenance

1.1.1 Fleet Management shall perform all maintenance on county vehicles in accordance with the vehicle manufacturer's specifications.
1.1.2 Fleet schedules vehicles for maintenance as required.
1.1.3 Each vehicle has the maintenance date and mileage posted on the vehicle.
1.1.4 Fleet Management shall be called at 582-3025 and an appointment shall be made to have the required maintenance performed as expediently as possible.
1.1.5 A secondary point of contact shall be the Public Safety Services Liaison, who can be contacted at 519-5991, if there is a unique problem.

1.2 When a vehicle is to be out of service, the Hazmat member shall notify:

1.2.1 Dispatch
1.2.2 The Hazmat Command Staff via pager. (Select: 1 - *EQUIP STATUS CHANGE/ALL CALL under HT in the CAD dialer file. Provide unit number and estimated time/date unit will return to service.
1.2.3 All team members via the memo account sent to "HAZ".

1.3 When the vehicle returns to service, all of the above shall again be notified.

1.4 Vehicle Repair

1.4.1 Fleet Management shall perform all repairs as required.
1.4.2 Fleet Management shall be contacted at 582-3025 to arrange an appointment for repairs between 07:00 and 16:00 weekdays.
1.4.3 A secondary point of contact shall be the Public Safety Services Liaison, who can be contacted at 519-5991, if there is a unique problem.
1.4.4 For an emergency during off-hours, Fleet shall be contacted at 420-9125
1.4.5 A secondary point of contact shall be the liaison Public Safety Services, who can be contacted through Dispatch at 298-5282, if there is a unique problem.

1.5 Vehicle Replacement

1.5.1 Permanent vehicle replacements shall be authorized through Pinellas County Public Safety Services and Fleet Management in accordance with Fleet's established system for vehicle replacement.

1.5.2 Vehicle replacements shall be provided according to Fleet Management's established procedure.

1.5.3 The Public Safety Services Liaison will coordinate vehicle type and design through Fleet's` Vehicle Acquisition Specialist, the Public Safety Services Director, and the Hazmat Team Command Staff.

1.5.4 In compliance with the Fleet Internal Service Fund requirements, used vehicles shall be transferred to the Fleet Management Department for disposal as surplus property.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
900 SERIES STANDARD OPERATING PROCEDURE
No. 900-2

SUBJECT: EQUIPMENT MAINTENANCE AND REPAIR

2.0 Equipment Maintenance and Repair:

2.1 All equipment maintenance and repair shall be authorized through the Public Safety Services Liaison.

2.1.1 Notification of required maintenance or repair shall be made to the Hazmat Coordinator of your fire department, through any procedure deemed satisfactory by each coordinator.

2.1.2 The fire department coordinator shall then contact the Public Safety Services Liaison to report the problem and make arrangements for necessary corrective actions.

2.1.3 In the event that the coordinator cannot be contacted, the on-call Hazmat officer shall be notified through the Dispatch Center.

2.1.4 Sufficient duplicity is built into the Hazmat Team that seldom will an equipment failure be construed as an emergency situation. Rely on other Hazmat units to fill any void that occurs.

2.1.5 All repairs shall be authorized through the Public Safety Services Liaison. Repairs shall be authorized prior to any repair work being performed.

2.2 Equipment Replacement and/or Upgrades

2.2.1 Equipment replacements and/or upgrades shall be conducted on a case-by-case basis through mutual concurrence of the Public Safety Services Liaison, the Hazmat Team Commander, and the Command Staff.

2.2.2 All requests for replacement and/or upgrade shall be forwarded to the fire department coordinator for processing through the Command Staff. The Director of Public Safety Services shall have final authority on all expenditures. The Command Staff maintains the right to appeal all final decisions through Pinellas County Administration as outlined in the Personnel Manual.

2.2.3 Any equipment that is no longer serviceable, worn out, and/or outmoded and no longer useful should be given to the Public Safety Services Liaison for disposal.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
900 SERIES STANDARD OPERATING PROCEDURE
No. 900-3

SUBJECT: RE-SUPPLY PROCEDURE

This section not yet completed.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM
900 SERIES STANDARD OPERATING PROCEDURE
No. 900-4

SUBJECT: VEHICLE IDENTIFICATION AND INVENTORIES

4.0 Hazmat Team vehicles include the following:

4.1 H5 - located at St. Petersburg's Master Fire Station, Hazmat 5 is a tractor/trailer unit, which can function as a stand-alone "mini-team" when necessary. This vehicle maintains an inventory of nearly all of the basic hazardous materials response gear. It also has 2 cellular phones, a fax, a modem, and computer system identical to Haz Mat 38's. This duplicity not only serves as a back-up but also gives the team the capability of simultaneously handling multiple incidents. (H5's vehicle is the property of the City of St. Petersburg.)

4.2 H29 - housed at Seminole Sta. 29, this vehicle is a custom-built tractor/trailer that carries large amounts of several types of absorbents and containment equipment. H29 is loaded with entry suits, air packs, radio equipment, gloves, boots, and other hazardous chemical atmosphere entry garments and equipment. It also carries a limited amount of absorbents and clean-up containers, 110 gallons of firefighting foam, a full compliment of hand tools, and some chemical analysis gear. This vehicle is equipped with an on-board generator, air conditioner, and a power hydraulic lift gate.

4.3 H33 - responding from Pinellas Park's Sta. 33 is a 1997 custom-built tractor/trailer that carries large amounts of several types of absorbents and containment equipment. The Hazmat Team's decontamination equipment is also carried on this truck along with chemical analysis and sampling equipment. This vehicle also has a 110-gallon water tank and a 180-gallon firefighting foam tank. This vehicle is equipped with an on-board generator and 2 – 100-foot electric cord reels.

4.4 H38 (Haz Mat 38) - stationed at Largo's Sta. 38 is a 1999 mobile office vehicle equipped with air monitoring equipment, a remote weather station which is interfaced into its computer, two multi-channel 800 MHz. radios, 3 cellular phones, a fax, a modem, a scanner, and two computers. This unit carries an extensive library of chemical research publications and also utilizes online chemical database software. Additionally, H38 has an on-board restroom, refrigerator, air conditioner, and a generator.

4.5 H66 - which responds from Palm Harbor's Sta. 66, is a custom-built tractor/trailer that carries large amounts of several types of absorbents and containment equipment. This unit carries decontamination equipment is along with chemical analysis and sampling equipment. This vehicle also has a 110-gallon water tank and a 180-gallon firefighting foam tank. This vehicle is equipped with an on-board generator and 2 – 100-foot electric cord reels.

4.6 Hazmat Vehicle Inventories**:** Please see Attachment C.

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM STANDARD OPERATING PROCEDURES MANUAL

ATTACHMENTS

Tab Page A

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM STANDARD OPERATING PROCEDURES MANUAL

ATTACHMENT A

FLORIDA STATE EMERGENCY RESPONSE COMMISSION HAZMAT GUIDELINES

STATE EMERGENCY RESPONSE COMMISSION

for hazardous materials

Florida Guidelines for Hazardous Materials Training

Florida

DIVISION OF EMERGENCY MANAGEMENT

Table of Contents

Table of Contents
(Continued)

Introduction

The Florida State Emergency Response Commission (SERC) has been challenged by the need for consistent guidance in the training of responders State-wide and delegated the SERC Training Task Force with developing training guidelines compliant with the Superfund Amendment and Reauthorization Act of 1986 (SARA Title I, Section 126). This federal law required the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) to promulgate regulations (29 CFR 1910.120 and 40 CFR 311) to protect workers from the effects of exposure to hazardous materials.

The National Emergency Training Center (NETC) developed the Guidelines for Public Sector Hazardous Materials Training to provide a resource for hazardous materials training, as part of the public service collaboration of the Federal Emergency Management Agency and the U.S. Department of Transportation under the Hazardous Materials Emergency Preparedness Grant Program.

Along with the federal hazardous materials emergency response-training mandate, the nationally recognized consensus standards established by the National Fire Protection Association (NFPA) must be considered. NFPA 471, “Recommended Practice for Responding to Hazardous Materials Incidents, (2002 Edition)” provides minimum requirements to consider when responding to hazardous materials incidents. NFPA 472, "Standard for Professional Competence of Responders to Hazardous Materials Incidents, (2002 Edition)" provides explicit detailed objectives for training responders to hazardous materials incidents. NFPA 472 is cited in 29 CFR 1910.120 as an "excellent resource" to aid emergency response organizations in developing training programs. NFPA 473, "Competencies for Emergency Medical Service (EMS) Personnel Responding to Hazardous Materials Incidents, (2002 Edition)" provides similar guidance for emergency medical services training programs.

SARA Title III, Section 303 states: ...Each emergency plan shall include training programs, including schedules for training of local emergency response and medical personnel. Each plan should also describe training requirements for all Hazardous Materials Emergency Response Personnel. Each plan should list and describe the training programs to support these requirements...

The Need to Train

Employees who respond to hazardous materials emergencies must be properly trained to perform their jobs safely and efficiently. Their employers are responsible for ensuring the health and safety of the responding personnel as well as the protection of the public and the communities served.

Training managers face a significant challenge in ensuring that all responding personnel are fully trained an prepared, while working within existing limited resources and conflicting priorities.

Employer’s Legal Responsibilities

OSHA 2 CFR 1910.120(q) and EPA 40 CFR 311 require that emergency response employees be completely trained before they perform at hazardous materials emergencies. The employer must certify annually that each employee has successfully completed the required training. The method used to demonstrate competency for certification of training must be recorded and maintained by the employer. Important concepts to remember are:

1. The chief or director is responsible for determining the appropriate level of training required, based on actions required of employees as stated in the organizations SOP’s.

2. The chief or director is responsible for implementing the required training or certifying that employees of the organization have the competencies required. Documentation of training is critical.
3. OSHA 29 CFR 1910.120(q) rules apply to all individuals and agencies that are expected to respond to an emergency involving hazardous materials, that is, career or volunteer, fire, emergency medical services (EMS), law enforcement, or hospital personnel.

OSHA 29 CFR 1910.120 and EPA 40 CFR 311 apply to employers whose employees are engaged in emergency response to hazardous materials incidents. Employer responsibilities under these regulations fall into four primary areas:

1. Development of an emergency response plan.
2. Development of specific procedures for handling hazardous materials incidents.
3. Training requirements.
4. Health and safety requirements (medical monitoring for the use of chemical protective clothing and exposure records).

The previously described laws, regulations, and consensus standards provide the reasonable, prudent, and appropriate guidance which will likely result in the "Standard of Care" to which emergency responders may be held accountable. In the event an incident that results in responders taking action contrary to the "Guidance," liability for personal injury or property damage could fall on the emergency response organization. In addition, if the responder is harmed as a result of the employer's failure to properly train and equip the emergency responder, then the responder may initiate litigation for compensation.

The goal of an emergency response organization should be to provide competent, reasonable, prudent, and appropriate actions, consistent with the applicable guidance at hazardous materials emergencies and, therefore, avoid liabilities associated with a failure to comply. Emergency Service Organizations can only provide for and effectively and efficiently protect the public and the environment if properly trained. Emergency responders must have the competency to properly mitigate a hazardous materials incident within their level of training and personnel protective equipment (PPE) consistent with local emergency response plan and organizations SOP's. The competencies specified in the SERC, Guidelines for Hazardous Materials Response Training meet the need for guidance in developing responders who will meet the demanding challenges of hazardous materials response.

Employer Training Requirements

Employers must ensure that employees receive training in emergency response to hazardous materials incidents based on their expected duties and functions. Such training must be performed before employees are permitted to perform at hazardous materials emergencies.

1. An employer is responsible for determining the appropriate level of training required based on actions required of employees as stated in the SOP's.
2. An employer is responsible for implementing the required training. Emphasis should be on achieving the required competencies for the appropriate level of response rather than on minimal requirements for length of training.
3. An employer is responsible for selecting qualified, competent instructors.
4. An employer must provide annual refresher training sufficient to maintain competencies, or employees must demonstrate required competencies annually.
5. An employer must maintain a record of demonstrated competencies including an explanation of how each competency was demonstrated. Training records must contain dates of training, student roster, curriculum outlines, demonstration checklists or performance records and evaluation tools and scores, if appropriate.

OSHA has defined the minimum number of hours for training at operations, technician and incident commander levels. However, each employer is responsible for employees being trained to competency and agencies often exceed the minimum hours of training to teach and test for competencies at the levels outlined by OSHA. The training needed to reach competency depend on the preexisting skills and experience of the trainees. Agencies frequently discover that training needs exceed the minimum required hours.

Training Guidelines

The SERC Guidelines for Hazardous Materials Training are derived from the National Emergency Training Center (NETC) Guidelines for Public Sector Hazardous Materials Training. NETC competency citations have been compared against NFPA 471, 472 and 473 for consistency and completeness.

The Guidelines are written to assist hazardous materials training managers. It assumes that users are experienced in hazardous materials training, the ability to evaluate their organization's hazard analysis and response capability as well as training requirements. The Guidelines are the minimum training appropriate for the competencies in each discipline. The Guidelines can be expanded by individual jurisdictions to better ensure effectiveness of training.

Included within these guidelines are:

1. Guidelines for Emergency Medical Service Responders Hazardous Materials Training.
2. Guidelines for Law Enforcement Hazardous Materials Training.
3. Guidelines for Fire Fighter Hazardous Materials Training.
4. Guidelines for Public Works, Utilities, Transportation, Public Health, and other Employees Hazardous Materials Training.
5. Guidelines for Hazardous Materials Technician Hazardous Materials Training.
6. Guidelines for Incident Commander Hazardous Materials Training.
7. Guidelines for Instructor Qualifications of Hazardous Materials Trainers.

Refresher Training

All employees who may respond to hazardous materials emergencies must receive refresher training on an annual basis or have experience that ensures their competency to perform their roles safely and efficiently. Employers must certify on an annual basis that employees continue to meet the performance objectives as defined in OSHA 1910.120. This is accomplished though refresher training or demonstration of competency.

It is up to the employer to determine that employees maintain their original competencies through refresher training. If it is determined that employees maintain their competency without refresher training, OSHA allows them to demonstrate this annually. If the employer decides to use demonstrated competencies instead of providing training, the employer must document how each employee demonstrated competency.

Refresher training or competency retesting requirements varies for each of the response levels. In general, refresher training should include critical skills practice, technical information updates and

refinements of incident scene coordination through field exercises simulating emergencies. Minimum hours for annual refresher training for response personnel are not specified in OSHA 1910.120. However, OSHA Interpretive Quips recognize 8-hour as the minimum refresher-training requirement HAZWOPER for site workers, recognizing that more than 8 hours may be required on an annual basis.
In each of the competency sections of the training guideline, unique areas of emphasis for refresher training are noted.

Guideline History

Following the 2002 revisions to NFPA 471, *Recommended Practice for Responding to Hazardous Materials Incidents,* NFPA 472, *Standard for Professional Competence of Responders to Hazardous Materials Incidents* and NFPA 473, *Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents,* the Florida State Emergency Response Commission (SERC) saw a need to make changes to the 1994 edition of the Guidelines for Public Sector Hazardous Materials Training. The original training guidelines were developed by South Tech Fire Academy, Boynton Beach Florida, for the SERC Hazardous Materials Training Task Force under a grant from the Florida Division of Emergency Management. Emergency Response Educators and Consultants, Inc. (EREC, Inc.), Silver Springs, Florida, was contracted by the Florida Division of Emergency Management to prepare this revised document to reflect changes in OSHA 29 CFR 1910.120, NFPA 471, 472 and 473.

Disclaimer

The Florida State Emergency Response Commission (SERC) and Emergency Response Educators and Consultants, Inc. (EREC) disclaim liability for any personal injury, property or other damages of any nature whatsoever, whether special, indirect, consequential or compensatory, directly or indirectly resulting from the publication, use of or reliance on this document. The reader of this document is warned to consider and use any and all safety precautions that might be indicated by the activities herein and to avoid potential hazards whenever possible. The reader willingly assumes all risks in connection with activities undertaken which may be referenced in this document. The SERC and EREC also make no guaranty or warranty as to the accuracy or completeness of any information published herein.

REFERENCES

OSHA, 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response. July 1, 1999 Edition.
EPA, 40 CFR 311, Worker Protection Standards for Hazardous Waste Operations and Emergency Response.
NETC, Guidelines for Public Sector Hazardous Materials Training. March 1998 Edition.
NFPA 471, Recommended Practice for Responding to Hazardous Materials Incidents. 2002 Edition
NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents. 2002 Edition
NFPA 473, Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents. 2002 Edition

FLORIDA STATE EMERGENCY RESPONSE COMMISSION

Guidelines for Emergency Medical Responders
Hazardous Materials Training

October 1, 2002
~Revised~

Guidelines for Emergency Medical Service Responders Hazardous Materials Training

Emergency Medical Services Responder Level 1

Introduction

Emergency Medical Service (EMS) Responder Level 1 shall be trained to meet the requirements of the first responder at the awareness level, as defined in OSHA 29 CFR 1910.120(q)(i), and meet the competencies included in this section. In addition, EMS Level 1 shall meet the training requirements of the Florida Department of Health – Bureau of Emergency Medical Services, U.S. Occupational Health and Safety Administration, Florida Department of Environmental Protection and the U.S. Environmental Protection Agency (EPA) as appropriate for their jurisdictions.

In addition to being trained to the first responder awareness level, emergency service personnel responding to hazardous material incidents will be trained and receive regular continuing education to maintain competence in three areas: emergency medical technology, hazardous materials, and specialized topics such as hazardous materials toxicology, as approved by the Florida Department of Health. Bureau of Emergency Medical Services The training program should be a comprehensive competency-based presentation of the required subject material with applicable hands-on sessions that demonstrate the newly acquired skills.

Definition

Emergency Medical Service Responder Level 1 are those persons who in the normal course of their duties may be called upon to perform patient care activities in the cold zone (i.e. clean, or support zone) at a hazardous materials incident. EMS Level 1 shall provide pre-hospital care *only* to those individuals who no longer pose a significant risk of secondary contamination such as decontaminated patients in the cold zone. The role of the EMS Level 1 is to provide care only to those individuals who no longer pose a significant risk of secondary contamination (that is, a risk of contaminating others, including those providing care).

Audience

All Emergency Medical Technicians (EMT's), Paramedics, and other health professionals who in the course of their normal duties, may respond to hazardous materials emergencies either as first responders or as on-site cold zone support to the incident command structure at an incident.

Related Health, Safety and Performance Standards

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99)
EPA 40 CFR 311 Worker Protection
NFPA 471, Recommended Practice for Responding to Hazardous Materials Incidents. 2002 Edition
NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents. 2002 Edition
NFPA 473 Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents. 2002 Edition
NETC Guidelines for Public Sector Hazardous Materials Training. March 1998

Appropriate Methodologies

EMS Responders Level 1 training should include a combination of traditional classroom lecture with small group activities, tabletop and field exercises involving working with the incident command structure in simulated emergencies, and hands-on psychomotor skill training. Content instruction should focus on contamination hazards, treatment procedures, and incident scene roles and responsibilities.

Student activities should focus on assessment, analysis of hazards and determination of appropriate procedures. Skill training should focus on implementing procedures. Written and practical examinations are highly recommended to measure achievement in initial training and refresher programs and to support the employer's responsibility that all EMS personnel are trained to competency before being called on to perform at actual emergencies. Tabletop and field exercises should focus on acting out incident scene roles and on implementing procedures in a field environment. Refresher training should be conducted on an annual basis and focus on technical updates to changes in response protocols, SOP's, and renewal of individual response skills.

The SERC estimates that the initial entry-level training can be accomplished in approximately 8 contact hours, including the first responder awareness training, with competent instructors knowledgeable in hazardous materials response. Annual refresher training should be accomplishable with approximately 4 contact hours. However, 8 hours would be preferred.

The Florida Department of Health, Bureau of Emergency Medical Services requires the individual to re-certify every two years. It is recommended that the individual be required to demonstrate proof of refresher training consistent with existing standards and that all EMS employers and educational institutions be required to issue certificates of training for compliance with refresher hazardous materials training.

The following resources are recommended to supplement the training process:

Local LEPC Emergency Response Plan
Local Standard Operating Procedures
Hawley's Condensed Chemical Dictionary. R. J. Lewis, Sr. 13th Edition. 1997
Hazardous Chemical Data (U.S. Government)
OSHA 29 CFR 1910.120 (Current Edition)
NIOSH Pocket Guide (Current Edition)
Association of American Railroads Emergency Action Guides (Current Edition)
NFPA 471, 472, 473 (Current Edition)
Handbook of Toxic and Hazardous Chemicals and Carcinogens. Marshall Sitting. 3rd Edition,
Haz/Mat Injuries. Bradford/Stutz.
Emergency Care for Haz/Mat Exposures .Mosby/Bronstien and Currance.

Training

All EMS Responder Level 1 personnel will be trained to the awareness level utilizing the Florida First Responder Awareness Level Hazardous Materials Training Program, National Fire Academy Program - Initial Response to Hazardous Materials Incidents: Basic Concepts or similar curricula complying with the First Responder Awareness Level as defined in 29 CFR 1910.120 *and* NFPA 472. Additionally, all EMS Level 1 responders will be trained to perform the EMS Level 1 competencies.

The following training objectives are recommended for the First Responder Awareness Level. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

First Responder Awareness

The First Responder Awareness competencies included here for reference.

Recommended Training Objectives

AWARE-1 Given a hazardous materials incident scenario, demonstrate an understanding of the role of the first responder at the awareness level.

AWARE-1.1 Describe the responsibility to analyze the incident to determine the hazardous materials present and the basic hazard and response information for each type of hazardous material, and demonstrate the ability to do the following:

AWARE-1.1.1 Identify the responsibility to detect the presence of hazardous materials.

AWARE-1.1.2 Identify the responsibilities to survey a hazardous materials incident, from a safe location, to identify the name, UN/NA identification number, or type placard applied for any hazardous material involved.

AWARE-1.1.3 Identify the responsibility to collect hazard information from the current edition of the *North American Emergency Response Guidebook* (ERG).

AWARE-1.2 Describe the responsibility to implement actions consistent with the local emergency response plan, the organization's SOP's and the current edition of the *North American Emergency Response Guidebook*, and demonstrate the ability to do the following:

AWARE-1.2.1 Identify the responsibility to initiate protective actions consistent with the local emergency response plan, the organization's SOP's, and the current edition of the *North American Emergency Response Guidebook*.

AWARE-1.2.2 Identify the responsibility to initiate the notification process specified in the local emergency response plan and the organization's SOP's.

Analyzing the Incident - Detecting the Presence of Hazardous Materials

AWARE-2 Given incident scenarios involving facility and/or transportation situations with and without hazardous materials present, identify those situations where hazardous materials are present.

AWARE-2.1 Identify the definition of hazardous materials.

AWARE-2.2 Identify the USDOT Hazard Classes and divisions of hazardous materials and identify common examples of each hazard class or division.

AWARE-2.3 Identify the primary hazards associated with each of the USDOT Hazard Classes and divisions of hazardous materials by hazard class or division.

AWARE-2.4 Identify the difference between hazardous materials emergencies and other emergencies.

AWARE-2.5 Identify typical occupancies and locations in the community where hazardous materials are manufactured, stored, transported, used, or disposed of.

AWARE-2.6 Identify typical container shapes that may indicate hazardous materials.

AWARE-2.7 Identify facility and transportation markings and colors that indicate hazardous materials, including:

1. UN/NA identification number
2. NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response, markings
3. Military hazardous materials markings
4. Special hazard communication markings
5. Pipeline marker
6. Container markings

AWARE-2.8 Given an NFPA 704 Standard System for the Identification of the Hazards of Materials for Emergency Response marking, identify the significance of the colors, numbers and special symbols.

AWARE-2.9 Identify US. and Canadian placards and labels that indicate hazardous materials.

AWARE-2.10 Identify the basic information on material safety data sheets (MSDS) and shipping papers that indicate hazardous materials.

AWARE-2.10.1 Identify where to find material safety data sheets (MSDS).

AWARE-2.10.2 Identify entries on a material safety data sheet that indicate the presence of hazardous materials.

AWARE-2.10.3 Identify the entries on shipping papers that indicate the presence of hazardous materials.

AWARE-2.10.4 Match the name of the shipping papers found in transportation (air, highway, rail and water).

AWARE-2.10.5 Identify the person responsible for having the shipping papers in each mode of transportation.

AWARE-2.10.6 Identify where the shipping papers are found in each mode of transportation.

AWARE-2.10.7 Identify where the papers can be found in an emergency in each mode of transportation.

AWARE-2.11 Identify examples of clues (other then occupancy/location, container shape, markings/ color, placards/labels, and shipping papers) that use the senses of sight, sound, and odor to indicate the presence of hazardous materials.

1. Changes in pressure release
2. Presence of smoke and/or fire
3. Presence of liquids, gas leaks, or vapor cloud
4. Chemical reactions
5. Condensation lines
6. Mass Casualties

AWARE-2.12 Describe the limitations of using the senses in determining the presence or absence of hazardous materials.

AWARE-2.13 Identify types of locations that may become targets for criminal or terrorist activity using hazardous materials.

The following are some examples of locations:

1. Public assembly areas
2. Public/Government buildings
3. Mass transit systems
4. Places with high economic impact
5. Telecommunications facilities
6. Places with historical or symbolic significance
7. Military facilities
8. Airports, Train Stations and Ports
9. Industrial facilities

AWARE-2.14 Identify at least four indicators of possible criminal or terrorist activity involving hazardous materials. The following are some examples of indicators:

1. Hazardous materials or lab equipment that is not relevant to the occupancy
2. Intentional release or hazardous materials
3. Unexplained patterns of sudden onset illnesses or deaths
4. Unusual orders or tastes
5. Mass casualty incident with unexplained signs of skin, eye or airway irritation
6. Unusual security, locks, bars on windows, covered windows and barbed wire
7. Unexplained vapors clouds, mists and plumes
8. Patients twitching, tightness in chest, sweating, pinpoint pupils (miosos), runny nose (rhinorrhea) and nausea and vomiting.
9. Unusual presence of natural indicators such as sick or dead birds and animals or dead or discolored trees, shrubs or grass.

AWARE-2.15 Describe the difference between a chemical and a biological incident.

1. Chemical incident are identified by the rapid onset of medical signs and systems characteristic of chemical exposure. Natural indicators and obvious signs of release may be present such as chemical residue and odors.
2. Biological incident are gradual in onset of medical signs and systems with no obvious characteristic of odor or colors. The migration of the disease by infected individuals may be wide spread and transmission from one person to another may occur.

AWARE-2.16 Identify at least four indicators of possible criminal or terrorist activity involving biological agents. The following are some examples of indicators:

1. Mass causality incident with unusual number of ill or dying persons with common signs and symptoms.
2. Hospitals reporting mass causalities with similar signs and symptoms.
3. Unscheduled outdoors spraying
4. Abandoned spraying (dissemination) device.

Analyzing the Incident – Surveying the Hazardous Materials Incident from a Safe Location

AWARE-3 Given simulated facility and transportation incidents involving hazardous materials, identify the hazardous material(s) in each situation by name, UN/NA identification number and/or type placard applied.

AWARE-3.1 Describe difficulties encountered in determining the specific names of hazardous materials in both facilities and transportation.

AWARE-3.2 Identify the significance of the terms “Type A”, “Type B” and “Special Form” as they relate to radioactive materials packaging.

AWARE-3.3 Identify additional information concerning radionuclide identity and activity provided on radioactive material labels and shipping papers.

AWARE-3.4 Identify additional information concerning physical and chemical form and packaging type provided on radioactive materials shipping papers.

AWARE-3.5 Identify sources for obtaining the names of, UN/NA identification numbers for or type of placards associated with hazardous materials in transportation.

AWARE-3.6 Identify sources for obtaining the names of hazardous materials in a facility.

Analyzing the Incident – Collecting Hazard Information

AWARE-4 Given the identity of various hazardous materials (name, UN/NA number, or type placard), identify the fire, explosion and health hazard information for each material using the current edition of the *North American Emergency Response Guidebook*.

AWARE-4.1 Identify the way hazardous materials are harmful to people, the environment and property at hazardous materials incidents.

AWARE-4.2 Identify the general routes of entry for human exposure to hazardous materials.

AWARE-4.3 Given the current edition of the *North American Emergency Response Guidebook*, identify the three methods for determining the appropriate guide page for a specific hazardous material.

AWARE-4.4 Given the current edition of the *North American Emergency Response Guidebook*, identify the two general types of hazards found on each guide page.

AWARE-4.5 Identify the difficulties encountered in using the senses to recognize radioactive material releases and radiation exposure.

Analyzing the Incident – Initiating Protective Actions

AWARE-5 Given simulated facility and transportation hazardous materials incidents, identify the actions to be taken to protect themselves and others and to control access to the scene using the local emergency response plan, the organization's SOP's, or the current edition of the *North American Emergency Response Guidebook*.

AWARE-5.1 Identify the location of both the local emergency response plan and the organization's SOP's.

AWARE-5.2 Given the local emergency response plan or the organization's SOP's, identify the role of the first responder at the awareness level during a hazardous material incident.

AWARE-5.2.1 Given a simulated facility and/or transportation hazardous materials incidents, initiate the incident management system (IMS) specified in the local emergency response plan and the organizations SOP's.

AWARE-5.2.2 Identify the basic techniques for the following protective actions at hazardous materials incidents.

1. Evacuation
2. In-place protection

AWARE-5.3 Given the local emergency response plan or the organization's SOP's, identify the basic precautions to be taken to protect themselves and others in a hazardous materials incident.

AWARE-5.3.1 Identify circumstances involving radioactive material in transportation where actions should be initiated to protect the lives of accident victims through carrying out rescue and providing emergency medical care.

AWARE-5.3.2 Identify the precautions necessary when providing emergency medical care to victims of hazardous materials incidents.

AWARE-5.3.3 Identify typical ignition sources found at scenes of hazardous materials incidents.

AWARE-5.3.4 Identify the ways hazardous materials are harmful to people, the environment, and property at hazardous materials incidents.

AWARE-5.3.5 Identify the general routes of entry for human exposure to hazardous materials.

AWARE-5.4 Given the identity of various hazardous materials (name, UN/NA identification number, or type placard), identify the following response information using the current edition of the *North American Emergency Response Guidebook*:

1. Emergency Action (fire, spill, leak and first aid)
2. Personal protective equipment necessary
3. Initial isolation and protective action distances

AWARE-5.4.1 Given the name of a hazardous material, identify the recommended personal protective equipment from the following list:

1. Street clothing and work uniforms
2. Structural fire-fighting protective clothing
3. Positive pressure self-contained breathing apparatus (SCBA)
4. Chemical-protective clothing and equipment

AWARE-5.4.2 Identify the definitions for each of the following protective actions:

1. Isolation of the hazard area and denial of entry
2. Evacuation
3. Sheltering in-place protection

AWARE-5.4.3 Identify the shapes of recommended initial isolation and protective action zones.

AWARE-5.4.4 Describe the difference between small and large spills as found in the table of Initial Isolation and Protective Actions Distances.

AWARE-5.4.5 Identifying the circumstances under which the following distances are used at a hazardous materials incident:

1. Table of initial isolation and protective action distances
2. Isolation distances in the numbered guides

AWARE-5.4.6 Given a copy of the current edition of the *North American Emergency Response Guidebook*, describe the difference between the isolation distances in the orange-bordered guide pages and the protective action distances in the green-bordered pages in the document.

AWARE-5.5 Identify the techniques used to isolate the hazard area and deny entry to unauthorized persons at hazardous materials incidents.

AWARE-5.6 Identify the specific actions necessary when an incident is suspected to involve criminal or terrorist activity. The following are some examples:

1. Take self protective actions
2. Be alert to secondary devices
3. Communicate the suspicion during the notification process
4. Establish work control zones and access control points
5. Isolate potentially exposed people
6. Document the initial observation
7. Prevent secondary contamination
8. Attempt to preserve evidence while performing operational duties

Implementing the Response – Initiating the Notification Process

AWARE-6 Given either a facility or transportation scenario of hazardous materials incidents, with and without criminal or terrorist activities, identify the appropriate notifications to be made and how to make them, consistent with the local emergency response plan or the organization's SOP's.

AWARE-6.1 Identify the initial notification procedures for hazardous materials incidents in the local emergency response plan or the organization's SOP's.

The following training objectives are recommended for first responder EMS Level 1. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

In addition to the hazardous materials first responder awareness level training, all EMS Level 1 responders will be trained in the following competencies:

EMS Responder Level 1

Recommended Training Objectives

EMS(1)-1 Given a hazardous materials incident scenario, demonstrate an understanding of the role of the EMS Responder Level 1 to safely deliver emergency medical care in the cold zone.

EMS(1)-1.1 Describe the responsibility of the emergency EMS Responder Level 1 to analyze a hazardous materials emergency to determine what risks are present to the provider and the patient.

1. Determine the hazards present
2. Risk of secondary contamination

EMS(1)-1.2 Describe the responsibility of the EMS Responder Level 1 to plan a response to provide the appropriate level of emergency medical care to persons involved in hazardous materials incidents.

1. Describe the role of the EMS Level 1 responder
2. Plan the appropriate response for patient care
3. Determine the appropriate personal protective equipment (PPE)
4. Determine the appropriate equipment and supplies for patient care

EMS(1)-1.3 Describe the responsibility of the EMS Responder Level 1 to implement the planned response.

1. Perform the necessary preparation to receiving the patient and preventing secondary contamination at the hazardous materials incident
2. Provide appropriate patient treatment
3. Provide appropriate patient transport
4. Perform medical support to response personnel at the hazardous materials incident

EMS(1)-1.4 Describe the responsibility of the EMS Responder Level 1 to terminate the incident.

Analyzing the Hazardous Materials Incident

EMS(1)-2 Given an emergency involving hazardous materials, determine the hazards to the responder and the patient in that situation.

EMS(1)-2.1 Given an emergency involving hazardous materials, assess the nature, severity, and potential for expansion of the incident as it pertains to EMS responsibilities at a hazardous materials incident with evaluation of available resources and a request for any needed assistance.

EMS(1)-2.2 Given an emergency involving hazardous materials, evaluate the environmental factor as they affect the patient care.

EMS(1)-2.3 Identify the information resources available and how to access the following:

1. Poison Control Center
2. Medical Control
3. Material Safety Data Sheet (MSDS)
4. Reference guidebooks
5. Hazardous materials databases
6. Technical information centers (CHEMTREC, NRC, etc.).
7. Technical specialist
8. Agency for Toxic Substances and Disease Registry (ATSDR)
9. Other applicable reference materials.

EMS(1)-2.4 Given a pesticide label, hazardous materials placard, and MSDS research, identify, and explain the significance of the following.

1. Name of pesticide
2. Signal word
3. EPA registration number
4. Precautionary statement
5. Hazard statement
6. Active ingredient

EMS(1)-3 Given a hazardous materials incident, assess the patient to determine the risk of secondary contamination.

EMS(1)-3.1 Explain the basic toxicological principles relative to the assessment and treatment of victims exposed to hazardous materials, including the following:

1. Acute and delayed toxicity
2. Reroutes of exposure
3. Local and systemic effects
4. Dose response as it relates to risk assessment
5. Synergistic effects
6. Health hazards as determined by assessing toxicity, exposure and dose.

EMS(1)-3.2 Describe how the chemical contamination of patients alters the principles of triage in hazardous materials incidents.

EMS(1)-3.3 Explain the need for patient decontamination procedures at hazardous materials incidents.

EMS(1)-3.4 Describe how the potential for secondary contamination determines the extent of patient decontamination required.

EMS(1)-3.5 Describe the way personal protective clothing, breathing apparatus, tools and equipment become contaminated and the importance and limitations of decontamination procedures.

EMS(1)-3.6 Explain the decontamination procedures as defined by the authority having jurisdiction (AHJ) for patients, personnel, personal protective equipment and apparatus at hazardous materials incidents.

EMS(1)-3.7 Describe how priorities for care of chemically contaminated patients differ from those suffering from radiological contamination.

EMS(1)-4 Advise the evaluator of the names of hospital facilities in the local area capable of handling patients contaminated at a hazardous materials incident and the importance of this information.

EMS-(1)-5 Given a description of a community, the EMS Level 1 responder should identify types of locations that may become targets for criminal or terrorist activity using hazardous materials.

The following are some examples of locations:

1. Public assembly areas
2. Public/Government buildings
3. Mass transit systems
4. Places with high economic impact
5. Telecommunications facilities
6. Places with historical or symbolic significance
7. Military facilities
8. Airports, Train Stations and Ports
9. Industrial facilities

EMS-(1)-6 Describe the difference between a chemical and a biological incident.

1. Chemical incidents are identified by the rapid onset of medical signs and symptoms characteristic of chemical exposure. Natural indicators and obvious signs of release may be present such as chemical residue and odors.
2. Biological incidents are gradual in onset of medical signs and symptoms with no obvious characteristic of odor or colors. The migration of the disease by infected individuals may be widespread and transmission from one person to another may occur.

EMS-(1)-7 Identify at least four indicators of possible criminal or terrorist activity involving chemical agents. The following are some examples of indicators:

1. Hazardous materials or lab equipment that is not relevant to the occupancy
2. Intentional release or hazardous materials
3. Unexplained patterns of sudden onset of similar, non-traumatic illnesses or deaths. Pattern may be geographic, by employer or associated with agent dissemination methods.
4. Unusual orders or tastes that are not in character with the surroundings
5. Mass casualty incident with unexplained signs of skin, eye or airway irritation
6. Unusual security, locks, bars on windows, covered windows and barbed wire
7. Unexplained vapors clouds, mists and plumes
8. Patients twitching, tightness in chest, sweating, pinpoint pupils (miosos), runny nose (rhinorrhea) and nausea and vomiting.
9. Unusual presence of natural indicators such as sick or dead birds and animals or dead or discolored trees, shrubs or grass.

EMS-(1)-8 Identify at least four indicators of possible criminal or terrorist activity involving biological agents. The following are some examples of indicators:

1. Mass causality incident with unusual number of ill or dying persons with common signs and symptoms.
2. Hospitals reporting mass causalities with similar signs and symptoms.

3. Unscheduled outdoors spraying
4. Abandoned spraying (dissemination) device

Planning the Response

EMS(1)-9 Given a plan of action by the incident commander, describe the EMS Level 1 responder's role in a hazardous materials incident as identified in the Local Emergency Response Plan or the organization's SOP's, and determine if the personal protective equipment provided is appropriate and if the equipment and supplies are adequate for implementing the planned response.

EMS(1)-9.1 Given specific scenarios, describe the emergency medical component of the hazardous materials response plan as developed by the authority having jurisdiction.

EMS(1)-9.2 State the EMS Level 1 responder's role within the hazardous materials response plan as developed by the authority having jurisdiction.

EMS(1)-9.3 State the EMS Level 1 responder's role within the Incident Management System (IMS).

EMS(1)-10 Given a hazardous materials incident, be able to plan a response to provide the appropriate level of emergency medical care, including the SOP's for the medical management of persons exposed to hazardous materials, as specified by the authority having jurisdiction.

EMS(1)-11 Given the name of the hazardous material and the type, duration, and extent of exposure and decontamination process, determine if available personal protective clothing and equipment are appropriate to implement the planned response.

EMS(1)-11.1 Describe the application, use, and limitations of the following:
1. Street clothing and work uniforms
2. Structural fire fighter protective clothing
3. Chemical protective clothing
4. Respiratory protective equipment
5. Body substance isolation equipment

EMS(1)-11.2 Given a simulated hazardous materials incident, determine if available equipment and supplies are appropriate to implement the planned response and describe the equipment and supplies available to the EMS Level 1 responder for the care and transportation of the hazardous materials incident patient.

Implementing the Planned Response

EMS(1)-12 Given a plan for providing patient care at a hazardous materials incident, perform the preparations necessary to receive the patient for treatment and transport.

EMS(1)-12.1 Given a plan for providing patient care, the EMS Level 1 responder shall be able to list the information that should be communicated to the medical control/receiving facility regarding the hazardous materials incident, including:
1. Type and nature of the incident
2. Chemical involved and its physical state
3. Number of potential patients
4. Manifestation in patient condition
5. Extent of decontamination the patient has received.

EMS(1)-12.2 Describe the procedure for preparing the vehicle and equipment for the patient.

EMS(1)-12.3 Demonstrate the proper donning, doffing, use and limitations of all personal protective equipment provided to the EMS Level 1 responder by the authority having jurisdiction for use in their hazardous materials response activities.

EMS(1)-12.4 Describe the concept of patient transfer from the incident site to the decontamination area and then to the treatment area.

EMS(1)-13 Given a plan for providing patient care at a hazardous materials incident, provide patient care consistent with the planned response and the organization's SOP's.

EMS(1)-13.1 Describe how chemical contamination alters the assessment and care of the hazardous materials patient.

EMS(1)-13.2 List the common signs and symptoms and describe the EMS treatment protocols for the following:

1. Corrosives (acid, alkali)
2. Choking agents or pulmonary irritants (ammonia, chlorine, phosgene)
3. Pesticides (organophosphates)
4. Chemical asphyxiants (cyanide, carbon monoxide)
5. Hydrocarbon solvents (xylene, methylene chloride)
6. Nerve agents (sarin, tabun)
7. Vesicants (blister agents)
8. Biological agents and toxins (anthrax, smallpox, ricin)
9. Irritants (riot control agents CN, CS)
10. Blood agents (hydrogen cyanide, cyanogens)
11. Radiological materials
12. Incapacitating agents.

EMS(1)-13.3 Explain the potential risk with invasive procedures for hazardous materials patients.

EMS(1)-13.4 Demonstrate the ability to perform the following EMS functions within the Incident Management System (IMS) during incidents involving multiple hazardous materials patients:

1. EMS control
2. Triage
3. Treatment
4. Disposition and transportation.

EMS(1)-14 Given a patient from a hazardous materials incident, transport the patient as specified in the local emergency response plan and the organization's SOP's.

EMS(1)-14.1 Identify the capabilities of the medical facilities available in the local area to receive hazardous materials patients.

EMS(1)-14.2 Identify acceptable vehicles available to transport hazardous materials patients from the treatment area to a receiving facility.

EMS(1)-14.3 List the pertinent patient information that should be communicated to the receiving facility, including the following:

1. Estimated time of arrival,
2. Age/sex of patient
3. Patient condition/chief complaint
4. Associated injuries
5. Routes, extent and duration of chemical exposure

6. Pertinent medical history
7. Signs and symptoms
8. Vital signs
9. Treatment, including decontamination and patient response
10. Pertinent chemical characteristics.

EMS(1)-14.4 Describe the actions necessary for the coordinated delivery of hazardous materials affected patients to a receiving facility.

EMS(1)-14.5 Explain the special hazards associated with the air transportation of patients exposed to hazardous materials.

EMS(1)-15 Describe the patient decontamination process.

EMS(1)-16 Given a simulated hazardous materials incident, perform medical support of response personnel.

EMS(1)-16.1 Identify the components of pre-entry and post-entry assessment to include the following:
1. Vital signs
2. Body weight
3. General health
4. Medications
5. Neurological status
6. EKG.

EMS(1)-16.2 Identify the following factors and how they influence heat stress for response personnel:
1. Hydration
2. Physical fitness
3. Environmental factors
4. Activity levels
5. Level of PPE
6. Duration of entry.

EMS(1)-16.3 Identify the medical monitoring protocols and demonstrate medical monitoring procedures for hazardous materials personnel at the scene.

EMS(1)-16.4 Define the criteria for site selection of a medical monitoring station at the scene of a hazardous materials incident.

EMS(1)-16.5 Demonstrate the ability to set up and operate a medical monitoring station at the scene of a hazardous materials incident.

EMS(1)-16.6 Demonstrate the ability to interpret and analyze data obtained from a medical monitoring station at the scene of a hazardous materials incident.

EMS(1)-16.7 Demonstrate proper documentation of medical monitoring at the scene of a hazardous materials incident.

EMS(1)-17 Identify the specific actions necessary when an incident is suspected to involve criminal or terrorist activity. The following are some examples of actions:
1. Take protective actions to protect yourself and other responders
2. Communicate the suspicion during the notification process
3. Isolate potentially exposed people or animals
4. Document initial observations
5. Attempt to preserve evidence while performing operational duties

6. Be alert for secondary devices
7. Establish access control points and work control zones
8. Prevent secondary contamination.

EMS(1)-17.1 Identify the procedures, equipment and safety precautions for collecting legal evidence at hazardous materials incidents.

EMS(1)-18 Given either a facility or transportation scenario of hazardous materials, with or without criminal or terrorist activities, the EMS Level 1 responder shall identify the appropriate initial notifications to be made and how to make them, consistent with the local emergency response plan or the organization's SOP's.

EMS(1)-19 Given an incident involving the suspicion of a biological agent the EMS Level 1responder should identify the following:

1. Identify the correct body substance isolation procedures to be followed
2. Identify the proper decontamination procedures n accordance with their Standard Operating Procedures
3. Identify the necessary post-exposure reporting to facilitate post-exposure prophylaxis when available.

Terminating the Incident

EMS(1)-20 Upon termination of the hazardous materials incident, complete the reporting, documentation, and EMS termination activities as required by the local emergency response plan or the organization's SOPs.

EMS(1)-20.1 Given scenarios, list the information to be gathered regarding the exposure of the patient and the EMS provider and describe the proper reporting procedures to include the following:

1. Patient number, condition and disposition
2. Product information
3. Exposure routes, extent and duration
4. Actions taken to limit exposure and contamination
5. Treatment rendered and adverse reactions noted.

EMS(1)-20.2 Given scenarios, identify situations that may necessitate critical incident stress debriefing intervention.

EMS(1)-20.3 Describe the EMS provider's role in the post-incident critique.

Summary: EMS Responder Level 1

Audience

Large training audience. All Paramedics and Emergency Medical Technicians who respond to emergencies, including all transportation accidents that may involve hazardous materials.

Prerequisites

First Responder Awareness Level

Training

- Classroom, physical skills lab and simulator/field instruction, with emphasis on decision making and treatment skills.

- Competencies:
    - Assessing incident scene hazards and risk of secondary contamination.
    - Incident scene planning, including determining personal protective equipment needs and defining roles and responsibilities of the EMS Level 1 responder.
    - Ability to perform EMS Level 1 patient preparation, care, and preparation for transport.
    - Ability to perform post-incident EMS reporting, documentation, and follow-up.

Refresher Training

1. Technical Updates
2. Changes in response protocols, SOPs, and incident command procedures.
3. Renewal and retesting of incident scene decision making and cold zone treatment skills.

Emergency Medical Service Responder Level 2

Introduction

Emergency Medical Service (EMS) Responders Level 2 shall be trained to the first responder operations level as defined in OSHA 29 CFR 1910.120 (q)(ii) and to the competencies of EMS Level 1, as defined in these guidelines. In addition, EMS Responder Level 2 shall meet all the training requirements of the Florida Department of Health Bureau of Emergency Medical Services Emergency Medical Technician (EMT) and/or Paramedic certification, U.S. Occupational Health and Safety Administration, Florida Department of Environmental Protection and the U.S. Environmental Protection Agency (EPA), as appropriate for their jurisdiction.

Decontamination of patients or rescue personnel is a critical task. These individuals have come in contact with a foreign agent that will manifest itself either in long-term (chronic) or short-term (acute) medical conditions. Whether the ramifications of contact with the foreign agent are chronic or acute, the need to have medically trained personnel, EMTs and Paramedics conducting these procedures is imperative and self-explanatory. The utilization of certified EMTs and Paramedics trained in hazardous materials to conduct the decontamination operation would result in a higher level of patient care. Properly trained EMTs & Paramedics will have the ability to provide effective and efficient patient assessment and pre-hospital care benefiting all who are involved in these types of operations.

EMS Level 2 responders are expected to be able to analyze hazardous materials incidents to determine the magnitude of problem areas in terms of outcomes based on their own assessment. They also are expected to plan a response and provide the appropriate level of emergency medical care and decontamination to persons involved in hazardous materials incidents, to provide medical support to hazardous materials response personnel, and to implement and terminates the response.

In addition to being trained to the first responder operational level, emergency service personnel responding to hazardous material incidents will be trained and receive regular continuing education to maintain competence in three areas: emergency medical technology, hazardous materials and specialized topics such as hazardous materials toxicology, as approved by the Florida Department of Health Bureau of Emergency Medical Services. The training program should be a comprehensive competency-based presentation of the required subject material with applicable hands-on sessions that demonstrate the newly acquired skills.

Definition

Emergency Medical Services Responders Level 2 are those persons who, in the normal course of their activities may be called upon to perform patient care and decontamination activities in the warm zone (contamination reduction zone) at hazardous materials incidents. EMS Level 2 responders are called on to provide care to those individuals that still pose a significant risk of secondary contamination (that is, a risk of contaminating others, including those providing care). In addition, personnel at this level shall be able to coordinate EMS activities at a hazardous materials incident and to provide medical support and decontamination of hazardous materials response personnel.

Audience

EMS Responders Level 2 may be individuals charged with the responsibility of providing and coordinating EMS services at a hazardous materials scene. This includes selected Emergency Medical Technicians and Paramedics, and may include members of industrial fire brigades who are assigned to patient care responsibility at a hazardous materials incident onsite or offsite.

Related Health, Safety, and Performance Standards

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99)
EPA 40 CFR 311 Worker Protection
NFPA 471, Recommended Practice for Responding to Hazardous Materials Incidents. 2002 Edition
NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents. 2002 Edition
NFPA 473 Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents. 2002 Edition
NETC Guidelines for Public Sector Hazardous Materials Training, March 1998
USFA, Emergency Incident Rehabilitation Guide, FA-114

Florida Department of Health, Bureau of Emergency Medical Services Emergency Medical Technician and Paramedic curricula constitutes the entry-level EMS preparation for continuing hazardous materials training. At a hazardous materials incident, it is desirable that all EMS basic life-support-provider personnel are trained to the entry level EMT or equivalent, as well as, the hazardous materials competencies included in this document.

Appropriate Methodologies

EMS Responder Level 2 training should include a combination of traditional classroom lecture and small group activities, tabletop and field exercises involving working with the incident command structure in simulated emergencies, and hands on psychomotor skills training. Content instruction should focus on contamination hazards, decontamination procedures, health monitoring treatment procedures and incident scene roles and responsibilities.

Student activities should focus on assessment and analysis of hazards and determination of appropriate procedures. Skill training should focus on implementing decontamination and patient care procedures and use of appropriate personal protective equipment. Written and practical examinations are highly recommended to measure achievement in initial training and refresher programs, and to support the employer's responsibility that all EMS Level 2 personnel are trained to competency before being called on to perform Level 2 functions at an actual emergency. Tabletop and field exercises should focus on acting out incident scene roles and on implementing procedures in the field environment. Refresher training should focus on technical updates, updates on changes in response protocols and SOPs, and renewal of individual skill in decontamination, patient treatment, and use of personal protective equipment.

The SERC estimates that the initial entry-level training can be accomplished in approximately 24 contact hours, anticipating completion of first responder awareness training and EMS Level 1, with competent instructors knowledgeable in hazardous materials response. Annual refresher training should be accomplishable with approximately 4 contact hours. However, 8 hours would be preferred.

The Florida Department of Health, Bureau of Emergency Medical Services requires the individual to recertify every two years. It is recommended that the individual be required to demonstrate proof of refresher training consistent with existing standards and that all EMS employers and educational institutions be required to issue certificates of training for compliance with hazardous materials refresher training.

The following resources are recommended to supplement the training process:

Local LEPC Emergency Response Plan
Local Standard Operating Procedures
Hawley's Condensed Chemical Dictionary. R. J. Lewis, Sr. 13th Edition. 1997

Hazardous Chemical Data (U.S. Government)
OSHA 29 CFR 1910.120 (Current Edition)
NIOSH Pocket Guide (Current Edition)
Association of American Railroads Emergency Action Guides (Current Edition)
NFPA 471, 472, 473 (Current Edition)
Handbook of Toxic and Hazardous Chemicals and Carcinogens. Marshall Sitting. 3rd Edition.
Haz/Mat Injuries (Bradford/Stutz)
Emergency Care for Haz/Mat Exposures. Mosby/Bronstien and Currance.

Training

All EMS Responder Level 2 personnel will be trained to the operational level utilizing the Florida First Responder Operational Level Hazardous Materials Training Program; National Fire Academy Program - Initial Response to Hazardous Materials Incidents: Basic Concepts and Concept Implementation or similar curricula complying with the First Responder Operational Level as defined in 29 CFR 1910.120 *and* NFPA 472. Additionally, all EMS Level 2 responders will be trained to perform the EMS Level 1 and 2 competencies.

The following training objectives are recommended for first responder operational level. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

First Responder Operational

The First Responder Operational competencies included here for reference.

Recommended Training Objectives

OPS-1 Given a hazardous materials incident scenario, demonstrate an understanding of the responders at the operations level.

OPS-1.1 Describe the responsibility to analyze the hazardous materials incident and determine the magnitude of the problem in terms of outcomes, and demonstrate the ability to do the following:

OPS-1.1.1 Identify the responsibility to survey the hazardous materials incident to determine the containers and materials involved, whether hazardous materials have been released, and the surrounding conditions.

OPS-1.1.2 Identify the responsibility to collect hazard and response information from MSDS, CHEMTREC and shipper / manufacturer contacts.

OPS-1.1.3 Identify the responsibility to predict likely behavior of a material and its container.

OPS-1.1.4 Identify the responsibility to estimate the potential harm at a hazardous materials incident.

OPS-1.2 Describe the responsibility to plan an initial response within the capabilities and competencies of available personnel, personal protective equipment and control equipment, and demonstrate the ability to do the following:

OPS-1.2.1 Identify the responsibility to describe the response objectives available for hazardous materials incidents.

OPS-1.2.2 Identify the responsibility to describe the defensive options available for a given response objective.

OPS-1.2.3 Identify the responsibility to determine whether the personal protective equipment provided is appropriate for implementing each defensive option.

OPS-1.2.4 Identify the responsibility to identify the emergency decontamination procedures.

OPS-1.3 Describe the responsibility to implement the planned response to favorably change the outcomes consistent with the local emergency response plan and the organization's SOP's, and demonstrate the ability to do the following:

OPS-1.3.1 Identify the responsibility to establish and enforce scene control procedures including control zones, emergency decontamination and communications.

OPS-1.3.2 Identify the responsibility to initiate the incident management system (IMS) for hazardous materials incidents.

OPS-1.3.3 Identify the responsibility to don, work in and doff personal protective equipment provided by the authority having jurisdiction.

OPS-1.3.4 Identify the responsibility to perform defensive control functions identified in the action plan.

OPS-1.4 Describe the responsibility to evaluate the progress of the actions taken to ensure that the response objectives are being met safely, effectively, and efficiently, and demonstrate the ability to do the following:

OPS-1.4.1 Identify the responsibility to evaluate the status of the defensive actions taken in accomplishing the response objectives.

OPS-1.4.2 Identify the responsibility to communicate the status of the planned response.

Analyzing the Incident: Surveying the Hazardous Materials Incident

OPS-2

and

Given examples of both facility and transportation situations involving hazardous materials, survey the hazardous materials incident to determine the container materials involved, whether hazardous materials have been released, and the surrounding conditions. The survey should include the following:

1. Inventory of the type of containers involved
2. Container identification markings
3. Container quantity or capacity
4. Involved materials
5. Release information
6. Surrounding conditions.

OPS-2.1 Given examples of various hazardous materials containers, identify the general shapes of containers for liquids, gases, and solid hazardous materials that are typically found.

OPS-2.1.1 Given examples of the following tank cars, identify each tank car by type:

1. Nonpressure tank cars with and without expansion domes
2. Pressure tank cars
3. Cryogenic liquid tank cars
4. Pneumatically unloaded hopper cars
5. High-pressure tube cars.

OPS-2.1.2 Given examples of the following intermodal tank containers, identify each intermodal tank container by type; identify one material and its USDOT Hazard Class that is typically found in each tank:

1. Nonpressure intermodal tank containers (IM-101 and IM 102)
2. Pressure intermodal tank containers
3. Special intermodal tanks (Cryogenic and tube modules)

OPS-2.1.3 Given examples of the following cargo tank by type:

1. Nonpressure liquid tanks (MC-306)
2. Low pressure chemical tanks (MC307)
3. Corrosive liquid tanks (MC-312)
4. High pressure tanks (MC-331)
5. Cryogenic liquid tanks (MC-338)
6. Dry bulk cargo tanks
7. Compressed gas tube trailers.

OPS-2.1.4 Given examples of the following facility tanks, identify at least one material and its hazard, that are typically found in each fixed facility tank by type:

1. Nonpressure tank
2. Pressure tank
3. Cryogenic liquid tank.

OPS-2.1.5 Given examples of the following non-bulk packages, identify each package by type:

1. Bags
2. Carboys
3. Cylinders
4. Drums.

OPS-2.1.7 Given examples of various radioactive material containers, identify each container/package by type:

1. Type A Package
2. Type B Package
3. Industrial
4. Excepted
5. Strong, tight containers.

OPS-2.2 Given examples of facility and transportation containers, identify the markings that differentiate one container from another.

OPS-2.2.1 Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Rail transportation vehicles, including tank cars
2. Intermodal equipment including tank containers
3. Highway transport vehicles, including cargo tanks

OPS-2.2.2 Given examples of the facility containers, identify the markings indicating container size, product contained and /or site identification numbers.

OPS-2.3 Given examples of the facility and transportation scenario involving hazardous materials, identify the name(s) of the hazardous material(s) in each situation.

OPS-2.3.1 Identify the following information on a pipeline marker:

1. Product
2. Owner/operator
3. Emergency telephone number.

OPS-2.3.2 Given a pesticide label, identify each of the following pieces of information; then match the piece of information to its significance in surveying the hazardous material incident:

1. Name of pesticide
2. Signal word
3. Pest control product number
4. Precautionary statement
5. Hazard statement
6. Active ingredient.

OPS-2.3.3 Given a radioactive material label identify vertical bars, contents and activity and transport index.

OPS-2.4 Identify and list surrounding conditions that should be noted when surveying hazardous materials incidents. Surrounding conditions may include:

1. The topography, land use, bodies of water and accessibility
2. Weather conditions
3. Public exposure potential, adjacent land use (rail lines, roadways, ports and airports)
4. Utilities, pipelines, storm and sewer drains
5. Ignitions sources
6. Nature and extent of injuries
7. Building information such as floor drains, ventilation ducts and returns should be considered.

OPS-2.5 Give examples of ways to verify information obtained from the surveying of a hazardous materials incident.

OPS-2.6 Identify at least three additional hazards that could be associated with an incident involving criminal or terrorist activity. The following are some examples of hazards:

1. Secondary events intended to delay or incapacitate emergency responders
2. Armed resistance
3. Use of weapons
4. Booby traps
5. Secondary contamination from handling patients
6. Hostage barricade situations.

Analyzing the Incident: Collecting Hazard and Response Information

OPS-3 Given known hazardous materials, collect hazard and response information from MSDS, CHEMTREC and contacts with the shipper/manufacturer.

OPS-3.1 Match the definitions associated with the USDOT Hazard Classes and divisions of hazardous materials, including refrigerated gases and cryogenic liquids, with the class or division.

OPS-3.2 Identify two ways to obtain a MSDS in an emergency.

OPS-3.3 Using a MSDS for a specified material, identify the following hazard and response information:

a. Physical and chemical characteristics
b. Physical hazards of the material
c. Health hazards of the material
d. Signs and symptoms of exposure
e. Routes of entry
f. Permissible exposure limits
g. Responsible party contact

h. Precautions for safe handling (including hygiene practices, protective measures, procedures for clean up of spills and leaks
i. Applicable control measures including personal protective equipment
j. Emergency and first aid procedures.

OPS-3.4 Identify the following:
1. The type of assistance provided by CHEMTREC.
2. How to contact CHEMTREC.
3. The information to be furnished to CHEMTREC.

OPS-3.5 Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-3.6 Identify two types of assistance provided by local, state and federal authorities, with respect to criminal or terrorist activities involving hazardous materials.

OPS-3.6.1 Identify the procedure for contacting local, state and federal authorities as specified in the local emergency response plan (ERP) or the organization's SOP's.

OPS-3.7 Describe the properties and characteristics of the following:
1. Alpha particles
2. Bata particles
3. Gamma rays
4. Neutrons.

Analyzing the Incident: Predicting the Behavior of a Material and its Container

OPS-4 Given examples of a single facility and transportation hazardous materials incidents, predict the likely behavior of a material and its container in each incident.

OPS-4.1 Given situations involving known hazardous materials, interpret the hazard response information obtained from the current edition of the North American Emergency Response Guidebook, MSDS, CHEMTREC, and shipper/manufacturer contacts.

OPS-4.1.1 Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:
1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (autoignition) temperature
7. Physical state (solid, liquid, gas)
8. Specific gravity
9. Toxic products of combustion
10. Vapor density
11. Vapor pressure
12. Water solubility
13. Radiation (ionizing and non-ionizing)

OPS-4.1.2 Identify the differences among the following terms:
1. Exposure and hazard

2. Exposure and contamination
3. Contamination and secondary contamination
4. Radioactive material exposure

OPS-4.2 Identify three types of stress that could cause a container system to release its contents:
1. Mechanical stress
2. Thermal stress
3. Chemical stress.

OPS-4.3 Identify five ways in which containers can breach:
1. Punctures
2. Splits or tears
3. Closures opening up
4. Disintegration
5. Runaway cracking.

OPS-4.4 Identify four ways in which containers can release their contents.
1. Catastrophic release or rupture
2. Detonation
3. Rapid relief
4. Spills or leaks.

OPS-4.5 Identify the general testing requirements for “Type A,” “Type B” and “Special Form” packaging used for radioactive materials transportations.

OPS-4.6 Identify common “industrial radiography” sources and any specialized large quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-4.7 Identify at least four dispersion patterns that can be created upon release of a hazardous material. The following are examples:
1. Cloud or hemisphere
2. Plume
3. Cone
4. Stream or pooling
5. Irregular.

OPS-4.8 Identify the three general time frames for predicting the length of time that exposures may be in contact with the hazardous material in an endangered area to be:
1. Short-term (minutes and hours)
2. Medium-term (days, weeks and months)
3. Long-term (years).

OPS-4.9 Identify the health and physical hazards that could cause harm to include;
1. Thermal
2. Etiologic
3. Asphyxiation
4. Mechanical
5. Corrosive
6. Poisonous
7. Radiation

OPS-4.9.1 Identify the health hazards associated with the following terms:
1. Asphyxiant - cellular and pulmonary
2. Chronic health hazard

3. Convulsant
4. Irritants and corrosive
5. Sensitizer/allergen
6. Highly Toxic
7. Carcinogens
8. Infectious Agents.
9. Systemic toxins.
10. Mutagens
11. Teratogens
12. Alpha, beta gamma and neutron radiation.

OPS-4.10 Given the following types of warfare agents, identify the corresponding DOT hazard class and division:
1. Nerve agents
2. Vesicants (blister agents)
3. Blood agents
4. Choking agents
5. Irritants (riot control agents)
6. Biological agents and toxins.

Analyzing the Incident: Estimating the Potential Harm

OPS-5 Given simulated incidents involving hazardous materials, estimate the potential harm within the endangered area at a hazardous materials incident to include:
1. Determining the dimensions of the area
2. Estimating the number of exposures
3. Measuring or predicting concentrations of materials
4. Estimating the physical, health and safety hazards
5. Identifying the areas of potential harm
6. Estimating the potential outcomes

OPS-5.1 Identify a resource for determining the size of an endangered area surrounding conditions at a hazardous materials incident to include:
1. The current North America Emergency Response Guidebook
2. Facility pre-incident plume dispersion modeling results

OPS-5.2 Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials incident, estimate the number and type of exposures within that endangered area.

OPS-5.3 Identify resources available for determining the concentrations of a released hazardous material within an endangered area.

OPS-5.4 Identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials incident given the concentration of the released hazardous material.
1. Surrounding conditions
2. Indication of the behavior of the hazardous material and its container
3. Degree of hazard

OPS-5.5 Describe the impact that time, distance and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-5.6 Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure and contamination concerns.

Planning the Response: Describing Response Objectives for Hazardous Materials Incidents

OPS-6 Given simulated facility and transportation hazardous materials problems, describe the first responder's response objectives for each problem.

OPS-6.1 Identify the steps for determining the number of exposures that could be saved by the first responder with the resources provided by the authority having jurisdiction and operating in a defensive fashion, given an analysis of the hazardous materials problem, and the exposures already lost.

OPS-6.2 Describe the steps for determining defensive response objective given an analysis of the hazardous materials incident.

OPS-6.3 Describe how to assess the risk to response personnel for each hazard class in rescuing injured persons at a hazardous materials incident.

Planning the Response: Identifying Defensive Options

OPS-7 Given simulated facility and transportation hazardous materials problems, identify the defensive options for each response objective.

OPS-7.1 Identify the defensive options to accomplish a given response objective.

OPS-7.2 Identify the purpose for, and the procedures, equipment, and safety precautions used with each of the following control techniques:

1. Absorption
2. Dike, dam, diversion or retention
3. Dilution
4. Vapor dispersion
5. Vapor suppression
6. Remote valve shutoff.

Planning the Response: Determining Appropriateness of Personal Protective Equipment

OPS-8 Given the name of a hazardous material involved and the anticipated type of exposure, determine whether available personal protective equipment is appropriate for implementing a defensive option.

OPS-8.1 Identify the appropriate respiratory protection required for a given defensive option for the first responder at the operational level as positive pressure self-contained breathing apparatus.

OPS-8.1.1 Identify the three types of respiratory protection and the advantages and limitations presented by the use of each at hazardous materials incidents.

OPS-8.1.2 Identify the required physical capabilities and limitations of personnel working in positive pressure self-contained breathing apparatus.

OPS-8.2 Identify the appropriate personal protective equipment required for a given defensive option.

OPS-8.2.1 Identify skin contact hazards encountered at hazardous materials incidents.

OPS-8.2.2 Identify the purpose, advantages, and limitations of the following protective clothing at hazardous materials incidents:

1. Structural fire fighting clothing
2. High temperature protective clothing
3. Chemical protective clothing
4. Liquid splash protective clothing
5. Vapor protective clothing

Planning the Response: Identifying Emergency Decontamination Procedures

OPS-9 Given a plan of action for a hazardous materials incident, identify emergency decontamination procedures.

OPS-9.1 Identify ways that personnel, personal protective equipment, apparatus and tools and equipment become contaminated.

OPS-9.2 Describe how the potential for secondary contamination determines the need for emergency contamination procedures.

OPS-9.3 Identify the purpose of emergency decontamination at hazardous materials incidents.

OPS-9.4 Identify the advantages and limitations of emergency decontamination procedures.

OPS-9.5 Identify appropriate, simple procedures for dealing with accident victims with life-threatening injuries who are known or suspected to be contaminated with radioactive material.

OPS-9.6 Describe the procedure listed in the Local Emergency Response Plan or the organization's SOP's for decontamination of a large number of people exposed to hazardous materials

OPS-9.7 Describe the procedure listed in the Local Emergency Response Plan or the organization's SOP's to preserve evidence at hazardous materials incidents involving suspected criminal or terrorist acts.

Implementing the Planned Response: Establishing and Enforcing Scene Control Procedures

OPS-10 Given scenarios for facility and/or transportation hazardous materials incidents identify how to establish and enforce scene control including control zones, emergency decontamination and communications.

OPS-10.1 Identify the procedures for establishing scene control through control zones.

OPS-10.2 Identify the criteria for determining the locations of the control zones at hazardous materials incidents.

OPS-10.3 Identify the basic techniques for the following protective actions at hazardous materials incidents:
1. Evacuation
2. Sheltering in-place

OPS-10.4 Identify the considerations associated with locating emergency decontamination.

OPS-10.5 Demonstrate the ability to perform emergency decontamination.

OPS-10.6 Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:
1. Hazardous materials incident

2. Hazardous materials incident with criminal or terrorist activities

OPS-10.6.1 Identify the items to be considered in a safety briefing prior to allowing for criminal or terrorist related incidents to include:
1. Secondary events intended to incapacitate or delay emergency responders
2. Armed resistance
3. Use of weapons
4. Booby traps
5. Secondary contamination from handling patients

Implementing the Planned Response: Initiating the Incident Management System (IMS)

OPS-11 Given a simulated facility and/or transportation hazardous materials incidents, initiate the incident management system (IMS) specified in the local emergency response plan and the organizations SOP's.

OPS-11.1 Identify the role of the responder at the operational level during hazardous materials incidents as specified in the local emergency response plan and the organizations SOP's.

OPS-11.2 Identify the levels of hazardous materials incidents as defined in the SERC Uniform Classification System for Categorizing Hazardous Materials Incidents.
1. Level 1 - Minor
2. Level 2 - Moderate
3. Level 3 - Major

OPS-11.3 Identify the purpose, need, benefits and elements of an IMS at hazardous materials incidents.

OPS-11.4 Identify the considerations for determining the location of the command post for a hazardous materials incident.

OPS-11.5 Identify the procedures for requesting additional resources at a hazardous materials incident.

OPS-11.6 Identify the responsibilities of the safety officer as follows:
1. Obtains a briefing from the Incident Commander
2. Advises the Incident Commander of incident safety considerations and dangerous situations
3. Monitors the implementation of incident safety considerations
4. Alters, suspends or terminates any activity that is deemed to be unsafe.

Implementing the Planned Response: Using Personal Protective Equipment

OPS-12 Demonstrate the ability to don, work in and doff the personal protective equipment provided by the authority having jurisdiction.

OPS-12.1 Identify the importance of the buddy system in implementing the planned defensive options.

OPS-12.2 Identify the importance of the backup personnel in implementing the planned defensive actions.

OPS-12.3 Identify the safety precautions to be observed when approaching and working at hazardous materials incidents.

OPS-12.4 Identify the signs and symptoms of heat and cold stress.

OPS-12.5 Identify the physical capabilities required for and the limitations of personnel working in the personal protective equipment as provided by the authority having jurisdiction.

OPS-12.6 Match the function of the operational components of the positive pressure self-contained breathing apparatus provided the responders to the name of the component.

OPS-12.7 Identify the procedures for cleaning, sanitizing and inspecting respiratory protective equipment.

OPS-12.8 Identify the procedures for donning, working in and doffing positive pressure self-contained breathing apparatus.

OPS-12.9 Demonstrate donning, working in and doffing positive pressure self-contained breathing apparatus. (Note: This competency is for familiarization purposes only and additional, specific training in the safe use of positive pressure self-contained breathing apparatus is required.)

Implementing the Planned Response: Performing Defensive Control Actions

OPS-13 Given a plan of action for a hazardous materials incident within their capabilities, demonstrate the ability to perform the defensive control actions set out in the plan.

OPS-13.1 Understand the types of firefighting foam(s) or vapor suppressing agent(s) and foam equipment furnished by the authority having jurisdiction, understand the proper application of the firefighting foam(s) or vapor-suppressing agents on a spill or fire involving hazardous materials.

OPS-13.2 Identify the characteristics and applicability of the following types of foams:

1. Protein
2. Fluoroprotein
3. Special purpose
   a. Polar solvent alcohol-resistant concentrates.
   b. Hazardous materials concentrates
4. Aqueous film-forming foam (AFFF)
5. High expansion.

OPS-13.3 Given the appropriate tools and equipment, describe how to perform the following defensive control activities:

1. Absorption
2. Damming, diking, diversion and retention
3. Dilution
4. Vapor dispersion
5. Vapor suppression.

OPS-13.4 Understand the location and use of the mechanical, hydraulic and air emergency remote shut-off devices.

OPS-13.5 Describe the objectives and dangers of search and rescue missions at hazardous materials incidents.

OPS-13.6 Describe methods for controlling the spread of radioactive contamination to limit impact.

OPS-13.7 Describe procedures, such as those listed in the Local Emergency Response Plan or the organization's SOP's, to preserve evidence at hazardous materials incidents involving suspected criminal or terrorist acts.

Evaluating Progress: Evaluation the Status of Defensive Actions

OPS-14 Given simulated facility and/or transportation hazardous materials incidents, evaluate the status of the defensive actions taken in accomplishing the response objectives.

OPS-14.1 Identify the considerations for evaluating whether defensive options are effective in accomplishing the objectives.

OPS-14.2 Describe the circumstances under which it would be prudent to withdraw (pull back) from a hazardous materials incident.

Evaluating Progress: Communicating the Status of the Planned Response

OPS-15 Given simulated facility and/or transportation hazardous materials incidents, demonstrate communicating the status of the planned response to the incident commander through the normal chain of command.

OPS-15.1 Identify the methods for communicating the status of the planned response to the incident commander through the normal chain of command.

OPS-15.2 Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

The following training objectives are recommended for first responder EMS Level 2. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

In addition to the hazardous materials first responder operational level training, all EMS Level 2 responders will be trained in the following competencies:

EMS Responder Level 2

Recommended Training Objective

EMS(2)-1 Given a hazardous materials incident scenario, demonstrate an understanding of the role of the Emergency Medical Service Responder Level 2.

EMS(2)-1.1 Describe the responsibility of the Emergency Medical Service Responder 2 to analyze a hazardous material incident to determine the magnitude of the problem in terms of outcomes.

1. Determine the hazards present to the responder and the patient
2. Assess the patient to determine the patient care needs and the risk of secondary contamination.

EMS(2)-1.2 Describe the responsibility of the Emergency Medical Service Responder 2 to plan a response to provide the appropriate level of emergency medical care to persons

involved in hazardous materials incidents and to provide medical support to hazardous materials response personnel.

1. Define the role of the EMS Level 2 responder
2. Plan a response to provide emergency medical care in a hazardous materials incident
3. Determine appropriate personal protective equipment needed for EMS personnel

EMS(2)-1.3 Describe the responsibility of the Emergency Medical Service Responder 2 to implement the planned response:

1. Perform the preparations for receiving the contaminated patient
2. Provide treatment to the hazardous materials patient
3. Coordinate and manage the EMS component of the hazardous materials incident.

EMS(2)-1.4 Describe the responsibility of the Emergency Medical Service Responder 2 to terminate the incident.

Analyzing the Hazardous Materials Incident

EMS(2)-2 Given an emergency involving hazardous materials, determine the hazards present to both the responder and the patient in that situation.

EMS(2)-2.1 Define the following chemical and physical properties and describe their importance in the risk assessment process:

1. Boiling point
2. Flammable (explosive) limits (LEL/UEL, LFL/UFL)
3. Flash point
4. Ignition temperature
5. Specific gravity
6. Vapor density
7. Vapor pressure
8. Water solubility.

EMS(2)-2.2 Define the following radiological terms and explain their use in the risk assessment process:

1. Alpha radiation
2. Beta radiation
3. Gamma radiation
4. Radiological measurement units.

EMS(2)-2.3 Define the following toxicological terms and explain their use in the risk assessment process:

1. Threshold Limit Value (TLV-TWA)
2. Lethal Concentration and Lethal Doses (LC50 and LD50)
3. Parts per million/billion (ppm/ppb)
4. Immediately Dangerous to Life and Health (IDLH)
5. Permissible Exposure Limit (PEL)
6. Short-Term Exposure Limit (TLV-STEL)
7. Ceiling Level (TLV-C).

EMS(2)-2.4 Given a specific hazardous material and using the information available to the level 2 responder, demonstrate extracting appropriate information about the physical characteristics, chemical properties, hazards and suggested medical response considerations.

EMS(2)-2.3 Given a hazardous materials incident with a patient(s), assess the patient and conditions to determine the risk of secondary contamination.

EMS(2)-2.3.1 Identify sources of technical information for performance of patient decontamination.

EMS(2)-3.2 Identify the factors that influence the decision of when and where to treat the patient and the extent of patient care, including the following:

1. Hazardous material toxicity
2. Patient condition
3. Availability of decontamination.

EMS(2)-3.3 Given a scenario involving potential domestic terrorism, the responder shall determine the basic tools for identification of the substance, appropriate detection devices and local availability of such devices.

EMS(2)-3.4 Given a scenario involving potential criminal or terrorist activity, describe procedures as listed in the local ERP or organization's SOP's to preserve evidence involving suspected criminal or terrorist acts at the hazardous materials incident.

Planning the Response

EMS(2)-4 Given a plan of action by the incident commander, and a role in a hazardous materials incident as identified in the local ERP or the organization' SOP's describe the importance of coordination between various agencies at the scene.

EMS(2)-5 Given a hazardous materials incident, plan a response to provide the appropriate level of emergency care to persons involved in hazardous materials incidents and to provide support to hazardous materials support personnel.

EMS(2)-5.1 Given a hazardous materials incident scenario, assess the problem and formulate and implement a plan that includes the following:

1. EMS control activities
2. EMS component of the IMS
3. Medical monitoring of personnel using personal protective clothing
4. Triage and medical treatment of chemically contaminated individuals including proper decontamination
5. Product and exposure information gathering and documentation.

EMS(2)-5.2 Describe the importance of pre-incident planning relating to specific areas.

EMS(2)-5.3 Describe the hazards and precautions to be observed when approaching a hazardous materials incident.

EMS(2)-5.4 Describe the considerations associated with the placement, location, and setup of the patient decontamination site.

EMS(2)-5.5 Explain the advantages and limitations of techniques of various decontamination procedures:

1. Absorption
2. Chemical degradation
3. Dilution
4. Isolation.

EMS(2)-5.6 Describe when it may be prudent to withdraw (pull back) from a hazardous materials incident.

EMS(2)-5.7 Describe impact that time, distance and shielding have on radioactive materials exposure specific to the expected dose rate.

EMS(2)-5.8 Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure and contamination concerns.

EMS(2)-.6 Given the name of the hazardous material and the type, duration and extent of exposure determine if the personal protective equipment available to EMS is appropriate to implement the planned response.

EMS(2)-6.1 Identify the advantages and dangers of search and rescue missions at hazardous materials incidents.

EMS(2)-6.2 Identify the advantages and hazards associated with the rescue, extrication and removal of a victim from a hazardous materials incident.

EMS(2)-6.3 Describe the types, application use and limitations of protective clothing used by EMS personnel at hazardous materials incidents.

EMS(2)-6.4 Demonstrate how to interpret a chemical compatibility chart for chemical protective clothing.

Implementing the Planned Response

EMS(2)-7 Given a plan for providing patient care at a hazardous materials incident, perform the preparations necessary to receive the patient for decontamination, treatment and transport.

EMS(2)7.1 Given a plan for providing patient care, demonstrate the proper donning, doffing, and use of personal protective equipment.

EMS(2)-8 At the scene of a hazardous materials incident, provide or coordinate the patients care

EMS(2)-8.1 Given a simulated hazardous materials incident and using locally available resources, demonstrate the implementation and execution of patient decontamination procedures.

EMS(2)-8.2 Explain the principles of emergency decontamination and its application to critically ill patients.

EMS(2)-8.3 Demonstrate the ability to coordinate patient care activities including treatment, disposition and transport of patients.

EMS(2)-9 Given a simulated hazardous materials incident, demonstrate the ability to establish and manage the EMS component of an incident management system (IMS).

EMS(2)-10 Given a hazardous materials scenario, perform medical support of hazardous materials incident response personnel.

EMS(2)-10.1 Identify the components of pre-entry and post-entry assessment to include the following:

1. Vital signs
2. Body weight
3. General health
4. Medications
5. Neurological status

6. EKG.

EMS(2)-10.2 Identify the following factors and how they influence heat stress for response personnel:
1. Hydration
2. Physical fitness
3. Environmental factors
4. Activity levels
5. Level of PPE
6. Duration of entry.

EMS(2)-10.3 Identify the medical monitoring protocols and demonstrate medical monitoring procedures for hazardous materials personnel at the scene.

EMS(2)-10.4 Define the criteria for site selection of a medical monitoring station at the scene of a hazardous materials incident.

EMS(2)-10.5 Demonstrate the ability to set up and operate a medical monitoring station at the scene of a hazardous materials incident.

EMS(2)-10.6 Demonstrate the ability to interpret and analyze data obtained from a medical monitoring station at the scene of a hazardous materials incident.

EMS(2)-10.7 Demonstrate proper documentation of medical monitoring at the scene of a hazardous materials incident.

EMS(2)-10.8 Describe how a rehabilitation sector is established and what activities need to take place.

Terminating the Incident

EMS(2)-11 Upon the termination of a hazardous materials incident, shall complete the reporting, documentation, and EMS termination activities as required by the local emergency response plan or the organization's SOPs.

EMS(2)-11.1 Given plans and SOPs, describe the information regarding incident EMS activities that should be relayed through the chain of command to the incident commander to include:
1. Patient numbers, conditions and disposition
2. Number of response personnel screened
3. Adverse reactions noted
4. Personnel transported for further treatment
5. Completed records
6. Recommended medical, physical and psychological needs for immediate rehabilitation
7. Availability of EMS personnel and equipment.

EMS(2)-11.2 Describe the activities required in terminating the EMS component of a hazardous materials incident.

EMS(2)-11.3 Describe the process and demonstrate the ability to conduct the EMS portion of an incident critique.

EMS(2)-11.4 Describe the process of making revisions to EMS operating procedures and response capabilities as a result of information learned.

EMS(2)-12 Describe the necessary procedures required to decontaminate all equipment to render it back in service and the proper disposal of equipment that requires the same.

Summary EMS Responder Level 2

Audience

Moderate size training audience. Paramedics and EMTs who may be called upon to conduct decontamination and patient care in the warm zone of a hazardous materials incident.

Prerequisites

First Responder Awareness training (29CFR1910.120(q)(i))
First Responder Operational training (29CFR1910.120(q)(ii))
EMS Responder Level 1 training

Training

- Classroom, physical skill lab and simulator / field instruction, with emphasize on decision making and treatment skills.

- Competencies:
    - Assessing incident scene hazards and risk of patient secondary contamination.
    - Incident scene response planning including determining personal protective equipment needs and defining roles and responsibilities of EMS Level 2 responders.
    - Ability to perform EMS Level 2 patient decontamination and treatment in the warm zone (contamination reduction zone) of an incident scene.
    - Ability to perform post-incident EMS reporting, documentation and follow-up.

Refresher Programs

1. Technical updates
2. Change in response protocols and incident command system SOPs.
3. Renewal and retesting of incident scene decision making and warm zone decontamination and treatment skills.

FLORIDA STATE EMERGENCY RESPONSE COMMISSION

Guidelines for Law Enforcement Officers
Hazardous Materials Training

October 1, 2002
~Revised~

Guidelines for Law Enforcement Officers Hazardous Materials Training

Introduction

Law Enforcement Officers at the awareness level shall be trained to meet the competencies of the awareness level. In addition, Law Enforcement Officers at the awareness level shall receive training to meet requirements of the Occupational Safety and Health Administration (OSHA), Florida Department of Law Enforcement, Florida Department of Environmental Protection, and the US. Environmental Protection Agency (EPA) as appropriate for their jurisdictions. Law Enforcement Officers that respond or can be expected to respond to a hazardous materials incident must be knowledgeable of 29 CFR 1910.120 and 40 CFR 311 training and emergency response requirements.

Definition

Law Enforcement Officers at the awareness level are personnel who are likely to discover or witness a hazardous materials emergency, or in the normal course of their duties may be the first on the scene of an emergency involving hazardous materials. Law Enforcement Officers at the awareness level are expected to recognize hazardous materials are present, protect themselves, call for trained personnel, and secure the area. The most important duty of these personnel is to make proper notification in order to begin the emergency response sequence. This level of training anticipates a response role that involves no potential for exposure to the hazards related to the hazardous materials involved in an incident.

Audience

All Law Enforcement Officers who normally patrol, or who may be called upon to respond to the scene of an incident to perform duties associated with cold zone activities in support of an incident command system. Cold zone activities may include the security of perimeters, evacuation efforts, security of evacuated areas, participation within the incident command system, traffic control, etc., and must be consistent with the local emergency response plan or organization's Standard Operating Procedures.

Related Health and Safety Standards

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99)
EPA 40 CFR 311 Worker Protection
NFPA 471, Recommended Practice for Responding to Hazardous Materials Incidents. 2002 Edition
NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents. 2002 Edition
NETC Guidelines for Public Sector Hazardous Materials Training. March 1998

Appropriate Methodologies

Law Enforcement Officer Awareness training should be conducted using a mix of lecture and media presentations with individual and small group exercises. The exercises should consist of activities practicing identification and recognition of hazardous materials from scenario descriptions and using information sources such as the North American Emergency Response Guidebook to establish the presence of hazardous materials in the scenarios. Competency should be measured by written examination.

Refresher training occurring annually should focus on skill renewal in using information sources to recognize and identify hazardous materials.

The SERC estimates that the initial training can be accomplished in approximately 8 contact hours with competent instructors knowledgeable in hazardous materials response. Annual refresher should be accomplishable with approximately 4 contact hours of training. However, 8 hours would be preferred.

The Florida Department of Law Enforcement requires the individual to recertify every four years. It is recommended that the individual be required to demonstrate proof of refresher training consistent with the standards and that all Law Enforcement Agencies and Law Enforcement training institutions be required to issue certificates of training for compliance with initial and refresher hazardous materials training.

Training

All Law Enforcement Officers will be trained to the awareness level utilizing the Florida First Responder Awareness Level Hazardous Materials Training Program, National Fire Academy Program - Initial Response to Hazardous Materials Incidents: Basic Concepts or similar curricula complying with the First Responder Awareness Level as defined in 29 CFR 1910.120.

The following training objectives are recommended for first responder awareness level. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

Law Enforcement Level 1

All Law Enforcement Officers will be trained to meet the following competencies as a minimum:

Recommended Training Objectives

LAW-1 Given a hazardous materials incident scenario, demonstrate an understanding of the role of the Law Enforcement Officer at the awareness level.

LAW-1.1 Describe the responsibility to analyze the incident to determine the hazardous materials present and the basic hazard and response information for each type of hazardous material, and demonstrate the ability to do the following:

LAW-1.1.1 Identify the responsibility to detect the presence of hazardous materials.

LAW-1.1.2 Identify the responsibilities to survey a hazardous materials incident, from a safe location, to identify the name, UN/NA identification number or type placard applied for any hazardous material involved.

LAW-1.1.3 Identify the responsibility to collect hazard information from the current edition of the *North American Emergency Response Guidebook* (ERG).

LAW-1.2 Describe the responsibility to implement actions consistent with the local emergency response plan, the organization's SOP's and the current edition of the *North American Emergency Response Guidebook* and demonstrate the ability to do the following:

LAW-1.2.1 Identify the responsibility to initiate protective actions consistent with the local emergency response plan, the organization's SOP's, and the current edition of the *North American Emergency Response Guidebook*.

LAW-1.2.2 Identify the responsibility to initiate the notification process specified in the local emergency response plan and the organization's SOP's.

Analyzing the Incident – Detecting the Presence of Hazardous Materials

LAW-2 Given incident scenarios involving facility and/or transportation situations with and without hazardous materials present, identify those situations where hazardous materials are present.

LAW-2.1 Identify the definition of hazardous materials.

LAW-2.2 Identify the USDOT Hazard Classes and divisions of hazardous materials and identify common examples of each hazard class or division.

LAW-2.3 Identify the primary hazards associated with each of the USDOT Hazard Classes and divisions of hazardous materials by hazard class or division.

LAW-2.4 Identify the difference between hazardous materials emergencies and other emergencies.

LAW-2.5 Identify typical occupancies and locations in the community where hazardous materials are manufactured, stored, transported, used or disposed of.

LAW-2.6 Identify typical container shapes that may indicate hazardous materials.

LAW-2.7 Identify facility and transportation markings and colors that indicate hazardous materials, including:

1. UN/NA identification number
2. NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response, markings
3. Military hazardous materials markings
4. Special hazard communication markings
5. Pipeline marker
6. Container markings.

LAW-2.8 Given an NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response marking, identify the significance of the colors, numbers and special symbols.

LAW-2.9 Identify U.S. and Canadian placards and labels that indicate hazardous materials.

LAW-2.10 Identify the basic information on material safety data sheets (MSDS) and shipping papers that indicate hazardous materials.

LAW-2.10.1 Identify where to find material safety data sheets (MSDS).

LAW-2.10.2 Identify entries on a material safety data sheet that indicate the presence of hazardous materials.

LAW-2.10.3 Identify the entries on shipping papers that indicate the presence of hazardous materials.

LAW-2.10.4 Match the name of the shipping papers found in transportation (air, highway, rail and water).

LAW-2.10.5 Identify the person responsible for having the shipping papers in each mode of transportation.

LAW -2.10.6 Identify where the shipping papers are found in each mode of transportation.

LAW-2.10.7 Identify where the papers can be found in an emergency in each mode of transportation.

LAW -2.11 Identify examples of clues (other then occupancy/location, container shape, markings/ color, placards/labels, and shipping papers) that use the senses of sight, sound, and odor to indicate the presence of hazardous materials.

1. Changes in pressure release
2. Presence of smoke and/or fire
3. Presence of liquids, gas leaks, or vapor cloud
4. Chemical reactions
5. Condensation lines
6. Mass Casualties.

LAW-2.12 Describe the limitations of using the senses in determining the presence or absence of hazardous materials.

LAW-2.13 Identify types of locations that may become targets for criminal or terrorist activity using hazardous materials.

The following are some examples of locations:

1. Public assembly areas
2. Public/Government buildings
3. Mass transit systems
4. Places with high economic impact
5. Telecommunications facilities
6. Places with historical or symbolic significance
7. Military facilities
8. Airports, Train Stations and Ports
9. Industrial facilities.

LAW-2.14 Identify at least four indicators of possible criminal or terrorist activity involving hazardous materials.

The following are some examples of indicators:

1. Hazardous materials or lab equipment that is not relevant to the occupancy
2. Intentional release of hazardous materials
3. Unexplained patterns of sudden onset illnesses or deaths
4. Unusual orders or tastes
5. Mass casualty incident with unexplained signs of skin, eye or airway irritation
6. Unusual security, locks, bars on windows, covered windows and barbed wire
7. Unexplained vapors clouds, mists and plumes
8. Patients twitching, tightness in chest, sweating, pin-point pupils (miosos), runny nose (rhinorrhea) and nausea ad vomiting.
9. Unusual presence of natural indicator such as sick or dead birds and animals or dead or discolored trees, shrubs or grass.

LAW-2.15 Describe the difference between a chemical and a biological incident.

1. Chemical incidents are identified by the rapid onset of medical signs and systems characteristic of chemical exposure. Natural indicators and obvious signs of release may be present such as chemical residue and odors.
2. Biological incidents are gradual in onset of medical signs and systems with no obvious characteristic of odor or colors. The migration of the disease by infected individuals may be wide spread and transmission from one person to another may occur.

LAW-2.16 Identify at least four indicators of possible criminal or terrorist activity involving biological agents.

The following are some examples of indicators:

1. Mass causality incident with unusual number of ill or dying persons with common signs and symptoms.
2. Hospitals reporting mass causalities with similar signs and symptoms.
3. Unscheduled outdoors spraying
4. Abandoned spraying (dissemination) device.

Analyzing the Incident – Surveying the Hazardous Materials Incident from a Safe Location

LAW-3 Given simulated facility and transportation incidents involving hazardous materials, identify the hazardous material(s) in each situation by name, UN/NA identification number and/or type placard applied.

LAW-3.1 Identify difficulties encountered in determining the specific names of hazardous materials in both facilities and transportation.

LAW-3.2 Identify the significance of the terms “Type A”, “Type B” and “Special Form” as they relate to radioactive materials packaging.

LAW-3.3 Identify additional information concerning radionuclide identity and activity provided on radioactive material labels and shipping papers.

LAW-3.4 Identify additional information concerning physical and chemical form and packaging type provided on radioactive materials shipping papers.

LAW -3.5 Identify sources for obtaining the names of, UN/NA identification numbers for or type of placards associated with hazardous materials in transportation.

LAW-3.6 Identify sources for obtaining the names of hazardous materials in a facility.

Analyzing the Incident – Collecting Hazard Information

LAW-4 Given the identity of various hazardous materials (name, UN/NA number or type placard), identify the fire, explosion, and health hazard information for each material using the current edition of the *North American Emergency Response Guidebook*.

LAW-4.1 Identify the way hazardous materials are harmful to people, the environment and property at hazardous materials incidents.

LAW-4.2 Identify the general routes of entry for human exposure to hazardous materials.

LAW-4.3 Given the current edition of the *North American Emergency Response Guidebook*, identify the three methods for determining the appropriate guide page for a specific hazardous material.

LAW-4.4 Given the current edition of the *North American Emergency Response Guidebook*, identify the two general types of hazards found on each guide page.

LAW-4.5 Identify the difficulties encountered in using the senses to recognize radioactive material releases and radiation exposure.

Analyzing the Incident – Initiating Protective Actions

LAW-5 Given simulated facility and transportation hazardous materials incidents, identify the actions to be taken to protect themselves and others and to control access to the scene using the local emergency response plan, the organization's SOP's, or the current edition of the *North American Emergency Response Guidebook*.

LAW-5.1 Identify the location of both the local emergency response plan and the organization's SOP's.

LAW-5.2 Given the local emergency response plan or the organization's SOP's, identify the role of the Law Enforcement Officer at the awareness level during a hazardous material incident.

LAW-5.2.1 Given a simulated facility and/or transportation hazardous materials incidents, initiate the Incident Management System (IMS) specified in the local emergency response plan and the organizations SOP's.

LAW-5.2.2 Identify the basic techniques for the following protective actions at hazardous materials incidents:
1. Evacuation
2. In-place protection.

LAW-5.3 Given the local emergency response plan or the organization's SOP's, identify the basic precautions to be taken to protect themselves and others in a hazardous materials incident.

LAW-5.3.1 Identify circumstances involving radioactive material in transportation where actions should be initiated to protect the lives of accident victims through carrying out rescue and providing emergency medical care.

LAW-5.3.2 Identify the precautions necessary when providing emergency medical care to victims of hazardous materials incidents.

LAW-5.3.3 Identify typical ignition sources found at scenes of hazardous materials incidents.

LAW-5.3.4 Identify the ways hazardous materials are harmful to people, the environment and property at hazardous materials incidents.

LAW -5.3.5 Identify the general routes of entry for human exposure to hazardous materials.

LAW-5.4 Given the identity of various hazardous materials (name, UN/NA identification number or type placard), identify the following response information using the current edition of the *North American Emergency Response Guidebook*:
a. Emergency Action (fire, spill, leak and first aid)
b. Personal protective equipment necessary
c. Initial isolation and protective action distances

LAW-5.4.1 Given the name of a hazardous material (name, UN/NA identification number or type placard), identify the following response information:
1. Street clothing and work uniforms
2. Structural fire-fighting protective clothing
3. Positive pressure self-contained breathing apparatus (SCBA)
4. Chemical-protective clothing and equipment

LAW-5.4.2 Identify the definitions for each of the following protective actions:
1. Isolation of the hazard area and denial of entry

2. Evacuation
3. Sheltering in-place protection.

LAW-5.4.3 Identify the shapes of recommended initial isolation and protective action zones.

LAW-5.4.4 Describe the difference between small and large spills as found in the table of Initial Isolation and Protective Actions Distances.

LAW-5.4.5 Identifying the circumstances under which the following distances are used at a hazardous materials incident:
1. Table of initial isolation and protective action distances
2. Isolation distances in the numbered guides.

LAW-5.4.6 Given a copy of the current edition of the *North American Emergency Response Guidebook*, describe the difference between the isolation distances in the orange-bordered guide pages and the protective action distances in the green-bordered pages in the document.

LAW-5.5 Identify the techniques used to isolate the hazard area and deny entry to unauthorized persons at hazardous materials incidents.

LAW-5.6 Identify the specific actions necessary when an incident is suspected to involve criminal or terrorist activity.
The following are some examples:
1. Take self protective actions
2. Be alert to secondary devices
3. Communicate the suspicion during the notification process
4. Establish work control zones and access control points
5. Isolate potentially exposed people
6. Document the initial observation
7. Prevent secondary contamination
8. Attempt to preserve evidence while performing operational duties.

Implementing the Response – Initiating the Notification Process

LAW-6 Given either a facility or transportation scenario of hazardous materials incidents, with and without criminal or terrorist activities, identify the appropriate notifications to be made and how to make them, consistent with the local emergency response plan or the organization's SOP's.

LAW-6.1 Identify the initial notification procedures for hazardous materials incidents in the local emergency response plan or the organization's SOP's.

LAW-6.2 Identify the procedures, equipment and safety precautions for collecting legal evidence at hazardous materials incidents.

Summary: Law Enforcement Officer Awareness Level

Audience

Large training audience. All current officers and recruit candidates who respond to, or may encounter in the normal course of their duties, incidents involving hazardous materials.

Prerequisites

None

Training

Classroom, utilizing lecture with discussion and media presentations. Individual and small group exercises with instructor guidance. Competency testing by written examination.

Refresher Training

To occur annually:

1. Technical updates
2. Changes in emergency response plan, SOP's and incident command procedures
3. Ability to perform awareness level competencies in the cold zone.

FLORIDA STATE EMERGENCY RESPONSE COMMISSION

Guidelines for Firefighters
Hazardous Materials Training

October 1, 2002
~Revised~

Guidelines for Firefighters Hazardous Materials Training

Introduction

Firefighters shall be trained to meet all the competencies of the awareness and operational levels, as defined in OSHA 29 CFR 1910.120(q). In addition, Firefighters at the operational level shall receive training to meet requirements of the Occupational Safety and Health Administration (OSHA, Florida Department of Insurance, Florida Department of Environmental Protection, and the US. Environmental Protection Agency (EPA) as appropriate for their jurisdictions. Firefighters that respond or can be expected to respond to a hazardous materials incident must be knowledgeable of 29 CFR 1910.120 and 40 CFR 311 training and emergency response requirements.

Definition

Firefighters at the operational level are personnel who respond to releases or potential releases, as part of the initial response to protect life, property, and the environment from the effects of a hazardous materials emergency. Operational level Firefighters are trained to take defensive actions rather then stop the release. Their function is to confine the release from a safe distance, keep it from spreading, and prevent exposures. Firefighters at the operational level must have knowledge of the awareness level. The awareness level competencies are included in this document for reference, it must be understood that the operational level builds upon the knowledge obtained during awareness level training.

Audience

All Firefighters who may be called upon to respond to a hazardous materials incident. Firefighters at the operational level are typically those persons who are first to arrive at the scene of a hazardous materials incident. Generally, they are not members of a hazardous materials response team.

Related Health and Safety Standards

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99)
EPA 40 CFR 311 Worker Protection
NETC Guidelines for Public Sector Hazardous Materials Training, March 1998
NFPA 471, Recommended Practice for Responding to Hazardous Materials Incident (2002 Edition)
NFPA 472, Standard for Competencies for Hazardous Materials Responders (2002 Edition)
NFPA 1561 Standard on Fire Department Incident Management System

Appropriate Methodologies

Firefighter operational level training is best conducted in a classroom environment with opportunities for small and large group exercises either in classroom or field exercise in conjunction with the training. Training awareness level in conjunction with operational level is acceptable. Lectures with small group activities are appropriate instructional delivery of much of the material. However, incident scene organization and command drill and practice will require large group simulated incidents which are best conducted in a simulator or as a field exercise.

Refresher training occurring annually should include: (1) competency retesting of all response skills, (2) technical information updates, and (3) critique of incident scene decision-making using simulated emergencies.

The SERC estimates that the initial training outlined above can be accomplished in a minimum of 16 hours with competent instructors knowledgeable in hazardous materials response when personnel are trained to the awareness level. The minimum of 24 hours for new/recruit and previously untrained firefighters is recommended. Annual refresher should be accomplished with a minimum of 8 hours training.

The Florida Department of Insurance, Florida State Fire Marshal's Office, currently requires a minimum of 24 hours for recruit firefighters seeking a Firefighter Certificate of Compliance. All career firefighters are required to maintain a certificate of compliance. With the adoption of this document we hope to encourage the volunteer fire service agencies of Florida to seek the same level of training in order to ensure personal safety during a hazardous materials incident in compliance with 29 CFR 1910.120 and 40 CFR 311.. Fire Service agencies and Fire Service training institutions should be required to issue certificates of training for compliance with both initial and refresher hazardous materials training.

Training

Employers, including volunteer agency responsible parties, are required to ensure that Firefighters demonstrate competency in the skills required. All Firefighters will be trained to the operational level utilizing the Florida First Responder Operational Level Hazardous Materials Training Program, National Fire Academy Program - Initial Response to Hazardous Materials Incidents: Basic Concepts and Concept Implementation or similar curricula complying with the First Responder Awareness and Operational Level as defined in 29 CFR 1910.120 *and* NFPA 472.

The following training objectives are recommended for first responder awareness level. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

Firefighters will be trained to meet all the following competencies as a minimum:

For the purpose of clarification, the prerequisite awareness competencies are included below.

Recommended Training Objectives

First Responder Awareness

AWARE-1 Given a hazardous materials incident scenario, demonstrate an understanding of the role of the Firefighter at the awareness level.

AWARE-1.1 Describe the responsibility to analyze the incident to determine the hazardous materials present and the basic hazard and response information for each type of hazardous material, and demonstrate the ability to do the following:

AWARE-1.1.1 Identify the responsibility to detect the presence of hazardous materials.

AWARE-1.1.2 Identify the responsibilities to survey a hazardous materials incident, from a safe location, to identify the name, UN/NA identification number or type placard applied for any hazardous material involved.

AWARE-1.1.3 Identify the responsibility to collect hazard information from the current edition of the *North American Emergency Response Guidebook* (ERG).

AWARE-1.2 Describe the responsibility to implement actions consistent with the local emergency response plan, the organization's SOP's and the current edition of the *North American Emergency Response Guidebook*, and demonstrate the ability to do the following:

AWARE-1.2.1 Identify the responsibility to initiate protective actions consistent with the local emergency response plan, the organization's SOP's, and the current edition of the *North American Emergency Response Guidebook*.

AWARE-1.2.2 Identify the responsibility to initiate the notification process specified in the local emergency response plan and the organization's SOP's.

Analyzing the Incident - Detecting the Presence of Hazardous Materials

AWARE-2 Given incident scenarios involving facility and/or transportation situations with and without hazardous materials present, identify those situations where hazardous materials are present.

AWARE-2.1 Identify the definition of hazardous materials.

AWARE-2.2 Identify the USDOT Hazard Classes and divisions of hazardous materials and identify common examples of each hazard class or division.

AWARE-2.3 Identify the primary hazards associated with each of the USDOT Hazard Classes and divisions of hazardous materials by hazard class or division.

AWARE-2.4 Identify the difference between hazardous materials emergencies and other emergencies.

AWARE-2.5 Identify typical occupancies and locations in the community where hazardous materials are manufactured, stored, transported, used, or disposed of.

AWARE-2.6 Identify typical container shapes that may indicate hazardous materials.

AWARE-2.7 Identify facility and transportation markings and colors that indicate hazardous materials, including:

1. UN/NA identification number
2. NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response, markings
3. Military hazardous materials markings
4. Special hazard communication markings
5. Pipeline marker
6. Container markings.

AWARE-2.8 Given an NFPA 704 Standard System for the Identification of the Hazards of Materials for Emergency Response marking, identify the significance of the colors, numbers and special symbols.

AWARE-2.9 Identify US. and Canadian placards and labels that indicate hazardous materials.

AWARE-2.10 Identify the basic information on material safety data sheets (MSDS) and shipping papers that indicate hazardous materials.

AWARE-2.10.1 Identify where to find material safety data sheets (MSDS).

AWARE-2.10.2 Identify entries on a material safety data sheet that indicate the presence of hazardous materials.

AWARE-2.10.3 Identify the entries on shipping papers that indicate the presence of hazardous materials.

AWARE-2.10.4 Match the name of the shipping papers found in transportation (air, highway, rail and water).

AWARE-2.10.5 Identify the person responsible for having the shipping papers in each mode of transportation.

AWARE-2.10.6 Identify where the shipping papers are found in each mode of transportation.

AWARE-2.10.7 Identify where the papers can be found in an emergency in each mode of transportation.

AWARE-2.11 Identify examples of clues (other then occupancy/location, container shape, markings/ color, placards/labels, and shipping papers) that use the senses of sight, sound and odor to indicate the presence of hazardous materials.

1. Changes in pressure release
2. Presence of smoke and/or fire
3. Presence of liquids, gas leaks, or vapor cloud
4. Chemical reactions
5. Condensation lines
6. Mass Casualties.

AWARE-2.12 Describe the limitations of using the senses in determining the presence or absence of hazardous materials.

AWARE-2.13 Identify types of locations that may become targets for criminal or terrorist activity using hazardous materials. The following are some examples of locations:

1. Public assembly areas
2. Public/Government buildings
3. Mass transit systems
4. Places with high economic impact
5. Telecommunications facilities
6. Places with historical or symbolic significance
7. Military facilities
8. Airports, Train Stations and Ports
9. Industrial facilities.

AWARE-2.14 Identify at least four indicators of possible criminal or terrorist activity involving hazardous materials.

The following are some examples of indicators:

1. Hazardous materials or lab equipment that is not relevant to the occupancy
2. Intentional release or hazardous materials
3. Unexplained patterns of sudden onset illnesses or deaths
4. Unusual orders or tastes
5. Mass casualty incident with unexplained signs of skin, eye or airway irritation
6. Unusual security, locks, bars on windows, covered windows and barbed wire
7. Unexplained vapors clouds, mists and plumes
8. Patients twitching, tightness in chest, sweating, pin-point pupils (miosos), runny nose (rhinorrhea) and nausea and vomiting.
9. Unusual presence of natural indicator such as sick or dead birds and animals or dead or discolored trees, shrubs or grass.

AWARE-2.15 Describe the difference between a chemical and a biological incident.

1. Chemical incidents are identified by the rapid onset of medical signs and symptoms characteristic of chemical exposure. Natural indicators and obvious signs of release may be present such as chemical residue and odors.
2. Biological incidents are gradual in onset of medical signs and symptoms with no obvious characteristic of odor or colors. The migration of the disease by infected individuals may be wide spread and transmission from one person to another may occur.

AWARE-2.16 Identify at least four indicators of possible criminal or terrorist activity involving biological agents.

The following are some examples of indicators:

1. Mass causality incident with unusual number of ill or dying persons with common signs and symptoms.
2. Hospitals reporting mass causalities with similar signs and symptoms.
3. Unscheduled outdoors spraying
4. Abandoned spraying (dissemination) device.

Analyzing the Incident: Surveying the Hazardous Materials Incident from a Safe Location

AWARE-3 Given simulated facility and transportation incidents involving hazardous materials, identify the hazardous material(s) in each situation by name, UN/NA identification number, and/or type placard applied.

AWARE-3.1 Identify difficulties encountered in determining the specific names of hazardous materials in both facilities and transportation.

AWARE-3.2 Identify the significance of the terms “Type A”, “Type B” and “Special Form” as they relate to radioactive materials packaging.

AWARE-3.3 Identify additional information concerning radionuclide identity and activity provided on radioactive material labels and shipping papers.

AWARE-3.4 Identify additional information concerning physical and chemical form and packaging type provided on radioactive materials shipping papers.

AWARE-3.5 Identify sources for obtaining the names of, UN/NA identification numbers for or type of placards associated with hazardous materials in transportation.

AWARE-3.6 Identify sources for obtaining the names of hazardous materials in a facility.

Analyzing the Incident: Collecting Hazard Information

AWARE-4 Given the identity of various hazardous materials (name, UN/NA number or type placard), identify the fire, explosion, and health hazard information for each material using the current edition of the *North American Emergency Response Guidebook*.

AWARE-4.1 Identify the way hazardous materials are harmful to people, the environment and property at hazardous materials incidents.

AWARE-4.2 Identify the general routes of entry for human exposure to hazardous materials.

AWARE-4.3 Given the current edition of the *North American Emergency Response Guidebook*, identify the three methods for determining the appropriate guide page for a specific hazardous material.

AWARE-4.4 Given the current edition of the *North American Emergency Response Guidebook*, identify the two general types of hazards found on each guide page.

AWARE-4.5 Identify the difficulties encountered in using the senses to recognize radioactive material releases and radiation exposure.

Analyzing the Incident – Initiating Protective Actions

AWARE-5 Given simulated facility and transportation hazardous materials incidents, identify the actions to be taken to protect themselves and others and to control access to the scene using the local emergency response plan, the organization's SOP's, or the current edition of the *North American Emergency Response Guidebook*.

AWARE-5.1 Identify the location of both the local emergency response plan and the organization's SOP's.

AWARE-5.2 Given the local emergency response plan or the organization's SOP's, identify the role of the first responder at the awareness level during a hazardous material incident.

AWARE-5.2.1 Given a simulated facility and/or transportation hazardous materials incidents, initiate the Incident Management System (IMS) specified in the local emergency response plan and the organizations SOP's.

AWARE-5.2.2 Identify the basic techniques for the following protective actions at hazardous materials incidents.

1. Evacuation
2. In-place protection.

AWARE-5.3 Given the local emergency response plan or the organization's SOP's, identify the basic precautions to be taken to protect themselves and others in a hazardous materials incident.

AWARE-5.3.1 Identify circumstances involving radioactive material in transportation where actions should be initiated to protect the lives of accident victims through carrying out rescue and providing emergency medical care.

AWARE-5.3.2 Identify the precautions necessary when providing emergency medical care to victims of hazardous materials incidents.

AWARE-5.3.3 Identify typical ignition sources found at scenes of hazardous materials incidents.

AWARE-5.3.4 Identify the ways hazardous materials are harmful to people, the environment and property at hazardous materials incidents.

AWARE-5.3.5 Identify the general routes of entry for human exposure to hazardous materials.

AWARE-5.4 Given the identity of various hazardous materials (name, UN/NA identification number or type placard), identify the following response information using the current edition of the *North American Emergency Response Guidebook*:

a. Emergency Action (fire, spill, leak and first aid)
b. Personal protective equipment necessary
c. Initial isolation and protective action distances.

AWARE-5.4.1 Given the name of a hazardous material identify the recommended personal protective equipment from the following list:

1. Street clothing and work uniforms
2. Structural fire-fighting protective clothing
3. Positive pressure self-contained breathing apparatus (SCBA)
4. Chemical-protective clothing and equipment.

AWARE-5.4.2 Identify the definitions for each of the following protective actions:

1. Isolation of the hazard area and denial of entry

2. Evacuation
3. Sheltering in-place protection.

AWARE-5.4.3 Identify the shapes of recommended initial isolation and protective action zones.

AWARE-5.4.4 Describe the difference between small and large spills as found in the table of Initial Isolation and Protective Actions Distances.

AWARE-5.4.5 Identifying the circumstances under which the following distances are used at a hazardous materials incident:
1. Table of initial isolation and protective action distances
2. Isolation distances in the numbered guides.

AWARE-5.4.6 Given a copy of the current edition of the *North American Emergency Response Guidebook*, describe the difference between the isolation distances in the orange-bordered guide pages and the protective action distances in the green-bordered pages in the document.

AWARE-5.5 Identify the techniques used to isolate the hazard area and deny entry to unauthorized persons at hazardous materials incidents.

AWARE-5.6 Identify the specific actions necessary when an incident is suspected to involve criminal or terrorist activity.
The following are some examples:
1. Take self protective actions
2. Be alert to secondary devices
3. Communicate the suspicion during the notification process
4. Establish work control zones and access control points
5. Isolate potentially exposed people
6. Document the initial observation
7. Prevent secondary contamination
8. Attempt to preserve evidence while performing operational duties

Implementing the Response – Initiating the Notification Process

AWARE-6 Given either a facility or transportation scenario of hazardous materials incidents, with and without criminal or terrorist activities, identify the appropriate notifications to be made and how to make them, consistent with the local emergency response plan or the organization's SOP's.

AWARE-6.1 Identify the initial notification procedures for hazardous materials incidents in the local emergency response plan or the organization's SOP's.

The following training objectives are recommended for first responder operational level. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

In addition to the hazardous materials first responder awareness level training, all firefighters will be trained in the following competencies:

First Responder Operational level competencies:

Recommended Training Objectives

OPS-1 Given a hazardous materials incident scenario, demonstrate an understanding of the Firefighter at the operations level.

OPS-1.1 Describe the responsibility to analyze the hazardous materials incident and determine the magnitude of the problem in terms of outcomes and demonstrate the ability to do the following:

OPS-1.1.1 Identify the responsibility to survey the hazardous materials incident to determine the containers and materials involved, whether hazardous materials have been released, and the surrounding conditions.

OPS-1.1.2 Identify the responsibility to collect hazard and response information from MSDS, CHEMTREC and shipper / manufacturer contacts.

OPS-1.1.3 Identify the responsibility to predict likely behavior of a material and its container.

OPS-1.1.4 Identify the responsibility to estimate the potential harm at a hazardous materials incident.

OPS-1.2 Describe the responsibility to plan an initial response within the capabilities and competencies of available personnel, personal protective equipment, and control equipment, and demonstrate the ability to do the following:

OPS-1.2.1 Identify the responsibility to describe the response objectives available for hazardous materials incidents.

OPS-1.2.2 Identify the responsibility to describe the defensive options available for a given response objective.

OPS-1.2.3 Identify the responsibility to determine whether the personal protective equipment provided is appropriate for implementing each defensive option.

OPS-1.2.4 Identify the responsibility to identify the emergency decontamination procedures.

OPS-1.3 Describe the responsibility to implement the planned response to favorably change the outcomes consistent with the local emergency response plan and the organization's SOP's, and demonstrate the ability to do the following:

OPS-1.3.1 Identify the responsibility to establish and enforce scene control procedures including control zones, emergency decontamination, and communications.

OPS-1.3.2 Identify the responsibility to initiate the Incident Management System (IMS) for hazardous materials incidents.

OPS-1.3.3 Identify the responsibility to don, work in and doff personal protective equipment provided by the authority having jurisdiction.

OPS-1.3.4 Identify the responsibility to perform defensive control functions identified in the action plan.

OPS-1.4 Describe the responsibility to evaluate the progress of the actions taken to ensure that the response objectives are being met safely, effectively, and efficiently and demonstrate the ability to do the following:

OPS-1.4.1 Identify the responsibility to evaluate the status of the defensive actions taken in accomplishing the response objectives.

OPS-1.4.2 Identify the responsibility to communicate the status of the planned response.

Analyzing the Incident: Surveying the Hazardous Materials Incident

OPS-2 and

Given examples of both facility and transportation situations involving hazardous materials, survey the hazardous materials incident to determine the container materials involved, whether hazardous materials have been released, and the surrounding conditions. The survey should include the following:

1. Inventory of the type of containers involved
2. Container identification markings
3. Container quantity or capacity
4. Involved materials
5. Release information
6. Surrounding conditions.

OPS-2.1 Given examples of various hazardous materials containers, identify the general shapes of containers for liquids, gases, and solid hazardous materials that are typically found.

OPS-2.1.1 Given examples of the following tank cars, identify each tank car by type:

1. Nonpressure tank cars with and without expansion domes
2. Pressure tank cars
3. Cryogenic liquid tank cars
4. Pneumatically unloaded hopper cars
5. High-pressure tube cars.

OPS-2.1.2 Given examples of the following intermodal tank containers, identify each intermodal tank container by type, identify one material and its USDOT Hazard Class that is typically fond in each tank:

1. Nonpressure intermodal tank containers (IM-101 and IM 102)
2. Pressure intermodal tank containers
3. Special intermodal tanks (Cryogenic and tube modules).

OPS-2.1.3 Given examples of the following cargo tank by type:

1. Nonpressure liquid tanks (MC-306)
2. Low pressure chemical tanks (MC307)
3. Corrosive liquid tanks (MC-312)
4. High pressure tanks (MC-331)
5. Cryogenic liquid tanks (MC-338)
6. Dry bulk cargo tanks
7. Compressed gas tube trailers.

OPS-2.1.4 Given examples of the following facility tanks, identify at least one material and its hazard, that are typically found in each fixed facility tank by type:

1. Nonpressure tank
2. Pressure tank
3. Cryogenic liquid tank.

OPS-2.1.5 Given examples of the following nonbulk packages, identify each package by type:

1. Bags
2. Carboys
3. Cylinders
4. Drums.

OPS-2.1.7 Given examples of various radioactive material containers, identify each container/package by type:

1. Type A Package

2. Type B Package
3. Industrial
4. Excepted
5. Strong, tight containers.

OPS-2.2 Given examples of facility and transportation containers, identify the markings that differentiate one container from another.

OPS-2.2.1 Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:
1. Rail transportation vehicles, including tank cars
2. Intermodal equipment including tank containers
3. Highway transport vehicles, including cargo tanks.

OPS-2.2.2 Given examples of the facility containers, identify the markings indicating container size, product contained and /or site identification numbers.

OPS-2.3 Given examples of the facility and transportation scenario involving hazardous materials, identify the name(s) of the hazardous material(s) in each situation.

OPS-2.3.1 Identify the following information on a pipeline marker:
1. Product
2. Owner/operator
3. Emergency telephone number.

OPS-2.3.2 Given a pesticide label, identify each of the following pieces of information; then match the piece of information to its significance in surveying the hazardous material incident:
1. Name of pesticide
2. Signal word
3. Pest control product number
4. Precautionary statement
5. Hazard statement
6. Active ingredient.

OPS-2.3.3 Given a radioactive material label identify vertical bars, contents and activity and transport index.

OPS-2.4 Identify and list surrounding conditions that should be noted when surveying hazardous materials incidents. Surrounding conditions may include:
1. The topography, land use, bodies of water and accessibility
2. Weather conditions
3. Public exposure potential, adjacent land use (rail lines, roadways, ports and airports)
4. Utilities, pipelines, storm and sewer drains
5. Ignition sources
6. Nature and extent of injuries
7. Building information such as floor drains, ventilation ducts and returns should be considered.

OPS-2.5 Give examples of ways to verify information obtained from the surveying of a hazardous materials incident.

OPS-2.6 Identify at least three additional hazards that could be associated with an incident involving criminal or terrorist activity. The following are some examples of hazards:
1. Secondary events intended to delay or incapacitate emergency responders

2. Armed resistance
3. Use of weapons
4. Booby traps
5. Secondary contamination from handling patients
6. Hostage barricade situations.

Analyzing the Incident: Collecting Hazard and Response Information

OPS-3 Given known hazardous materials, collect hazard and response information from MSDS, CHEMTREC and contacts with the shipper/manufacturer.

OPS-3.1 Match the definitions associated with the USDOT Hazard Classes and divisions of hazardous materials, including refrigerated gases and cryogenic liquids, with the class or division.

OPS-3.2 Identify two ways to obtain a MSDS in an emergency.

OPS-3.3 Using a MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for clean up of spills and leaks
9. Applicable control measures including personal protective equipment
10. Emergency and first aid procedures.

OPS-3.4 Identify the following:

1. The type of assistance provided by CHEMTREC
2. How to contact CHEMTREC.
3. The information to be furnished to CHEMTREC

OPS-3.5 Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-3.6 Identify two type of assistance provided by local, state and federal authorities, with respect to criminal or terrorist activities involving hazardous materials.

OPS-3.6.1 Identify the procedure for contacting local, state and federal authorities as specified in the local emergency response plan (ERP) or the organization's SOG.

OPS-3.7 Describe the properties and characteristics of the following:

1. Alpha particles
2. Bata particles
3. Gamma rays
4. Neutrons.

Analyzing the Incident: Predicting the Behavior of a Material and its Container

OPS-4 Given examples of a single facility and transportation hazardous materials incidents, predict the likely behavior of a material and its container in each incident.

OPS-4.1 Given situations involving known hazardous materials, interpret the hazard response information obtained from the current edition of the North American Emergency Response Guidebook, MSDS, CHEMTREC and shipper/manufacturer contacts.

OPS-4.1.1 Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

a. Boiling point
b. Chemical reactivity
c. Corrosivity (pH)
d. Flammable (explosive) range (LEL & UEL)
e. Flash point
f. Ignition (autoignition) temperature
g. Physical state (solid, liquid, gas)
h. Specific gravity
i. Toxic products of combustion
j. Vapor density
k. Vapor pressure
l. Water solubility
m. Radiation (ionizing and non-ionizing).

OPS-4.1.2 Identify the differences among the following terms:

1. Exposure and hazard Exposure and contamination
2. Contamination and secondary contamination
3. Radioactive material exposure

OPS-4.2 Identify three types of stress that could cause a container system to release its contents.

1. Mechanical stress
2. Thermal stress
3. Chemical stress.

OPS-4.3 Identify five ways in which containers can breach.

1. Punctures
2. Splits or tears
3. Closures opening up
4. Disintegration
5. Runaway cracking.

OPS-4.4 Identify four ways in which containers can release their contents.

1. Catastrophic release or rupture
2. Detonation
3. Rapid relief
4. Spills or leaks.

OPS-4.5 Identify the general testing requirements for “Type A,” “Type B” and “Special Form” packaging used for radioactive materials transportations.

OPS-4.6 Identify common “industrial radiography” sources and any specialized large quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-4.7 Identify at least four dispersion patterns that can be created upon release of a hazardous material. The following are examples:

1. Cloud or hemisphere
2. Plume

3. Cone
4. Stream or pooling
5. Irregular.

OPS-4.8 Identify the three general time frames for predicting the length of time that exposures may be in contact with the hazardous material in an endangered area to be
1. Short-term (minutes and hours)
2. Medium-term (days, weeks and months)
3. Long-term (years).

OPS-4.9 Identify the health and physical hazards that could cause harm to include;
1. Thermal
2. Etiologic
3. Asphyxiation
4. Mechanical
5. Corrosive
6. Poisonous
7. Radiation.

OPS-4.9.1 Identify the health hazards associated with the following terms:
1. Asphyxiant - cellular and pulmonary
2. Chronic health hazard
3. Convulsant
4. Irritants and corrosive
5. Sensitizer/allergen
6. Highly Toxic
7. Carcinogens
8. Infectious Agents.
9. Systemic toxins.
10. Mutagens
11. Teratogens
12. Alpha, beta gamma and neutron radiation.

OPS-4.10 Given the following types of warfare agents, identify the corresponding DOT hazard class and division:
1. Nerve agents
2. Vesicants (blister agents)
3. Blood agents
4. Choking agents
5. Irritants (riot control agents)
6. Biological agents and toxins

Analyzing the Incident: Estimating the Potential Harm

OPS-5 Given simulated incidents involving hazardous materials, estimate the potential harm within the endangered area at a hazardous materials incident to include:
1. Determining the dimensions of the area
2. Estimating the number of exposures
3. Measuring or predicting concentrations of materials
4. Estimating the physical, health and safety hazards
5. Identifying the areas of potential harm
6. Estimating the potential outcomes.

OPS-5.1 Identify a resource for determining the size of an endangered area surrounding conditions at a hazardous materials incident to include:
1. The current North America Emergency Response Guidebook
2. Facility pre-incident plume dispersion modeling results.

OPS-5.2 Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials incident, estimate the number and type of exposures within that endangered area.

OPS-5.3 Identify resources available for determining the concentrations of a released hazardous material within an endangered area.

OPS-5.4 Identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials incident given the concentration of the released hazardous material.
1. Surrounding conditions
2. Indication of the behavior of the hazardous material and its container
3. Degree of hazard.

OPS-5.5 Describe the impact that time, distance and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-5.6 Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure and contamination concerns.

Planning the Response: Describing Response Objectives for Hazardous Materials Incidents

OPS-6 Given simulated facility and transportation hazardous materials problems, describe the first responder's response objectives for each problem.

OPS-6.1 Identify the steps for determining the number of exposures that could be saved by the Firefighter with the resources provided by the authority having jurisdiction and operating in a defensive fashion, given an analysis of the hazardous materials problem, and the exposures already lost.

OPS-6.2 Describe the steps for determining defensive response objective given an analysis of the hazardous materials incident.

OPS-6.3 Describe how to assess the risk to response personnel for each hazard class in rescuing injured persons at a hazardous materials incident.

Planning the Response: Identifying Defensive Options

OPS-7 Given simulated facility and transportation hazardous materials problems, identify the defensive options for each response objective.

OPS-7.1 Identify the defensive options to accomplish a given response objective.

OPS-7.2 Identify the purpose for, and the procedures, equipment, and safety precautions used with each of the following control techniques:
1. Absorption
2. Dike, dam, diversion or retention
3. Dilution
4. Vapor dispersion

5. Vapor suppression
6. Remote valve shutoff.

Planning the Response: Determining Appropriateness of Personal Protective Equipment

OPS-8 Given the name of a hazardous material involved and the anticipated type of exposure, determine whether available personal protective equipment is appropriate for implementing a defensive option.

OPS-8.1 Identify the appropriate respiratory protection required for a given defensive option for the first responder at the operational level as positive pressure self-contained breathing apparatus.

OPS-8.1.1 Identify the three types of respiratory protection and the advantages and limitations presented by the use of each at hazardous materials incidents.

OPS-8.1.2 Identify the required physical capabilities and limitations of personnel working in positive pressure self-contained breathing apparatus.

OPS-8.2 Identify the appropriate personal protective equipment required for a given defensive option.

OPS-8.2.1 Identify skin contact hazards encountered at hazardous materials incidents.

OPS-8.2.2 Identify the purpose, advantages, and limitations of the following protective clothing at hazardous materials incidents:
1. Structural fire fighting clothing
2. High temperature protective clothing
3. Chemical protective clothing
4. Liquid splash protective clothing
5. Vapor protective clothing.

Planning the Response: Identifying Emergency Decontamination Procedures

OPS-9 Given a plan of action for a hazardous materials incident, identify emergency decontamination procedures.

OPS-9.1 Identify ways that personnel, personal protective equipment, apparatus, and tools and equipment become contaminated.

OPS-9.2 Describe how the potential for secondary contamination determines the need for emergency contamination procedures.

OPS-9.3 Identify the purpose of emergency decontamination at hazardous materials incidents.

OPS-9.4 Identify the advantages and limitations of emergency decontamination procedures.

OPS-9.5 Identify appropriate, simple procedures for dealing with accident victims with life-threatening injuries who are known or suspected to be contaminated with radioactive material.

OPS-9.6 Describe the procedure listed in the Local Emergency Response Plan or the organization's SOP's for decontamination of a large number of people exposed to hazardous materials

OPS-9.7 Describe the procedure listed in the Local Emergency Response Plan or the organization's SOP's to preserve evidence at hazardous materials incidents involving suspected criminal or terrorist acts.

Implementing the Planned Response: Establishing and Enforcing Scene Control Procedures

OPS-10 Given scenarios for facility and/or transportation hazardous materials incidents identify how to establish and enforce scene control including control zones, emergency decontamination and communications.

OPS-10.1 Identify the procedures for establishing scene control through control zones.

OPS-10.2 Identify the criteria for determining the locations of the control zones at hazardous materials incidents.

OPS-10.3 Identify the basic techniques for the following protective actions at hazardous materials incidents:
1. Evacuation
2. Sheltering in-place.

OPS-10.4 Identify the considerations associated with locating emergency decontamination.

OPS-10.5 Demonstrate the ability to perform emergency decontamination.

OPS-10.6 Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:
1. Hazardous materials incident
2. Hazardous materials incident with criminal or terrorist activities.

OPS-10.6.1 Identify the items to be considered in a safety briefing prior to allowing for criminal or terrorist related incidents to include:
1. Secondary events intended to incapacitate or delay emergency responders
2. Armed resistance
3. Use of weapons
4. Booby traps
5. Secondary contamination from handling patients.

Implementing the Planned Response: Initiating the Incident Management System (IMS)

OPS-11 Given a simulated facility and/or transportation hazardous materials incidents, initiate the incident management system (IMS) specified in the local emergency response plan and the organizations SOP's.

OPS-11.1 Identify the role of the Firefighter at the operational level during hazardous materials incidents as specified in the local emergency response plan and the organizations SOP's.

OPS-11.2 Identify the levels of hazardous materials incidents as defined in the SERC Uniform Classification System for Categorizing Hazardous Materials Incidents:
1. Level 1 - Minor
2. Level 2 - Moderate
3. Level 3 – Major

OPS-11.3 Identify the purpose, need, benefits and elements of an IMS at hazardous materials incidents.

OPS-11.4 Identify the considerations for determining the location of the command post for a hazardous materials incident.

OPS-11.5 Identify the procedures for requesting additional resources at a hazardous materials incident.

OPS-11.6 Identify the responsibilities of the safety officer as follows:

1. Obtains a briefing from the Incident Commander
2. Advises the Incident Commander of incident safety considerations and dangerous situations
3. Monitors the implementation of incident safety considerations
4. Alters, suspends or terminates any activity that is deemed to be unsafe.

Implementing the Planned Response: Using Personal Protective Equipment

OPS-12 Demonstrate the ability to don, work in and doff the personal protective equipment provided by the authority having jurisdiction.

OPS-12.1 Identify the importance of the buddy system in implementing the planned defensive options.

OPS-12.2 Identify the importance of the backup personnel in implementing the planned defensive actions.

OPS-12.3 Identify the safety precautions to be observed when approaching and working at hazardous materials incidents.

OPS-12.4 Identify the signs and symptoms of heat and cold stress.

OPS-12.5 Identify the physical capabilities required for and the limitations of personnel working in the personal protective equipment as provided by the authority having jurisdiction.

OPS-12.6 Match the function of the operational components of the positive pressure self-contained breathing apparatus provided the responders to the name of the component.

OPS-12.7 Identify the procedures for cleaning, sanitizing and inspecting respiratory protective equipment.

OPS-12.8 Identify the procedures for donning, working in and doffing positive pressure self-contained breathing apparatus.

OPS-12.9 Demonstrate donning, working in and doffing positive pressure self-contained breathing apparatus. (Note: Firefighters should have extensive knowledge of the positive pressure self-contained breathing apparatus. This demonstration competency is to identify those individuals who may need additional training in the use of positive pressure SCBA.)

Implementing the Planned Response: Performing Defensive Control Actions

OPS-13 Given a plan of action for a hazardous materials incident within their capabilities, demonstrate the ability to perform the defensive control actions set out in the plan.

OPS-13.1 Understand the types of firefighting foam(s) or vapor suppressing agent(s) and foam equipment furnished by the authority having jurisdiction, understand the proper

application of the firefighting foam(s) or vapor-suppressing agents on a spill or fire involving hazardous materials.

OPS-13.2 Identify the characteristics and applicability of the following types of foams:

1. Protein
2. Fluoroprotein
3. Special purpose
   a. Polar solvent alcohol-resistant concentrates.
   b. Hazardous materials concentrates
4. Aqueous film-forming foam (AFFF)
5. High expansion.

OPS-13.3 Given the appropriate tools and equipment, describe how to perform the following defensive control activities:

1. Absorption
2. Damming, diking, diversion, and retention
3. Dilution
4. Vapor dispersion
5. Vapor suppression.

OPS-13.4 Understand the location and use of the mechanical, hydraulic and air emergency remote shut-off devices.

OPS-13.5 Describe the objectives and dangers of search and rescue missions at hazardous materials incidents.

OPS-13.6 Describe methods for controlling the spread of radioactive contamination to the limit impact.

OPS-13.7 Describe procedures, such as those listed in the Local Emergency Response Plan or the organization's SOP's, to preserve evidence at hazardous materials incidents involving suspected criminal or terrorist acts.

Evaluating Progress: Evaluation the Status of Defensive Actions

OPS-14 Given simulated facility and/or transportation hazardous materials incidents, evaluate the status of the defensive actions taken in accomplishing the response objectives.

OPS-14.1 Identify the considerations for evaluating whether defensive options are effective in accomplishing the objectives.

OPS-14.2 Describe the circumstances under which it would be prudent to withdraw (pull back) from a hazardous materials incident.

Evaluating Progress: Communicating the Status of the Planned Response

OPS-15 Given simulated facility and/or transportation hazardous materials incidents, demonstrate communicating the status of the planned response to the incident commander through the normal chain of command.

OPS-15.1 Identify the methods for communicating the status of the planned response to the incident commander through the normal chain of command.

OPS-15.2 Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

Summary: Firefighter Operations Level

Audience

Large training audience. All Firefighters who may participate in operations at a hazardous materials incident.

Prerequisites

First Responder Awareness Level.

Training

Classroom and simulated lab/field instruction. Competencies include: (1) understanding hazardous material terms, basic hazard and risk assessment, and the role of the Firefighter at the operational level. (2) Ability to perform basic control, containment and/or confinement techniques with proper use of personal protective equipment and following standard operating procedures (SOP's). (3) Ability to implement basic decontamination procedures.

Refresher Training

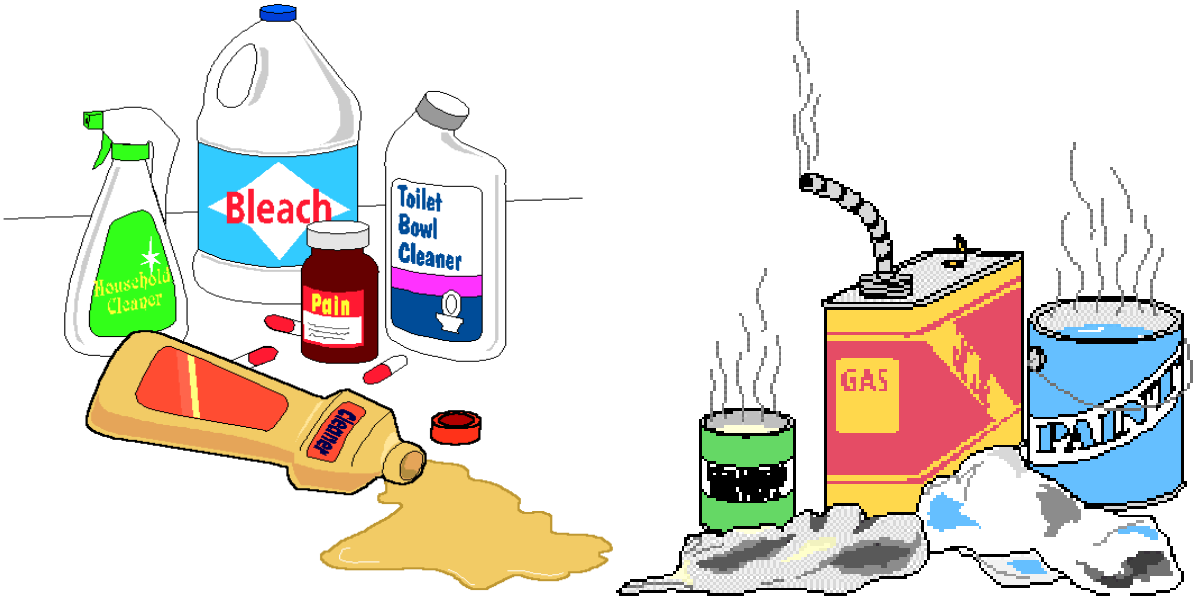
To occur annually:

1. Competency retesting of all response skills.
2. Technical information updates.
3. Incident scene decision-making using simulated emergencies.

FLORIDA STATE EMERGENCY RESPONSE COMMISSION

Guidelines for Public Works, Utilities, Transportation, Public Health and General Employees Hazardous Materials Training

October 1, 2002
~Revised~



Guidelines for Public Works, Utilities, Transportation, Public Health and General Employees Hazardous Materials Training

Introduction

Employees not addressed specifically by the Florida State Emergency Response Commission shall be trained to meet the competencies of the awareness level. In certain cases, when the local emergency response plan defines emergency response roles beyond the scope of the awareness level, it will be necessary to train the individual to the level appropriate for the defined emergency response role. Both the awareness and operational competencies are defined below. Should the defined emergency response role call for a competency in the operational level competencies, then the individual will be trained to the operational level. All employees with a defined emergency response role in the local emergency response plan will be trained to the appropriate level, awareness as a minimum, utilizing approved programs meeting the competencies outlined below.

Employees expected to operate at the technician level at a hazardous materials incident as defined in the local emergency response plan will be trained to the competencies defined for Technicians in the Guidelines for Hazardous Materials Training as published by the Florida State Emergency Response Commission. In addition, Employees shall receive training to meet requirements of the Occupational Safety and Health Administration (OSHA), Florida Department of Environmental Protection, and the US. Environmental Protection Agency (EPA) as appropriate for their jurisdictions. Other employees that respond or can be expected to respond to a hazardous materials incident must be knowledgeable of 29 CFR 1910.120 and 40 CFR 311 training and emergency response requirements.

First Responder Awareness Level

Definition

Employees at the awareness level are personnel who are likely to discover or witness a hazardous materials emergency, or in the normal course of their duties may be the first on the scene of an emergency involving hazardous materials. Employees at the awareness level are expected to recognize hazardous materials are present, protect themselves, call for trained personnel and secure the area. The most important duty of these personnel is to make proper notification in order to begin the emergency response sequence. This level of training anticipates a response role, which involves no potential for exposure to the hazards related to the hazardous materials involved in an incident.

Audience

Employees such as public works, utilities, emergency management, transportation, public health, etc.. The audience is a large and diverse group, although the minimum competencies remain the same, whenever possible training should be tailored to meet the needs of specific groups. Students from a specific discipline should be asked to respond to scenarios relevant to their work and play roles that are consistent with their defined emergency response roles and occupational responsibilities.

Related Health and Safety Standards

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99)
EPA 40 CFR 311 Worker Protection
NETC, Guidelines for Public Sector Hazardous Materials Training (March 1998)

Appropriate Methodologies

First Responder Awareness training should be conducted using a mix of lecture and media presentations with individual and small group exercises. The exercises should consist of activities practicing identification and recognition of hazardous materials from scenario descriptions and using information

sources such as the North American Emergency Response Guidebook to establish the presence of hazardous materials in the scenarios. Competency should be measured by written examination.

Refresher training occurring annually should focus on skill renewal in using information sources to recognize and identify hazardous materials.

The SERC estimates that the training outlined above for the awareness level can be accomplished in approximately 8 contact hours with competent instructors knowledgeable in hazardous materials response. Annual refresher should be accomplished with approximately 4 contact hours of training. Certificates should be issued for successful demonstration of competency for initial and refresher hazardous materials training.

Training

Employers are required to ensure that Employees demonstrate competency in the skills required. All Employees will be trained to the appropriate level utilizing the Florida First Responder Awareness Level Hazardous Materials Training Program, National Fire Academy Program - Initial Response to Hazardous Materials Incidents: Basic Concepts or similar curricula complying with the competencies First Responder Awareness as defined in 29 CFR 1910.120 *and* NFPA 472.

Employees with a defined emergency response role will be trained to meet all the following competencies of the awareness level as a minimum. The first responder awareness level competencies are defined below:

The following training objectives are recommended for first responder awareness level. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

First Responder Awareness

Recommended Training Objectives

AWARE-1 Given a hazardous materials incident scenario, demonstrate an understanding of the role of the responder at the awareness level.

AWARE-1.1 Describe the responsibility to analyze the incident to determine the hazardous materials present and the basic hazard and response information for each type of hazardous material, and demonstrate the ability to do the following:

AWARE-1.1.1 Identify the responsibility to detect the presence of hazardous materials.

AWARE-1.1.2 Identify the responsibilities to survey a hazardous materials incident, from a safe location, to identify the name, UN/NA identification number or type placard applied for any hazardous material involved.

AWARE-1.1.3 Identify the responsibility to collect hazard information from the current edition of the *North American Emergency Response Guidebook* (ERG).

AWARE-1.2 Describe the responsibility to implement actions consistent with the local emergency response plan, the organization's SOP's and the current edition of the *North American Emergency Response Guidebook*, and demonstrate the ability to do the following:

AWARE-1.2.1 Identify the responsibility to initiate protective actions consistent with the local emergency response plan, the organization's SOP's, and the current edition of the *North American Emergency Response Guidebook*.

AWARE-1.2.2 Identify the responsibility to initiate the notification process specified in the local emergency response plan and the organization's SOP's.

Analyzing the Incident - Detecting the Presence of Hazardous Materials

AWARE-2 Given incident scenarios involving facility and/or transportation situations with and without hazardous materials present, identify those situations where hazardous materials are present.

AWARE-2.1 Identify the definition of hazardous materials.

AWARE-2.2 Identify the USDOT Hazard Classes and divisions of hazardous materials and identify common examples of each hazard class or division.

AWARE-2.3 Identify the primary hazards associated with each of the USDOT Hazard Classes and divisions of hazardous materials by hazard class or division.

AWARE-2.4 Identify the difference between hazardous materials emergencies and other emergencies.

AWARE-2.5 Identify typical occupancies and locations in the community where hazardous materials are manufactured, stored, transported, used or disposed of.

AWARE-2.6 Identify typical container shapes that may indicate hazardous materials.

AWARE-2.7 Identify facility and transportation markings and colors that indicate hazardous materials, including:

1. UN/NA identification number
2. NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response, markings
3. Military hazardous materials markings
4. Special hazard communication markings
5. Pipeline marker
6. Container markings.

AWARE-2.8 Given an NFPA 704 Standard System for the Identification of the Hazards of Materials for Emergency Response marking, identify the significance of the colors, numbers and special symbols.

AWARE-2.9 Identify US and Canadian placards and labels that indicate hazardous materials.

AWARE-2.10 Identify the basic information on material safety data sheets (MSDS) and shipping papers that indicate hazardous materials.

AWARE-2.10.1 Identify where to find material safety data sheets (MSDS).

AWARE-2.10.2 Identify entries on a material safety data sheet that indicate the presence of hazardous materials.

AWARE-2.10.3 Identify the entries on shipping papers that indicate the presence of hazardous materials.

AWARE-2.10.4 Match the name of the shipping papers found in transportation (air, highway, rail and water).

AWARE-2.10.5 Identify the person responsible for having the shipping papers in each mode of transportation.

AWARE-2.10.6 Identify where the shipping papers are found in each mode of transportation.

AWARE-2.10.7 Identify where the papers can be found in an emergency in each mode of transportation.

AWARE-2.11 Identify examples of clues (other then occupancy/location, container shape, markings/ color, placards/labels, and shipping papers) that use the senses of sight, sound and odor to indicate the presence of hazardous materials:

1. Changes in pressure release
2. Presence of smoke and/or fire
3. Presence of liquids, gas leaks, or vapor cloud
4. Chemical reactions
5. Condensation lines
6. Mass Casualties.

AWARE-2.12 Describe the limitations of using the senses in determining the presence or absence of hazardous materials.

AWARE-2.13 Identify types of locations that may become targets for criminal or terrorist activity using hazardous materials. The following are some examples of locations:

1. Public assembly areas
2. Public/Government buildings
3. Mass transit systems
4. Places with high economic impact
5. Telecommunications facilities
6. Places with historical or symbolic significance
7. Military facilities
8. Airports, Train Stations and Ports
9. Industrial facilities.

AWARE-2.14 Identify at least four indicators of possible criminal or terrorist activity involving hazardous materials.

The following are some examples of indicators:

1. Hazardous materials or lab equipment that is not relevant to the occupancy
2. Intentional release or hazardous materials
3. Unexplained patterns of sudden onset illnesses or deaths
4. Unusual orders or tastes
5. Mass casualty incident with unexplained signs of skin, eye or airway irritation
6. Unusual security, locks, bars on windows, covered windows and barbed wire
7. Unexplained vapors clouds, mists and plumes
8. Patients twitching, tightness in chest, sweating, pin-point pupils (miosos), runny nose (rhinorrhea) and nausea and vomiting.
9. Unusual presence of natural indicator such as sick or dead birds and animals or dead or discolored trees, shrubs or grass.

AWARE-2.15 Describe the difference between a chemical and a biological incident.

1. Chemical incident are identified by the rapid onset of medical signs and symptoms characteristic of chemical exposure. Natural indicators and obvious signs of release may be present such as chemical residue and odors.
2. Biological incident are gradual in onset of medical signs and symptoms with no obvious characteristic of odor or colors. The migration of the disease by infected individuals may be widespread and transmission from one person to another may occur.

AWARE-2.16 Identify at least four indicators of possible criminal or terrorist activity involving biological agents. The following are some examples of indicators:

1. Mass causality incident with unusual number of ill or dying persons with common signs and symptoms.
2. Hospitals reporting mass causalities with similar signs and symptoms.
3. Unscheduled outdoors spraying
4. Abandoned spraying (dissemination) device.

Analyzing the Incident: Surveying the Hazardous Materials Incident from a Safe Location

AWARE-3 Given simulated facility and transportation incidents involving hazardous materials, identify the hazardous material(s) in each situation by name, UN/NA identification number and/or type placard applied.

AWARE-3.1 Identify difficulties encountered in determining the specific names of hazardous materials in both facilities and transportation.

AWARE-3.2 Identify the significance of the terms “Type A”, “Type B” and “Special Form” as they relate to radioactive materials packaging.

AWARE-3.3 Identify additional information concerning radionuclide identity and activity provided on radioactive material labels and shipping papers.

AWARE-3.4 Identify additional information concerning physical and chemical form and packaging type provided on radioactive materials shipping papers.

AWARE-3.5 Identify sources for obtaining the names of, UN/NA identification numbers for or type of placards associated with hazardous materials in transportation.

AWARE-3.6 Identify sources for obtaining the names of hazardous materials in a facility.

Analyzing the Incident: Collecting Hazard Information

AWARE-4 Given the identity of various hazardous materials (name, UN/NA number or type placard), identify the fire, explosion, and health hazard information for each material using the current edition of the *North American Emergency Response Guidebook*.

AWARE-4.1 Identify the way hazardous materials are harmful to people, the environment and property at hazardous materials incidents.

AWARE-4.2 Identify the general routes of entry for human exposure to hazardous materials.

AWARE-4.3 Given the current edition of the *North American Emergency Response Guidebook*, identify the three methods for determining the appropriate guide page for a specific hazardous material.

AWARE-4.4 Given the current edition of the *North American Emergency Response Guidebook*, identify the two general types of hazards found on each guide page.

AWARE-4.5 Identify the difficulties encountered in using the senses to recognize radioactive material releases and radiation exposure.

Analyzing the Incident – Initiating Protective Actions

AWARE-5 Given simulated facility and transportation hazardous materials incidents, identify the actions to be taken to protect themselves and others and to control access to the scene using the local emergency response plan, the organization's SOP's or the current edition of the *North American Emergency Response Guidebook*.

AWARE-5.1 Identify the location of both the local emergency response plan and the organization's SOP's.

AWARE-5.2 Given the local emergency response plan or the organization's SOP's, identify the role of the first responder at the awareness level during a hazardous material incident.

AWARE-5.2.1 Given a simulated facility and/or transportation hazardous materials incidents, initiate the Incident Management System (IMS) specified in the local emergency response plan and the organizations SOP's.

AWARE-5.2.2 Identify the basic techniques for the following protective actions at hazardous materials incidents.

1. Evacuation
2. In-place protection.

AWARE-5.3 Given the local emergency response plan or the organization's SOP's, identify the basic precautions to be taken to protect themselves and others in a hazardous materials incident.

AWARE-5.3.1 Identify circumstances involving radioactive material in transportation where actions should be initiated to protect the lives of accident victims through carrying out rescue and providing emergency medical care.

AWARE-5.3.2 Identify the precautions necessary when providing emergency medical care to victims of hazardous materials incidents.

AWARE-5.3.3 Identify typical ignition sources found at scenes of hazardous materials incidents.

AWARE-5.3.4 Identify the ways hazardous materials are harmful to people, the environment and property at hazardous materials incidents.

AWARE-5.3.5 Identify the general routes of entry for human exposure to hazardous materials.

AWARE-5.4 Given the identity of various hazardous materials (name, UN/NA identification number or type placard), identify the following response information using the current edition of the *North American Emergency Response Guidebook*:

a. Emergency Action (fire, spill, leak and first aid)
b. Personal protective equipment necessary
c. Initial isolation and protective action distances.

AWARE-5.4.1 Given the name of a hazardous material identify the recommended personal protective equipment from the following list:

1. Street clothing and work uniforms
2. Structural fire-fighting protective clothing
3. Positive pressure self-contained breathing apparatus (SCBA)

4. Chemical-protective clothing and equipment.

AWARE-5.4.2 Identify the definitions for each of the following protective actions:
1. Isolation of the hazard area and denial of entry
2. Evacuation
3. Sheltering in-place protection.

AWARE-5.4.3 Identify the shapes of recommended initial isolation and protective action zones.

AWARE-5.4.4 Describe the difference between small and large spills as found in the table of Initial Isolation and Protective Actions Distances.

AWARE-5.4.5 Identifying the circumstances under which the following distances are used at a hazardous materials incident:
1. Table of initial isolation and protective action distances
2. Isolation distances in the numbered guides.

AWARE-5.4.6 Given a copy of the current edition of the *North American Emergency Response Guidebook*, describe the difference between the isolation distances in the orange-bordered guide pages and the protective action distances in the green-bordered pages in the document.

AWARE-5.5 Identify the techniques used to isolate the hazard area and deny entry to unauthorized persons at hazardous materials incidents.

AWARE-5.6 Identify the specific actions necessary when an incident is suspected to involve criminal or terrorist activity. The following are some examples:
1. Take self protective actions
2. Be alert to secondary devices
3. Communicate the suspicion during the notification process
4. Establish work control zones and access control points
5. Isolate potentially exposed people
6. Document the initial observation
7. Prevent secondary contamination
8. Attempt to preserve evidence while performing operational duties

Implementing the Response – Initiating the Notification Process

AWARE-6 Given either a facility or transportation scenario of hazardous materials incidents, with and without criminal or terrorist activities, identify the appropriate notifications to be made and how to make them, consistent with the local emergency response plan or the organization's SOP's.

AWARE-6.1 Identify the initial notification procedures for hazardous materials incidents in the local emergency response plan or the organization's SOP's.

Summary: First Responder Awareness Level

Audience

Very broad, all employees who may respond to a hazardous materials incident.

Prerequisites

None.

Training

Traditional classroom delivery, Competencies include understanding hazardous materials incidents and the defined emergency response role of the individual public sector employee and the ability to recognize and identify that an incident is a hazardous materials incident.

Refresher

To occur annually;

1. Technical updates
2. Emergency response plan and SOG review
3. Ability to perform Awareness level competencies

First Responder Operational Level

Definition

Employees at the operational level are personnel who respond to releases or potential releases, as part of the initial response to protect people, property, and the environment from the effects of a hazardous materials emergency. Operational level Employees are trained to take defensive actions rather then stop the release. Their function is to contain the release from a safe distance, keep it from spreading and prevent exposures. Employees at the operational level must have knowledge of the awareness level. The awareness level competencies are included in this document. It must be understood that the operational level builds upon the knowledge obtained during awareness level training.

Audience

All Employees who may be called upon to respond to a hazardous materials incident. Employees at the operational level are typically those persons who are generally not members of a hazardous materials response team.

Related Health and Safety Standards

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99)
EPA 40 CFR 311 Worker Protection
NFPA 471, Recommended Practice for Responding to Hazardous Materials Incidents.
2002 Edition
NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents.
2002 Edition
NETC, Guidelines for Public Sector Hazardous Materials Training (March 1998)

Appropriate Methodologies

Employee operational level training is best conducted in a classroom environment with opportunities for small and large group exercises either in classroom or field exercise in conjunction with the training. Training awareness level in conjunction with operational level is acceptable. Lectures with small group activities are appropriate instructional delivery of much of the material. However, incident scene organization and command drill and practice will require large group simulated incidents which are best conducted in a simulator or as a field exercise. Competency demonstration is absolutely imperative.

Refresher training occurring annually, should include: (1) competency retesting of all response skills, (2) technical information updates, and (3) critique of incident scene decision-making using simulated emergencies.

The SERC that the training outlined above can be accomplished in approximately 16 contact hours with competent instructors knowledgeable in hazardous materials response and personnel previously trained to the awareness level. Approximately 24 contact hours for new/recruit and previously untrained Employees is recommended. Annual refresher should be accomplished with approximately 8 contact hours of training. Certificates should be issued for successful demonstration of competency for both initial and refresher hazardous materials training.

The following training objectives are recommended for first responder operational level. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

First Responder Operational Level

Recommended Training Objectives

OPS-1 Given a hazardous materials incident scenario, demonstrate an understanding of the First Responder at the operations level.

OPS-1.1 Describe the responsibility to analyze the hazardous materials incident and determine the magnitude of the problem in terms of outcomes, and demonstrate the ability to do the following:

OPS-1.1.1 Identify the responsibility to survey the hazardous materials incident to determine the containers and materials involved, whether hazardous materials have been released, and the surrounding conditions.

OPS-1.1.2 Identify the responsibility to collect hazard and response information from MSDS, CHEMTREC and shipper / manufacturer contacts.

OPS-1.1.3 Identify the responsibility to predict likely behavior of a material and its container.

OPS-1.1.4 Identify the responsibility to estimate the potential harm at a hazardous materials incident.

OPS-1.2 Describe the responsibility to plan an initial response within the capabilities and competencies of available personnel, personal protective equipment, and control equipment and demonstrate the ability to do the following:

OPS-1.2.1 Identify the responsibility to describe the response objectives available for hazardous materials incidents.

OPS-1.2.2 Identify the responsibility to describe the defensive options available for a given response objective.

OPS-1.2.3 Identify the responsibility to determine whether the personal protective equipment provided is appropriate for implementing each defensive option.

OPS-1.2.4 Identify the responsibility to identify the emergency decontamination procedures.

OPS-1.3 Describe the responsibility to implement the planned response to favorably change the outcomes consistent with the local emergency response plan and the organization's SOP's, and demonstrate the ability to do the following:

OPS-1.3.1 Identify the responsibility to establish and enforce scene control procedures including control zones, emergency decontamination and communications.

OPS-1.3.2 Identify the responsibility to initiate the Incident Management System (IMS) for hazardous materials incidents.

OPS-1.3.3 Identify the responsibility to don, work in and doff personal protective equipment provided by the authority having jurisdiction.

OPS-1.3.4 Identify the responsibility to perform defensive control functions identified in the action plan.

OPS-1.4 Describe the responsibility to evaluate the progress of the actions taken to ensure that the response objectives are being met safely, effectively, and efficiently and demonstrate the ability to do the following:

OPS-1.4.1 Identify the responsibility to evaluate the status of the defensive actions taken in accomplishing the response objectives.

OPS-1.4.2 Identify the responsibility to communicate the status of the planned response.

Analyzing the Incident: Surveying the Hazardous Materials Incident

OPS-2 and Given examples of both facility and transportation situations involving hazardous materials, survey the hazardous materials incident to determine the container materials involved, whether hazardous materials have been released, and the surrounding conditions. The survey should include the following:

1. Inventory of the type of containers involved
2. Container identification markings
3. Container quantity or capacity
4. Involved materials
5. Release information
6. Surrounding conditions.

OPS-2.1 Given examples of various hazardous materials containers, identify the general shapes of containers for liquids, gases and solid hazardous materials that are typically found.

OPS-2.1.1 Given examples of the following tank cars, identify each tank car by type:

1. Nonpressure tank cars with and without expansion domes
2. Pressure tank cars
3. Cryogenic liquid tank cars
4. Pneumatically unloaded hopper cars
5. High-pressure tube cars.

OPS-2.1.2 Given examples of the following intermodal tank containers, identify each intermodal tank container by type, identify one material and its USDOT Hazard Class that is typically found in each tank:

1. Nonpressure intermodal tank containers (IM-101 and IM 102)
2. Pressure intermodal tank containers
3. Special intermodal tanks (Cryogenic and tube modules).

OPS-2.1.3 Given examples of the following cargo tank by type:

1. Nonpressure liquid tanks (MC-306)
2. Low pressure chemical tanks (MC307)
3. Corrosive liquid tanks (MC-312)
4. High pressure tanks (MC-331)
5. Cryogenic liquid tanks (MC-338)
6. Dry bulk cargo tanks
7. Compressed gas tube trailers.

OPS-2.1.4 Given examples of the following facility tanks, identify at least one material and its hazard, that are typically found in each fixed facility tank by type:

1. Nonpressure tank
2. Pressure tank
3. Cryogenic liquid tank.

OPS-2.1.5 Given examples of the following nonbulk packages, identify each package by type:
1. Bags
2. Carboys
3. Cylinders
4. Drums.

OPS-2.1.7 Given examples of various radioactive material containers, identify each container/package by type:
1. Type A Package
2. Type B Package
3. Industrial
4. Excepted
5. Strong, tight containers.

OPS-2.2 Given examples of facility and transportation containers, identify the markings that differentiate one container from another.

OPS-2.2.1 Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:Rail transportation vehicles, including tank cars:
1. Intermodal equipment including tank containers
2. Highway transport vehicles, including cargo tanks.

OPS-2.2.2 Given examples of the facility containers, identify the markings indicating container size, product contained and /or site identification numbers.

OPS-2.3 Given examples of the facility and transportation scenario involving hazardous materials, identify the name(s) of the hazardous material(s) in each situation.

OPS-2.3.1 Identify the following information on a pipeline marker:
1. Product
2. Owner/operator
3. Emergency telephone number.

OPS-2.3.2 Given a pesticide label, identify each of the following pieces of information; then match the piece of information to its significance in surveying the hazardous material incident:
1. Name of pesticide
2. Signal word
3. Pest control product number
4. Precautionary statement
5. Hazard statement
6. Active ingredient.

OPS-2.3.3 Given a radioactive material label identify vertical bars, contents and activity and transport index.

OPS-2.4 Identify and list surrounding conditions that should be noted when surveying hazardous materials incidents. Surrounding conditions may include:
1. The topography, land use, bodies of water and accessibility
2. Weather conditions
3. Public exposure potential, adjacent land use (rail lines, roadways, ports and airports)
4. Utilities, pipelines, storm and sewer drains
5. Ignitions sources
6. Nature and extent of injuries

7. Building information such as floor drains, ventilation ducts and returns should be considered.

OPS-2.5 Give examples of ways to verify information obtained from the surveying of a hazardous materials incident.

OPS-2.6 Identify at least three additional hazards that could be associated with an incident involving criminal or terrorist activity. The following are some examples of hazards:
1. Secondary events intended to delay or incapacitate emergency responders
2. Armed resistance
3. Use of weapons
4. Booby traps
5. Secondary contamination from handling patients
6. Hostage barricade situations.

Analyzing the Incident: Collecting Hazard and Response Information

OPS-3 Given known hazardous materials, collect hazard and response information from MSDS, CHEMTREC and contacts with the shipper/manufacturer.

OPS-3.1 Match the definitions associated with the USDOT Hazard Classes and divisions of hazardous materials, including refrigerated gases and cryogenic liquids, with the class or division.

OPS-3.2 Identify two ways to obtain a MSDS in an emergency.

OPS-3.3 Using a MSDS for a specified material, identify the following hazard and response information:
1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for clean up of spills and leaks
9. Applicable control measures including personal protective equipment
10. Emergency and first aid procedures.

OPS-3.4 Identify the following:
a. The type of assistance provided by CHEMTREC.
b. How to contact CHEMTREC.
c. The information to be furnished to CHEMTREC.

OPS-3.5 Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-3.6 Identify two type of assistance provided by local, state and federal authorities, with respect to criminal or terrorist activities involving hazardous materials.

OPS-3.6.1 Identify the procedure for contacting local, state and federal authorities as specified in the local emergency response plan (ERP) or the organization's SOG.

OPS-3.7 Describe the properties and characteristics of the following:
1. Alpha particles

2. Bata particles
3. Gamma rays
4. Neutrons.

Analyzing the Incident: Predicting the Behavior of a Material and its Container

OPS-4 Given examples of a single facility and transportation hazardous materials incidents, predict the likely behavior of a material and its container in each incident.

OPS-4.1 Given situations involving known hazardous materials, interpret the hazard response information obtained from the current edition of the North American Emergency Response Guidebook, MSDS, CHEMTREC and shipper/manufacturer contacts.

OPS-4.1.1 Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (autoignition) temperature
7. Physical state (solid, liquid, gas)
8. Specific gravity
9. Toxic products of combustion
10. Vapor density
11. Vapor pressure
12. Water solubility
13. Radiation (ionizing and non-ionizing).

OPS-4.1.2 Identify the differences among the following terms:

1. Exposure and hazard
2. Exposure and contamination
3. Contamination and secondary contamination
4. Radioactive material exposure.

OPS-4.2 Identify three types of stress that could cause a container system to release its contents:

1. Mechanical stress
2. Thermal stress
3. Chemical stress.

OPS-4.3 Identify five ways in which containers can breach:

1. Punctures
2. Splits or tears
3. Closures opening up
4. Disintegration
5. Runaway cracking.

OPS-4.4 Identify four ways in which containers can release their contents:

1. Catastrophic release or rupture
2. Detonation
3. Rapid relief
4. Spills or leaks.

OPS-4.5 Identify the general testing requirements for “Type A,” “Type B” and “Special Form” packaging used for radioactive materials transportations.

OPS-4.6 Identify common “industrial radiography” sources and any specialized large quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-4.7 Identify at least four dispersion patterns that can be created upon release of a hazardous material. The following are examples:

1. Cloud or hemisphere
2. Plume
3. Cone
4. Stream or pooling
5. Irregular.

OPS-4.8 Identify the three general time frames for predicting the length of time that exposures may be in contact with the hazardous material in an endangered area to be:

1. Short-term (minutes and hours)
2. Medium-term (days, weeks and months)
3. Long-term (years).

OPS-4.9 Identify the health and physical hazards that could cause harm to include;

1. Thermal
2. Etiologic
3. Asphyxiation
4. Mechanical
5. Corrosive
6. Poisonous
7. Radiation.

OPS-4.9.1 Identify the health hazards associated with the following terms:

1. Asphyxiant - cellular and pulmonary
2. Chronic health hazard
3. Convulsant
4. Irritants and corrosive
5. Sensitizer/allergen
6. Highly Toxic
7. Carcinogens
8. Infectious Agents.
9. Systemic toxins.
10. Mutagens
11. Teratogens
12. Alpha, beta gamma and neutron radiation.

OPS-4.10 Given the following types of warfare agents, identify the corresponding DOT hazard class and division:

1. Nerve agents
2. Vesicants (blister agents)
3. Blood agents
4. Choking agents
5. Irritants (riot control agents)
6. Biological agents and toxins.

Analyzing the Incident: Estimating the Potential Harm

OPS-5 Given simulated incidents involving hazardous materials, estimate the potential harm within the endangered area at a hazardous materials incident to include:

1. Determining the dimensions of the area

2. Estimating the number of exposures
3. Measuring or predicting concentrations of materials
4. Estimating the physical, health and safety hazards
5. Identifying the areas of potential harm
6. Estimating the potential outcomes.

OPS-5.1 Identify a resource for determining the size of an endangered area surrounding conditions at a hazardous materials incident to include:
1. The current North America Emergency Response Guidebook
2. Facility pre-incident plume dispersion modeling results.

OPS-5.2 Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials incident, estimate the number and type of exposures within that endangered area.

OPS-5.3 Identify resources available for determining the concentrations of a released hazardous material within an endangered area.

OPS-5.4 Identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials incident given the concentration of the released hazardous material.
1. Surrounding conditions
2. Indication of the behavior of the hazardous material and its container
3. Degree of hazard.

OPS-5.5 Describe the impact that time, distance and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-5.6 Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure and contamination concerns.

Planning the Response: Describing Response Objectives for Hazardous Materials Incidents

OPS-6 Given simulated facility and transportation hazardous materials problems, describe the first responder's response objectives for each problem.

OPS-6.1 Identify the steps for determining the number of exposures that could be saved by the responder with the resources provided by the authority having jurisdiction and operating in a defensive fashion, given an analysis of the hazardous materials problem, and the exposures already lost.

OPS-6.2 Describe the steps for determining defensive response objective given an analysis of the hazardous materials incident.

OPS-6.3 Describe how to assess the risk to response personnel for each hazard class in rescuing injured persons at a hazardous materials incident.

Planning the Response: Identifying Defensive Options

OPS-7 Given simulated facility and transportation hazardous materials problems, identify the defensive options for each response objective.

OPS-7.1 Identify the defensive options to accomplish a given response objective.

OPS-7.2 Identify the purpose for, and the procedures, equipment, and safety precautions used with each of the following control techniques:

1. Absorption
2. Dike, dam, diversion or retention
3. Dilution
4. Vapor dispersion
5. Vapor suppression
6. Remote valve shutoff.

Planning the Response: Determining Appropriateness of Personal Protective Equipment

OPS-8 Given the name of a hazardous material involved and the anticipated type of exposure, determine whether available personal protective equipment is appropriate for implementing a defensive option.

OPS-8.1 Identify the appropriate respiratory protection required for a given defensive option for the first responder at the operational level is positive pressure self-contained breathing apparatus.

OPS-8.1.1 Identify the three type of respiratory protection and the advantages and limitations presented by the use of each at hazardous materials incidents.

OPS-8.1.2 Identify the required physical capabilities and limitations of personnel working in positive pressure self-contained breathing apparatus.

OPS-8.2 Identify the appropriate personal protective equipment required for a given defensive option.

OPS-8.2.1 Identify skin contact hazards encountered at hazardous materials incidents.

OPS-8.2.2 Identify the purpose, advantages, and limitations of the following protective clothing at hazardous materials incidents:
1. Structural firefighting clothing
2. High temperature protective clothing
3. Chemical protective clothing
4. Liquid splash protective clothing
5. Vapor protective clothing.

Planning the Response: Identifying Emergency Decontamination Procedures

OPS-9 Given a plan of action for a hazardous materials incident, identify emergency decontamination procedures.

OPS-9.1 Identify ways that personnel, personal protective equipment, apparatus and tools and equipment become contaminated.

OPS-9.2 Describe how the potential for secondary contamination determines the need for emergency contamination procedures.

OPS-9.3 Identify the purpose of emergency decontamination at hazardous materials incidents.

OPS-9.4 Identify the advantages and limitations of emergency decontamination procedures.

OPS-9.5 Identify appropriate, simple procedures for dealing with accident victims with life-threatening injuries who are known or suspected to be contaminated with radioactive material.

OPS-9.6 Describe the procedure listed in the Local Emergency Response Plan or the organization's SOP's for decontamination of a large number of people exposed to hazardous materials

OPS-9.7 Describe the procedure listed in the Local Emergency Response Plan or the organization's SOP's to preserve evidence at hazardous materials incidents involving suspected criminal or terrorist acts.

Implementing the Planned Response: Establishing and Enforcing Scene Control Procedures

OPS-10 Given scenarios for facility and/or transportation hazardous materials incidents identify how to establish and enforce scene control including control zones, emergency decontamination and communications.

OPS-10.1 Identify the procedures for establishing scene control through control zones.

OPS-10.2 Identify the criteria for determining the locations of the control zones at hazardous materials incidents.

OPS-10.3 Identify the basic techniques for the following protective actions at hazardous materials incidents:
1. Evacuation
2. Sheltering in-place .

OPS-10.4 Identify the considerations associated with locating emergency decontamination.

OPS-10.5 Demonstrate the ability to perform emergency decontamination.

OPS-10.6 Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:
1. Hazardous materials incident
2. Hazardous materials incident with criminal or terrorist activities.

OPS-10.6.1 Identify the items to be considered in a safety briefing prior to allowing for criminal or terrorist related incidents to include:
1. Secondary events intended to incapacitate or delay emergency responders
2. Armed resistance
3. Use of weapons
4. Booby traps
5. Secondary contamination from handling patients.

Implementing the Planned Response: Initiating the Incident Management System (IMS)

OPS-11 Given a simulated facility and/or transportation hazardous materials incidents, initiate the Incident Management System (IMS) specified in the local emergency response plan and the organizations SOP's.

OPS-11.1 Identify the role of the responder at the operational level during hazardous materials incidents as specified in the local emergency response plan and the organizations SOP's.

OPS-11.2 Identify the levels of hazardous materials incidents as defined in the SERC Uniform Classification System for Categorizing Hazardous Materials Incidents:
1. Level 1 - Minor
2. Level 2 - Moderate

3. Level 3 - Major

OPS-11.3 Identify the purpose, need, benefits and elements of an IMS at hazardous materials incidents.

OPS-11.4 Identify the considerations for determining the location of the command post for a hazardous materials incident.

OPS-11.5 Identify the procedures for requesting additional resources at a hazardous materials incident.

OPS-11.6 Identify the responsibilities of the safety officer as follows:.

1. Obtains a briefing from the Incident Commander
2. Advises the Incident Commander of incident safety considerations and dangerous situations
3. Monitors the implementation of incident safety considerations
4. Alters, suspends or terminates any activity that is deemed to be unsafe.

Implementing the Planned Response: Using Personal Protective Equipment

OPS-12 Demonstrate the ability to don, work in and doff the personal protective equipment provided by the authority having jurisdiction.

OPS-12.1 Identify the importance of the buddy system in implementing the planned defensive options.

OPS-12.2 Identify the importance of the backup personnel in implementing the planned defensive actions.

OPS-12.3 Identify the safety precautions to be observed when approaching and working at hazardous materials incidents.

OPS-12.4 Identify the signs and symptoms of heat and cold stress.

OPS-12.5 Identify the physical capabilities required for and the limitations of personnel working in the personal protective equipment as provided by the authority having jurisdiction.

OPS-12.6 Match the function of the operational components of the positive pressure self-contained breathing apparatus provided the responders to the name of the component.

OPS-12.7 Identify the procedures for cleaning, sanitizing and inspecting respiratory protective equipment.

OPS-12.8 Identify the procedures for donning, working in and doffing positive pressure self-contained breathing apparatus.

OPS-12.9 Demonstrate donning, working in and doffing positive pressure self-contained breathing apparatus. (Note: This competency is for familiarization purposes only and additional, specific training in the safe use of positive pressure self-contained breathing apparatus is required.)

Implementing the Planned Response: Performing Defensive Control Actions

OPS-13 Given a plan of action for a hazardous materials incident within their capabilities, demonstrate the ability to perform the defensive control actions set out in the plan.

OPS-13.1 Understand the types of firefighting foam(s) or vapor suppressing agent(s) and foam equipment furnished by the authority having jurisdiction, understand the proper application of the firefighting foam(s) or vapor-suppressing agents on a spill or fire involving hazardous materials.

OPS-13.2 Identify the characteristics and applicability of the following types of foams:

1. Protein
2. Fluoroprotein
3. Special purpose
   a. Polar solvent alcohol-resistant concentrates.
   b. Hazardous materials concentrates
4. Aqueous film-forming foam (AFFF)
5. High expansion.

OPS-13.3 Given the appropriate tools and equipment, describe how to perform the following defensive control activities:

1. Absorption
2. Damming, diking, diversion, and retention
3. Dilution
4. Vapor dispersion
5. Vapor suppression.

OPS-13.4 Understand the location and use of the mechanical, hydraulic and air emergency remote shut-off devices.

OPS-13.5 Describe the objectives and dangers of search and rescue missions at hazardous materials incidents.

OPS-13.6 Describe methods for controlling the spread of radioactive contamination to limit impact.

OPS-13.7 Describe procedures, such as those listed in the Local Emergency Response Plan or the organization's SOPs, to preserve evidence at hazardous materials incidents involving suspected criminal or terrorist acts.

Evaluating Progress: Evaluation the Status of Defensive Actions

OPS-14 Given simulated facility and/or transportation hazardous materials incidents, evaluate the status of the defensive actions taken in accomplishing the response objectives.

OPS-14.1 Identify the considerations for evaluating whether defensive options are effective in accomplishing the objectives.

OPS-14.2 Describe the circumstances under which it would be prudent to withdraw (pull back) from a hazardous materials incident.

Evaluating Progress: Communicating the Status of the Planned Response

OPS-15 Given simulated facility and/or transportation hazardous materials incidents, demonstrate communicating the status of the planned response to the incident commander through the normal chain of command.

OPS-15.1 Identify the methods for communicating the status of the planned response to the incident commander through the normal chain of command.

OPS-15.2 Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

Summary: First Responder Operations Level

Audience

Large training audience. All employees who may participate in operations at a hazardous materials incident.

Prerequisites

First Responder Awareness Level.

Training

Classroom and simulated lab/field instruction. Competencies include: (1) understanding hazardous material terms, basic hazard and risk assessment, and the role of the Employees at the operational level. (2) Ability to perform basic control, containment and/or confinement techniques with proper use of personal protective equipment and following standard operating procedures (SOP's). (3) Ability to implement basic decontamination procedures.

Refresher Training

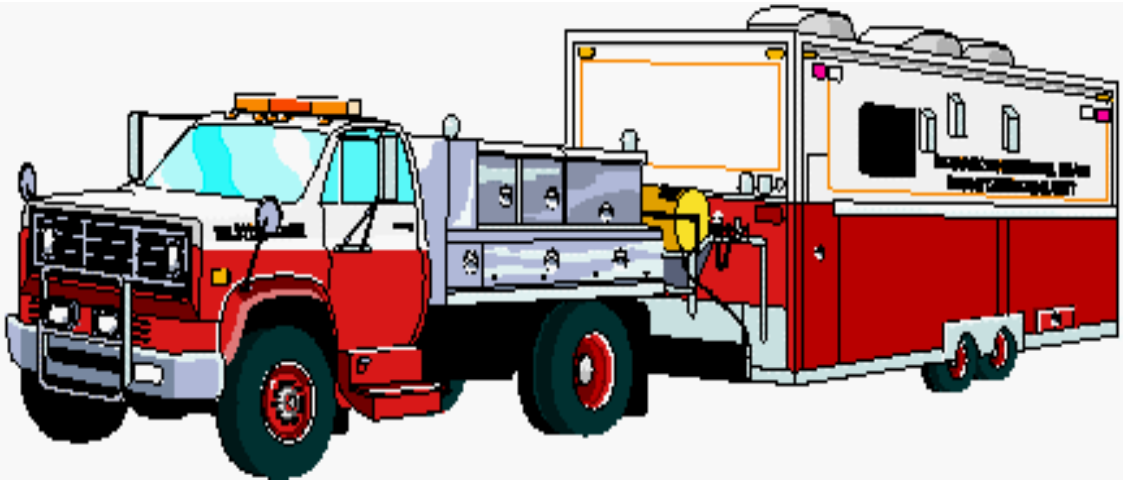
To occur annually;

1. Competency retesting of all response skills.
2. Technical information updates.
3. Incident scene decision-making using simulated emergencies.

FLORIDA STATE EMERGENCY RESPONSE COMMISSION

Guidelines for Hazardous Materials Technicians
Hazardous Materials Training

October 1, 2002
~Revised~



Guidelines for Hazardous Materials Technicians Hazardous Materials Training

Introduction

Hazardous Materials Technicians shall be trained to meet all the requirements of the Awareness and Operational levels and the Technician level of emergency hazardous materials response. In addition technicians shall meet the training requirements and be provided medical surveillance in accordance with the requirements of the Occupational Safety and Health Administration (OSHA), Florida Department of Environmental Protection and the U.S. Environmental Protection Agency (EPA), as appropriate for their jurisdiction.

Definition

Technicians are those persons who respond to releases or potential releases for the purpose of controlling the release. They assume a more aggressive role then the First Responder at the Operations Level in that they are trained to approach the point of release to plug, patch or otherwise stop the release of a hazardous materials substance. Technicians are expected to use specialized chemical protective clothing and specialized control equipment.

Audience

Technicians typically are members of hazardous materials response teams, which consist of specially trained personnel who respond to hazardous materials incidents. The teams perform various response actions including assessment, fire fighting, rescue and containment; they are not responsible for cleanup operations following the incidents. Technicians are employed by various public and private organizations including fire, emergency medical services, law enforcement, public health, utilities, manufacturers and contractors. By definition, technicians must be well versed in a wide variety of topics. They are expected to respond to most kinds of hazardous materials incidents that would occur in their jurisdictions. Therefore training managers should be careful not to specialize this broad based training to a great extent.

Related Health and Safety Standards

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99)
EPA 40 CFR 311 Worker Protection
NETC Guidelines for Public Sector Hazardous Materials Training, March 1998
NFPA 471, Recommended Practice for Responding to Hazardous Materials Incident (2002 Edition)
NFPA 472, Standard for Competencies for Hazardous Materials Responders (2002 Edition)
NFPA 1561 Standard on Fire Department Incident Management System

Equipment, Facilities, and Resources

Hazardous materials technician training requires classroom and hands-on workspace as well as reference materials, equipment and props. Consideration must be given to class size, weather conditions, number of instructors/evaluators and available equipment and props. Because of the time involved in demonstrations and performance activities, class size must be limited. A reasonable student/teacher ratio would be 30:1 for lecture and 10:1 for hands-on, although some blocks of instruction (such as work with live chemicals) may require a 5:1 ratio. Extreme cold or heat will affect outdoor activities involving suits, chemicals and props. If outdoor exercises involving chemical protective clothing or actual chemicals are to be conducted, neighboring residences and facilities must be considered and notified. Arrangements for secured storage must be made to handle the thousands of dollars worth of equipment that will have to be located near the classroom and work area.

Methodology Recommendations

Hazardous materials technician training is best conducted with a varied mix of classroom instruction using traditional lecture and small activity approaches, field exercises involving group practice in simulated emergencies and hands-on skill training in doing actual control, confinement and containment evolutions. Typically, training ranges from 40 to 240 hours. The Florida State Fire College is currently developing a program for voluntarily certifying the competency of Hazardous Materials Technicians. There should be a strong emphasis on hands-on practice and incident decision-making. Content instruction should be synthesized in student activities requiring analysis of incident information to determine plans of action. Skill training should be performed on actual containers with simulated releases, using full protective equipment and response tools. Skill training should include instructor modeling, student walk-through and student practice under stress until competency is achieved. Proper critiques and corrective instruction are essential. Refresher training should include (1) competency retesting of all response skills; (2) technical information updates; and (3) critique of incident scene decision making using simulated emergencies.

It is the understanding of the SERC that the training outlined here has cognitive and manipulative skills that will take a substantial amount of time to master. It is absolutely imperative that demonstrable competency is assured through the training process. Programs modified or tailored to select groups are acceptable provided competency in all training objectives contained in this document is accomplished.

The SERC estimates that the initial training outlined above can be accomplished in a minimum of 120 hours with competent instructors knowledgeable in hazardous materials response when personnel are trained to the awareness level. Annual refresher should be accomplished with a minimum of 24 hours training.

It is understood that the Florida Department of Insurance, Florida State Fire Marshal's Office, Florida State Fire College is developing a comprehensive Hazardous Materials Technician Program. The program will address both cognitive and manipulative skills. The Fire College will issue certificates of competency for successful completion.

There are other programs available through other organizations and institutions in the State and nothing in this document is intended to be exclusive. It remains the employer's responsibility to comply with OSHA 29 CFR 1910.120 and 40 CFR 311 *and* NFPA 472.

Training

The following training objectives are recommended for first responder technician level. The primary source for this material is NETC Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

In addition to the awareness and operational level competencies as defined by the SERC, the hazardous materials technician will be competent in the following training objectives:

Hazardous Materials Technician

Recommended Training Objectives

TECH-1 Given a hazardous materials incident scenario, demonstrate an understanding of the role of the hazardous material technician and the need for medical monitoring.

TECH-1.1 Identify the responsibility to analyze the hazardous materials incident and determine the magnitude of the problem in terms of outcomes.

TECH-1.1.1 Define a confined space and identify the hazards associated with entry into confined spaces.

TECH-1.1.2 Identify the resources and local SOP's for handling radioactive incidents.

TECH-1.2 Identify the responsibility to plan a response within the capabilities of available personnel, personal protective equipment and control equipment.

TECH-1.3 Identify the responsibility to implement the planned response to favorably change the outcomes consistent with the organizations SOP's and/or site safety plan.

Analyzing the Incident: Surveying the Hazardous Materials Incident

TECH-2 Given hazardous materials incidents and the appropriate equipment, identify special containers involved and identify or classify unknown materials, verify the identity of hazardous materials and determine the concentration of hazardous materials.

TECH-2.1 Given examples of various specialized containers, identify each container by name and match the hazard class of the materials typically found inside the container.

TECH-2.1.1 Given examples of the following tank cars, identify each tank car by type and at lease one material, and its hazard class:

1. Cryogenic liquid tank cars
2. High pressure tube cars
3. Nonpressure tank cars
4. Pneumatically unloaded hopper cars
5. Pressure tank cars.

TECH-2.1.2 Given examples of the following intermodal tank containers, identify each intermodal tank container by type:

1. Nonpressure intermodal tanks
    a. IM-101 portable tanks
    b. IM-102 portable tanks
2. Pressure intermodal tanks
3. Specialized intermodal tank containers:
    a. Cryogenic intermodal tank containers
    b. Tube modules.

TECH-2.1.3 Given examples of the following cargo tanks, identify at least one materials and its hazard class:

1. MC-306
2. MC-307
3. MC-312
4. MC-331
5. MC-338
6. Dry bulk cargo

TECH-2.1.4 Given examples of the following facility tanks, identify at least one materials and its hazard class:

1. Nonpressure tanks
2. Pressure tanks
3. Cryogenic tanks.

TECH-2.1.5 Given examples of the following non-bulk containers, identify at least one materials and its hazard class:
1. Bags
2. Carboys
3. Cylinders
4. Drums.

TECH-2.1.6 For each of the following, describe a method that can be used to detect them:
1. Nerve agents
2. Vesicants (blister agents)
3. Biological agents and toxins
4. Irritants (riot control agents).

TECH-2.1.7 Given examples of the following radioactive materials packages, identify each package by type and identify at least one typical material found in each package:
1. Type A
2. Type B
3. Industrial
4. Excepted
5. Strong, tight containers

TECH-2.2 Given three examples of both facility and transportation containers, identify the approximate quantity in or capacity of each container.

TECH-2.2.1 Given examples of the following transport vehicles, identify the capacity (by weight and/ or volume) of each transport vehicle using the markings on the vehicle:
1. Tank cars
2. Tank containers
3. Cargo tanks.

TECH-2.2.2 Using the markings on the container and other available resources, identify the approximate quantity in or capacity of each container.
1. Nonpressure tank
2. Pressure tank
3. Cryogenic tank.

TECH-2.3 Given at least three unknown materials, one of which is a solid, one a liquid, and one a gas, identify or classify by hazard each unknown material.

TECH-2.3.1 Identify the steps in the analysis process for identifying unknown solid and liquid materials.

TECH-2.3.2 Identify the steps in the analysis process for identifying unknown atmosphere.

TECH-2.3.3 Identify the type(s) of monitoring equipment (test strips and reagents) used to determine the following hazards:
1. Corrosivity (pH)
2. Flammability / Combustibility
3. Oxidizing potential
4. Oxygen deficiency / enrichment
5. Radioactivity
6. Toxic exposures.

TECH-2.3.4 Identify the capabilities and limiting factors associated with the selection and use of the following monitoring equipment, test strips and reagents:
1. Carbon monoxide meter

2. Colormetric tubes
3. Combustible gas indicator (CGI)
4. Oxygen meter
5. Passive dosimeter
6. Photoionization detectors (PID)
7. pH papers, pH meters, and test strips
8. Radiation detection instruments
9. Reagents.

TECH-2.3.5 Demonstrate how radiation detection instruments may be used defensively.

TECH-2.3.6 Given examples of various hazardous materials and the following monitoring equipment, in addition to other monitoring and detection equipment provided by the authority having jurisdiction, select appropriate monitoring equipment to identify and quantify the materials.

1. Carbon monoxide meter
2. Colormetric tubes
3. Combustible gas indicator (CGI)
4. Oxygen meter
5. Passive dosimeter
6. pH papers, pH meters, and test strips
7. Radiation detection instruments
8. Reagents.

TECH-2.3.7 Demonstrate the field maintenance, testing and calibration procedures for the monitoring equipment, test strips and reagents provided by the authority having jurisdiction.

TECH-2.3.8 Demonstrate the use of conversion charts associated with monitoring devices provided by the authority having jurisdiction.

TECH-2.4 Given a label for a radioactive material, identify vertical bars, contents, activity and transport index, then match the label item to its significance in surveying a hazardous materials incident.

Analyzing the Incident: Collecting and Interpreting Hazard and Response Information

TECH-3 Given hazardous materials incident scenarios and access to printed resources, technical resources, computer data bases and monitoring equipment, collect and interpret hazard and response information not available from the current edition of the North American Emergency Response Guidebook or a MSDS.

TECH-3.1 Identify the types of hazard and response information available from each of the following resources and explain the advantages and disadvantages of each resource:

1. Reference manuals for chemicals, toxicology, and equipment
2. Hazardous materials data bases
3. Technician information centers (i.e.. CHEMTREC and NRC)
4. Technical information specialist
5. Monitoring equipment
6. Maps and diagrams.

TECH-3.2 Describe the following terms and explain their significance in the risk assessment process:

1. Acid, caustic
2. Air reactivity

3. Biological agents
4. Boiling point
5. Catalyst
6. Chemical interactions
7. Chemical reactivity
8. Compound, mixture
9. Concentration
10. Corrosivity pH
11. Critical temperatures and pressure.
12. Dose and dose rate
13. Expansion ration
14. Flammable explosive/range (LEL/UEL)
15. Fire and Flash point
16. Half-life
17. Halogenated hydrocarbon
18. Inhibitor
19. Instability
20. Ionic and covalent compounds
21. Irritants (riot control agents)
22. Maximum safe storage temperature
23. Melting point and freezing point
24. Miscibility
25. Nerve agents
26. Organic and inorganic
27. Oxidation potential
28. Physical state (solid, liquid, gas)
29. Polymerization
30. Radioactivity
31. Salt and non-salt
32. Saturated, unsaturated, and aromatic hydrocarbons
33. Solution and slurry
34. Specific gravity
35. Strength
36. Sublimation
37. Temperature
38. Toxic products of combustion
39. Toxins
40. Vapor density
41. Vapor pressure
42. Vesicants
43. Viscosity
44. Volatility
45. Water reactivity
46. Water solubility.

TECH-3.3 Describe the heat transfer processes that occur as a result of a cryogenic liquid spill.

TECH-3.4 Given various hazardous materials scenarios and appropriate reference materials, identify the signs and symptoms of exposure to each material and the target organ effects of exposure to that material.

TECH-3.5 Given the scenario of a residential gas line break and readings for a CGI, determine the areas of evacuation.

TECH-3.6 Identify two methods for determining the pressure in bulk packaging or facility containers

TECH-3.7 Identify one method for determining the amount of lading remaining in damaged bulk package or facility containers.

Analyzing the Incident: Describing the Condition of the Container Involved in the Incident

TECH-4 Given simulated facility and transportation container damage, describe the damage found using one of the following terms:
1. Undamaged, no product release
2. Damaged, no product release
3. Damaged, product release
4. Undamaged, product release.

TECH-4.1 Given DOT specification markings for non-bulk and bulk packaging (including tank cars, tank containers and cargo tanks) and the appropriate reference guide, identify the design and construction of the packaging and identify examples of the likely materials found in the packaging.

TECH-4.1.1 Given examples of the following containers identify the basic design and construction features, including closures, of each bulk packaging and storage vessel:
1. Fixed facility tanks and storage tanks
2. Intermodal tanks and bulk containers
3. Pipelines
4. Rail cars
5. One-ton containers
6. Cargo tanks (tank trucks and trailers).

TECH-4.1.2 Given examples of the following containers, identify the basic design, construction features and closures found on each container by name.
1. Pressurized cylinders
2. Drums
3. Carboys

TECH-4.1.3 Identify the basic design and construction features of the following radioactive materials containers:
1. Type A
2. Type B
3. Industrial
4. Excepted
5. Strong, tight containers.

TECH-4.1.4 Demonstrate a sampling method for collecting the following:
1. Solid
2. Liquid
3. Gas.

TECH-4.2 Identify how a liquid pipeline may transport different products.

TECH-4.2.1 Given an example of a ruptured domestic pipeline, identify the following
1. Ownership of the pipeline
2. Type of product in the line
3. Procedures for checking for gas migration
4. Procedure for shutting down the line or controlling the leak.

TECH-4.2.2 Given an example of a domestic gas line break and the reading from a combustible gas indicator, determine the area of evacuation.

TECH-4.3 Identify the method for determining the pressure in bulk packaging or facility containers using both a pressure gauge and the temperature of the contents.

TECH-4.3.1 Identify the method for determining the amount of lading in bulk packaging or facility containers.

TECH-4.4 Identify the types of damage that containers may incur to include.
1. Cracks
2. Scores
3. Gouges
4. Dents.

TECH-4.5 Given examples of tank car damage, identify the type of damage in each example by name.

TECH-4.6 Given a scenario involving radioactive materials, determine if the integrity of any container has been breached using available survey and monitoring equipment.

Analyzing the Incident: Predicting Likely Behavior of Materials and Their Containers When Multiple Materials are involved

TECH-5 Given examples of both facility and transportation incidents involving multiple hazardous materials, predict the likely behavior of the contents in each case.

TECH-5.1 Identify at least three resources available that indicate the effects of mixing various chemicals.

TECH-5.2 Describe the heat transfer processes that occur as a result of a cryogenic liquid spill.

TECH-5.3 Identify the impact of the following fire and safety features on the behavior of the products during an incident at a bulk storage facility and explain their significance in the risk assessment process:
1. Fire protection systems (NFPA 30)
2. Monitoring and detection systems
3. Product spillage and control (impoundment and diking)
4. Tank spacing
5. Tank venting and flaring systems
6. Transfer operations.

Analyzing the Incident: Estimating the Likely Size of an Endangered Area

TECH-6 Given various facility and transportation hazardous materials incidents, estimate the size, shape and concentrations associated with the materials involved in the incident using computer modeling, monitoring equipment or specialist in this field.

TECH-6.1 Identify local resources for dispersion pattern prediction and modeling including computers, monitoring equipment or specialist in the field.

TECH-6.2 Given the concentration of a released material, Identify the steps for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials incident given the concentration of the release.

TECH-6.2.1 Match the following toxicological terms and exposure values with their significance in predicting the extent of health hazards in a hazardous materials incident.

1. Immediately Dangerous to Life and Health (IDLH).
2. Lethal Concentrations (LC_{50}).
3. Lethal Dose (LD_{50}).
4. Permissible Exposure Limit (PEL).
5. Threshold Limit Value Ceiling (TLV-C).
6. Threshold Limit Value Short-term Exposure Limit (TLV-STEL).
7. Threshold limit value time-weighted average (TLV-TWA).
8. Parts per million (ppm), part per billion (ppb).
9. Emergency Response Planning Guide (ERPG).
10. RAD, Millirem (MREM)
11. Roentgen Equivalent Man (REM).

TECH-6.2.2 Describe the following toxicological terms and exposure values with their significance in predicting the extent of health hazards in a hazardous materials incident.

1. Alpha radiation
2. Beta radiation
3. Gamma radiation
4. Half-life
5. Time, distance and shielding.

TECH-6.2.3 Identify two methods for predicting the areas of potential harm within the endangered area of a hazardous materials incident.

TECH-6.3 Identify the methods for estimating the outcomes within an endangered area of a hazardous materials incident.

Planning the Response: Identifying Response Objectives

TECH-7 Given simulated facility and transportation problems, describe the response objective for each problem and describe the steps for determining response objectives (defensive, offensive and nonintervention) given an analysis of a hazardous materials incident.

Planning the Response: Identifying the Potential Action Options

TECH-8 Given simulated facility and transportation hazardous materials incidents, identify the possible action options (defensive, offensive and nonintervention) by response objective for each problem.

TECH-8.1 Identify the possible action options to accomplish a given response objective.

TECH-8.2 Identify the purpose and the procedures, equipment and safety precautions for each of the following control techniques:

1. Absorption
2. Neutralization
3. Overpacking
4. Patch and plug.

Planning the Response: Selecting Personal Protective Equipment

TECH-9 Given situations with known and unknown hazardous materials, determine the appropriate personal protective equipment for the action options specified in the plan of action in each situation.

TECH-9.1 Identify the four levels of chemical protection (EPA/NIOSH) and match both the equipment required for each level and the conditions under which each level is used.

TECH-9.2 Identify the factors to be considered in selecting the proper respiratory protection for a specified option.

TECH-9.2.1 Describe the advantages, limitations and proper use of the following type of respiratory protection at hazardous materials incidents:
1. Air purifying respirator (APR)
2. Supplied air respirator (air line respirator) (SAR)
3. Positive pressure self-contained breathing apparatus (SCBA).

TECH-9.2.2 Identify the process for selecting the proper respiratory protection at hazardous materials incidents.

TECH-9.2.3 Identify the operational components of the air purifying respirators and supplied air respirators by name and match the function to the component.

TECH-9.3 Identify the factors to be considered in selecting the proper chemical-protective clothing for a specified option.

TECH-9.3.1 Match the following terms with their definition and explain their impact and significance on the selection of chemical-protective clothing:
1. Degradation
2. Penetration
3. Permeation.

TECH-9.3.2 Identify at least three indications of material degradation of chemical-protective clothing.

TECH-9.3.3 Identify the three types of vapor protective and splash protective clothing and describe the advantages and disadvantages of each type.

TECH-9.3.4 Identify the relative advantages and disadvantages of: heat exchange unit, air-cooled jackets, water-cooled jackets and ice-vest used for the cooling of personnel in chemical-protective clothing.

TECH-9.3.5 Identify the process for selecting the proper protective clothing at hazardous materials incidents.

TECH-9.3.6 Given examples of various hazardous materials, determine the appropriate protective clothing construction materials for a given action option using chemical compatibility charts.

TECH-9.3.7 Identify the physical and psychological stresses that can affect users of specialized protective clothing.

Planning the Response: Developing Appropriate Decontamination Procedures

TECH-10 Given a simulated hazardous materials incident, select an appropriate decontamination procedure and determine the equipment required to implement that procedure.

TECH-10.1 Identify the advantages and limitations and describe an example where each of the following decontamination methods would be used:
1. Absorption
2. Adsorption
3. Chemical and physical degradation
4. Dilution
5. Disposal
6. Evaporation

7. Neutralization
8. Solidification
9. Vacuuming
10. Washing.

TECH-10.2 Identify the sources of technical information for selecting appropriate decontamination procedures and identify how to contact those sources in an emergency.

Planning the Response: Developing a Plan of Action

TECH-11 Given simulated hazardous materials incidents in facility and transportation settings, develop plans of action, including safety considerations, which are consistent with the local emergency response plan and the organization's SOP's, and which are within the capability of available personnel, personal protective equipment, and control equipment.

TECH-11.1 Describe the purpose of, procedures for, equipment required and safety precautions used with the following techniques for hazardous materials control:
1. Absorption.
2. Neutralization.
3. Overpacking.
4. Patching and plugging.

TECH-11.2 Given an MC-306/DOT-406, MC-307/DOT-407, MC-312/DOT-412, MC-331 and MC-338 cargo tanks, identify the common methods for product transfer form each type of tank.

TECH-11.3 Develop a site safety plan for a hazardous materials incident.

TECH-11.3.1 Describe the components of a site safety plan for a hazardous materials incident.

TECH-11.3.2 Given a simulated hazardous materials incident, demonstrate the ability to develop a site safety plan.

TECH-11.4 Given a simulated hazardous materials incident, develop the safety consideration that must be included in the plan of action.

TECH-11.4.1 List and describe the safety consideration to be included

TECH-11.4.2 Given a plan of action for a simulated hazardous materials incident, identify the points that should be made in a safety briefing prior to working on the scene.

TECH-11.4.3 Identify the atmospheric and physical safety hazards associated with hazardous materials incidents involving confined spaces.

TECH-11.4.4 Identify the pre-entry activities to be performed.

TECH-11.4.5 Identify the procedures, equipment and safety precautions for collecting legal evidence at hazardous materials incidents.

Implementing the Planned Response: Performing Incident Management Duties

TECH-12 Given the local emergency response plan or organization's SOP's and a simulated hazardous materials incident, demonstrate the duties of an assigned hazardous materials branch position within the local Incident Management System (IMS).

TECH-12.1 Identify the role, specified in the local emergency response plan and the organization's SOP's, of the hazardous materials technician during a hazardous materials incident.

TECH-12.2 Given the local emergency response plan or organization's SOP's, identify the duties and responsibilities of the following hazard group functions within the incident management system, including:

1. Backup
2. Decontamination and Medical
3. Entry and Reconnaissance
4. Hazardous Materials Branch Management
5. Hazardous Materials Brach Safety
6. Information and Research
7. Resources.

TECH-12.2.1 Given the local emergency response plan or the organizations SOP's, identify the duties and responsibilities of the hazard group officer and describe how to coordinate all activities of that group.

TECH-12.3 Given a simulated hazardous materials incident, demonstrate setup of the contamination reduction corridor as specified in the planned response.

TECH-12.4 Given a simulated hazardous materials incident, demonstrate how to perform the decontamination process specified in the planned response.

Implementing the Planned Response: Using Protective Clothing and Respiratory Protection

TECH-13 Demonstrate the ability to don, work in and doff both liquid splash and vapor protective clothing and any other specialized personal protective equipment provided by the authority having jurisdiction, with the appropriate respiratory protection.

TECH-13.1 Identify the safety procedures for personnel wearing vapor protective clothing.

TECH-13.2 Identify three safety and emergency procedures for personnel wearing vapor protective clothing.

1. Loss of air supply
2. Loss of suit integrity
3. Loss of verbal communication system.

TECH-13.3 Identify the procedures for donning, working in and doffing the following types of respiratory protection:

1. Air purifying respirator
2. Supplied air respirator (SAR) and required escape unit (air line respirator).

TECH-13.4 Demonstrate donning, working in and doffing chemical protective clothing in addition to any other specialized protective equipment provided by the authority having jurisdiction.

TECH-13.5 Demonstrate the ability to record the use, repair and testing of chemical protective clothing according to the manufacturer's specifications and recommendations.

TECH-13.6 Describe the maintenance, testing, inspection and storage procedures for personal protective equipment provided by the authority having jurisdiction according to the manufacturer's specifications and recommendations.

Implementing the Planned Response: Performing Control Functions Identified in Plan of Action

TECH-14 Given various simulated hazardous materials incidents involving non-bulk packaging and facility containers, select the tools, equipment and materials for the control of hazardous materials incidents and identify the precautions for controlling releases from those packages/containers.

TECH-14.1 Given non-bulk and bulk pressure vessel/containers, select the appropriate material or equipment and demonstrate a method(s) to contain the following leaks:

1. Fusible metal plug
2. Fusible plug threads
3. Side wall of cylinder
4. Valve blowout
5. Valve gland
6. Valve inlet threads
7. Valve seat
8. Valve stem assembly blowout.

TECH-14.2 Given the fittings on a pressure container, demonstrate the ability to:

1. Close open valves
2. Tighten loose plugs
3. Replace missing plugs.

TECH-14.3 Given a 55 gallon drum, demonstrate the ability to contain the following leaks using appropriate tools and materials:

1. Bung leak
2. Chime leak
3. Nail puncture
4. Forklift puncture.

TECH-14.4 Given a 55 gallon drum and an overpack drum, demonstrate the ability to place the 55 gallon drum into the overpack drum using the following methods:

1. Slide-in
2. Rolling slide-in
3. Slip-over.

TECH-14.5 Identify the maintenance and inspection procedures for the tools and equipment provided for the control of hazardous materials releases according to the manufacturer's specifications and recommendations.

TECH-14.6 Identify three considerations for assessing a leak or spill inside a confined space without entering the area.

TECH-14.7 Identify the safety considerations for product transfer operations, including bonding, grounding, elimination of ignition sources and shock hazards.

TECH-14.8 Given an MC-306 cargo tank and a dome cover clamp, demonstrate the ability to install the clamp on the dome properly.

TECH-14.9 Identify the methods and precautions used when controlling a fire involving an MC-306 aluminum shell cargo tank.

TECH-14.10 Describe methods for containing the following leaks in MC306, MC-307 and MC-312 cargo tanks:

1. Dome cover leak
2. Puncture
3. Irregular-shaped hole
4. Split or tear.

TECH-14.11 Describe product removal and transfer considerations for overturned MC-306, MC-307, MC-312, MC-331 andMC-338 cargo tanks, including:

1. Inherent risk associated with such operations
2. Procedures and safety precautions as bonding, grounding and elimination of ignition sources and shock hazards
3. Equipment required.

Evaluating Progress: Evaluating the Effectiveness of the Control Functions

TECH-15 Given hazardous materials incident scenarios and the task of implementing the plan of action, demonstrate the ability to evaluate the effectiveness of any control function identified in the plan of action.

Terminating the Incident: Assisting in the Debriefing

TECH - 16 Given the details of a simulated facility and transportation hazardous materials incidents involving non-bulk and bulk packaging, participate in the debriefing of the incident.

TECH - 16.1 Describe three components of an effective debriefing.

TECH - 16.2 Describe the key topics in an effective debriefing.

TECH - 16.3 Describe when a debriefing should take place.

TECH - 16.4 Describe who should be involved in a debriefing

TECH - 16.5 Identify the procedure for conducting debriefings at a hazardous materials incident.

Terminating the Incident: Assisting in the Incident Critique

TECH – 17 Given a simulated multi-agency hazardous materials incident, provide operational observations of the activities that were performed in the hot and warm zones during the incident.

TECH – 17.1 Describe three components of an effective critique.

TECH – 17.2 Describe who should be involved in a critique.

TECH – 17.3 Describe why an effective critique is necessary after a hazardous materials incident.

TECH – 17.4 Describe what written documents should be prepared as a result of the critique.

TECH – 17.5 Implement the procedure for conducting a critique of the incident.

Terminating the Incident Providing Reports and Documentation

TECH – 18 Given a simulated hazardous materials incident, complete the reporting and documentation requirements consistent with the organization's ERP and SOP's requirements.

TECH - 18.1 Identify the reports and supporting documentation required by the local ERP and the organization's SOP's.

TECH - 18.2 Demonstrate the proper completion of required reports as identified in the local ERP and the organization's SOP's.

TECH - 18.3 Identify the importance of documentation for a hazardous materials incident including training records, personnel exposure records, incident reports and critique reports.

TECH - 18.4 Identify the steps in keeping an activity log and exposure records for hazardous materials incidents.

TECH – 18.5 Identify the step to be taken in compiling incident reports that meet federal, state, local and organization's SOP's.

TECH – 18.6 Identify the requirements for compiling hot zone entry and exit logs.

TECH - 18.7 Identify the requirements for compiling personal protective equipment logs.

TECH - 18.8 Identify the requirements for filing documents and maintaining records found in the local emergency response plan and the organization's SOP's.

TECH - 18.9 Identify the procedures required for legal documentation and chain of custody/continuity described in the organization's SOP's or the local emergency operating plan.

Summary: Hazardous Materials Technician Level

Audience

Narrow. Prospective hazardous materials team members and others who are designated in response plans as a general resource to perform advanced defensive and offensive operations at all anticipated hazardous materials emergencies.

Prerequisites

First Responder Awareness Level
First Responder Operational Level training (Minimum of 24 hours required)

Training

Programs range from 40 to 240-hours nationally. It is recognized nationally that 40-hour programs for Technician Level, i.e. HazMat Team members is totally inadequate. There are case studies where limited training was identified as a contributing factor to the accident where response personnel were killed or seriously injured. The Florida State Fire College has developed a comprehensive 120-hour Technician program. Programs ranging in the 40 – 160-hours are currently in place within the State. Programs requiring less hours generally take into consideration prior cognitive knowledge. It is imperative to remember that program participants must be capable of *demonstrating* competency in *all* stated objectives.

Classroom and simulated lab/field instruction with emphasis on hands-on training. Competencies include: 1) Knowledge of the role of the hazardous materials technician within the incident command system and responsibilities within the employer's emergency response plan. 2) Knowledge of hazardous materials terminology, behavior and ability to perform advanced hazard and risk assessment using field survey instruments and equipment. 3) Ability to select and use specialized personal protective equipment. 4) Ability to implement decontamination procedures. 5) Knowledge of termination procedures.

Refresher Training

To occur annually;

1. Competency retesting of all response skills.
2. Technical information updates.
3. Incident scene decision-making using simulated emergencies.

References

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99)
EPA 40 CFR 311 Worker Protection
NFPA 471, Recommended Practice for Responding to Hazardous Materials Incident (2002 Edition)
NFPA 472, Standard for Competencies for Hazardous Materials Responders (2002 Edition)
NFPA 1561 Standard on Fire Department Incident Management System
NETC, Guidelines for Public Sector Hazardous Materials Training (March 1998)

FLORIDA STATE EMERGENCY RESPONSE COMMISSION

Guidelines for Incident Commanders
Hazardous Materials Training

October 1, 2002
~Revised~

Guidelines for Incident Commander Hazardous Materials Training

Introduction

In Title 29 of the Code of Federal Regulations, 1910.120 (q)(6)(v), OSHA sets the minimum level of training and competencies required for Incident Commanders. Incident Commanders who will assume control of the incident scene beyond the first responder at the awareness level shall receive at least 24 hours of training equal to the first responder at the operations level as well as training to the competencies defined in this section. The U.S. Environmental Protection Agency, individual States, and local agencies may require that Incident Commanders have additional training or competencies.

Definition

The Incident Commander is the person responsible for all decisions relating to the management of an incident and is in charge of the incident site. This is equivalent to the On-scene Incident Commander as defined by OSHA 29 CFR 1910.120.

Audience

Incident Commanders may be employed by public emergency response or private agencies that may respond to hazardous materials incidents. They are typically employees of law enforcement agencies, fire departments, emergency medical services, emergency management agencies, public works departments or any other agencies that may be expected to take the lead responsibility at a hazardous materials incident.

Related Health, Safety, and Performance Standards

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99)
EPA 40 CFR 311 Worker Protection
NECT Guidelines for Public Sector Hazardous Materials Training, (March 1998)
NFPA 471, Recommended Practice for Responding to Hazardous Materials Incidents (2002 Edition)
NFPA 472, Standard for Competencies for Hazardous Materials Responders (2002 Edition)
NFPA 1561 Standard on Fire Department Incident Management

Appropriate Methodologies

Hazardous Materials Incident Commander training should include a combination of traditional classroom lecture with small group actives and large-group field exercises. Small-group classroom activities focusing on using the Incident Command System should be progressive in terms of incident complexity and resource management complexity. Tabletop, field exercises or large group incident scene simulations are optimal for overall command structure practice to develop effective incident management skills. For proper skill development during scenario practice, it is essential that there be proper critiques and corrective instruction of incident resource organization, style, choice of delegation of command responsibilities, management of communication systems and transfer of command. Testing and evaluation consist of a written examination and post incident critique of simulations, including solutions to small-group activities and field exercises. Refresher training should include review of command structure SOP's, technical updates on State and Federal response plans and field exercise practice performing command roles in simulated emergencies.

The SERC estimates that the training outlined above for the Incident Commander can be accomplished in approximately 24 hours with competent instructors knowledgeable in hazardous materials response incident command. Annual refresher training should be accomplished with approximately 4 contact hours of training. Certificates should be issued for successful demonstration of competency for both initial and hazardous materials refresher training.

Training

Employers are required to ensure that Incident Commanders at hazardous materials incidents demonstrate competency in the skills required for Incident Management. All Incident Commanders will be trained to the operational level utilizing the Florida First Responder Awareness and Operational Level Hazardous Materials Training Programs, National Fire Academy Program - Initial Response to Hazardous Materials Incidents Basic Concepts *and* Concept Implementation or similar curricula complying with the First Responder Awareness and First Responder Operational competencies. In addition the Incident Commander will be trained in the incident command competencies included in this document.

First Responder Awareness and First Responder Operational competencies are included here for reference.

The following training objectives are recommended for first responder awareness level. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

First Responder Awareness

Recommended Training Objectives

AWARE-1 Given a hazardous materials incident scenario, demonstrate an understanding of the role of the Firefighter at the awareness level.

AWARE-1.1 Describe the responsibility to analyze the incident to determine the hazardous materials present and the basic hazard and response information for each type of hazardous material and demonstrate the ability to do the following:

AWARE-1.1.1 Identify the responsibility to detect the presence of hazardous materials.

AWARE-1.1.2 Identify the responsibilities to survey a hazardous materials incident, from a safe location, to identify the name, UN/NA identification number or type placard applied for any hazardous material involved.

AWARE-1.1.3 Identify the responsibility to collect hazard information from the current edition of the *North American Emergency Response Guidebook* (ERG).

AWARE-1.2 Describe the responsibility to implement actions consistent with the local emergency response plan, the organization's SOP's and the current edition of the *North American Emergency Response Guidebook*, and demonstrate the ability to do the following:

AWARE-1.2.1 Identify the responsibility to initiate protective actions consistent with the local emergency response plan, the organization's SOP's and the current edition of the *North American Emergency Response Guidebook*.

AWARE-1.2.2 Identify the responsibility to initiate the notification process specified in the local emergency response plan and the organization's SOP's.

Analyzing the Incident - Detecting the Presence of Hazardous Materials

AWARE-2 Given incident scenarios involving facility and/or transportation situations with and without hazardous materials present, identify those situations where hazardous materials are present.

AWARE-2.1 Identify the definition of hazardous materials.

AWARE-2.2 Identify the USDOT Hazard Classes and divisions of hazardous materials and identify common examples of each hazard class or division.

AWARE-2.3 Identify the primary hazards associated with each of the USDOT Hazard Classes and divisions of hazardous materials by hazard class or division.

AWARE-2.4 Identify the difference between hazardous materials emergencies and other emergencies.

AWARE-2.5 Identify typical occupancies and locations in the community where hazardous materials are manufactured, stored, transported, used or disposed of.

AWARE-2.6 Identify typical container shapes that may indicate hazardous materials.

AWARE-2.7 Identify facility and transportation markings and colors that indicate hazardous materials, including:

1. UN/NA identification number
2. NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response
3. Military hazardous materials markings
4. Special hazard communication markings
5. Pipeline markers
6. Container markings.

AWARE-2.8 Given an NFPA 704 Standard System for the Identification of the Hazards of Materials for Emergency Response marking, identify the significance of the colors, numbers and special symbols.

AWARE-2.9 Identify US and Canadian placards and labels that indicate hazardous materials.

AWARE-2.10 Identify the basic information on material safety data sheets (MSDS) and shipping papers that indicate hazardous materials.

AWARE-2.10.1 Identify where to find material safety data sheets (MSDS).

AWARE-2.10.2 Identify entries on a material safety data sheet that indicate the presence of hazardous materials.

AWARE-2.10.3 Identify the entries on shipping papers that indicate the presence of hazardous materials.

AWARE-2.10.4 Match the name of the shipping papers found in transportation (air, highway, rail and water).

AWARE-2.10.5 Identify the person responsible for having the shipping papers in each mode of transportation.

AWARE-2.10.6 Identify where the shipping papers are found in each mode of transportation.

AWARE-2.10.7 Identify where the papers can be found in an emergency in each mode of transportation.

AWARE-2.11 Identify examples of clues (other then occupancy/location, container shape, markings/ color, placards/labels and shipping papers) that use the senses of sight, sound and odor to indicate the presence of hazardous materials.

1. Changes in pressure release
2. Presence of smoke and/or fire
3. Presence of liquids, gas leaks, or vapor cloud
4. Chemical reactions
5. Condensation lines
6. Mass Casualties.

AWARE-2.12 Describe the limitations of using the senses in determining the presence or absence of hazardous materials.

AWARE-2.13 Identify types of locations that may become targets for criminal or terrorist activity using hazardous materials. The following are some examples of locations:

1. Public assembly areas
2. Public/Government buildings
3. Mass transit systems
4. Places with high economic impact
5. Telecommunications facilities
6. Places with historical or symbolic significance
7. Military facilities
8. Airports, Train Stations and Ports
9. Industrial facilities.

AWARE-2.14 Identify at least four indicators of possible criminal or terrorist activity involving hazardous materials. The following are some examples of indicators:

1. Hazardous materials or lab equipment that is not relevant to the occupancy
2. Intentional release of hazardous materials
3. Unexplained patterns of sudden onset illnesses or deaths
4. Unusual orders or tastes
5. Mass casualty incident with unexplained signs of skin, eye or airway irritation
6. Unusual security, locks, bars on windows, covered windows and barbed wire
7. Unexplained vapors clouds, mists and plumes
8. Patients twitching, tightness in chest, sweating, pin-point pupils (miosos), runny nose (rhinorrhea), and nausea and vomiting.
9. Unusual presence of natural indicator such as sick or dead birds and animals or dead or discolored trees, shrubs or grass.

AWARE-2.15 Describe the difference between a chemical and a biological incident.

1. Chemical incidents are identified by the rapid onset of medical signs and symptoms characteristic of chemical exposure. Natural indicators and obvious signs of release may be present such as chemical residue and odors.
2. Biological incidents are gradual in onset of medical signs and symptoms with no obvious characteristic of odor or colors. The migration of the disease by infected individuals may be wide spread and transmission from one person to another may occur.

AWARE-2.16 Identify at least four indicators of possible criminal or terrorist activity involving biological agents. The following are some examples of indicators:

1. Mass causality incident with unusual number of ill or dying persons with common signs and symptoms.
2. Hospitals reporting mass causalities with similar signs and symptoms.
3. Unscheduled outdoors spraying
4. Abandoned spraying (dissemination) device.

Analyzing the Incident: Surveying the Hazardous Materials Incident from a Safe Location

AWARE-3 Given simulated facility and transportation incidents involving hazardous materials, identify the hazardous material(s) in each situation by name, UN/NA identification number and/or type placard applied.

AWARE-3.1 Identify difficulties encountered in determining the specific names of hazardous materials in both facilities and transportation.

AWARE-3.2 Identify the significance of the terms “Type A”, “Type B” and “Special Form” as they relate to radioactive materials packaging.

AWARE-3.3 Identify additional information concerning radionuclide identity and activity provided on radioactive material labels and shipping papers.

AWARE-3.4 Identify additional information concerning physical and chemical form and packaging type provided on radioactive materials shipping papers.

AWARE-3.5 Identify sources for obtaining the names of, UN/NA identification numbers for or type of placards associated with hazardous materials in transportation.

AWARE-3.6 Identify sources for obtaining the names of hazardous materials in a facility.

Analyzing the Incident: Collecting Hazard Information

AWARE-4 Given the identity of various hazardous materials (name, UN/NA number or type placard), identify the fire, explosion and health hazard information for each material using the current edition of the *North American Emergency Response Guidebook*.

AWARE-4.1 Identify the way hazardous materials are harmful to people, the environment and property at hazardous materials incidents.

AWARE-4.2 Identify the general routes of entry for human exposure to hazardous materials.

AWARE-4.3 Given the current edition of the *North American Emergency Response Guidebook*, identify the three methods for determining the appropriate guide page for a specific hazardous material.

AWARE-4.4 Given the current edition of the *North American Emergency Response Guidebook*, identify the two general types of hazards found on each guide page.

AWARE-4.5 Identify the difficulties encountered in using the senses to recognize radioactive material releases and radiation exposure.

Analyzing the Incident – Initiating Protective Actions

AWARE-5 Given simulated facility and transportation hazardous materials incidents, identify the actions to be taken to protect themselves and others and to control access to the scene using the local emergency response plan, the organization’s SOP’s or the current edition of the *North American Emergency Response Guidebook*.

AWARE-5.1 Identify the location of both the local emergency response plan and the organization’s SOP’s.

AWARE-5.2 Given the local emergency response plan or the organization’s SOP’s, identify the role of the first responder at the awareness level during a hazardous material incident.

AWARE-5.2.1 Given a simulated facility and/or transportation hazardous materials incidents, initiate the incident management system (IMS) specified in the local emergency response plan and the organizations SOP's.

AWARE-5.2.2 Identify the basic techniques for the following protective actions at hazardous materials incidents.
1. Evacuation
2. In-place protection.

AWARE-5.3 Given the local emergency response plan or the organization's SOP's, identify the basic precautions to be taken to protect themselves and others in a hazardous materials incident.

AWARE-5.3.1 Identify circumstances involving radioactive material in transportation where actions should be initiated to protect the lives of accident victims through carrying out rescue and providing emergency medical care.

AWARE-5.3.2 Identify the precautions necessary when providing emergency medical care to victims of hazardous materials incidents.

AWARE-5.3.3 Identify typical ignition sources found at scenes of hazardous materials incidents.

AWARE-5.3.4 Identify the ways hazardous materials are harmful to people, the environment and property at hazardous materials incidents.

AWARE-5.3.5 Identify the general routes of entry for human exposure to hazardous materials.

AWARE-5.4 Given the identity of various hazardous materials (name, UN/NA identification number or type placard), identify the following response information using the current edition of the *North American Emergency Response Guidebook*:
1. Emergency Action (fire, spill, leak and first aid)
2. Personal protective equipment necessary
3. Initial isolation and protective action distances.

AWARE-5.4.1 Given the name of a hazardous material identify the recommended personal protective equipment from the following list:
1. Street clothing and work uniforms
2. Structural fire-fighting protective clothing
3. Positive pressure self-contained breathing apparatus (SCBA)
4. Chemical-protective clothing and equipment.

AWARE-5.4.2 Identify the definitions for each of the following protective actions:
1. Isolation of the hazard area and denial of entry
2. Evacuation
3. Sheltering in-place protection.

AWARE-5.4.3 Identify the shapes of recommended initial isolation and protective action zones.

AWARE-5.4.4 Describe the difference between small and large spills as found in the table of Initial Isolation and Protective Actions Distances.

AWARE-5.4.5 Identifying the circumstances under which the following distances are used at a hazardous materials incident:
1. Table of initial isolation and protective action distances

2. Isolation distances in the numbered guides.

AWARE-5.4.6 Given a copy of the current edition of the *North American Emergency Response Guidebook*, describe the difference between the isolation distances in the orange-bordered guide pages and the protective action distances in the green-bordered pages in the document.

AWARE-5.5 Identify the techniques used to isolate the hazard area and deny entry to unauthorized persons at hazardous materials incidents.

AWARE-5.6 Identify the specific actions necessary when an incident is suspected to involve criminal or terrorist activity. The following are some examples:

1. Take self protective actions
2. Be alert to secondary devices
3. Communicate the suspicion during the notification process
4. Establish work control zones and access control points
5. Isolate potentially exposed people
6. Document the initial observation
7. Prevent secondary contamination
8. Attempt to preserve evidence while performing operational duties.

Implementing the Response – Initiating the Notification Process

AWARE-6 Given either a facility or transportation scenario of hazardous materials incidents, with and without criminal or terrorist activities, identify the appropriate notifications to be made and how to make them, consistent with the local emergency response plan or the organization's SOP's.

AWARE-6.1 Identify the initial notification procedures for hazardous materials incidents in the local emergency response plan or the organization's SOP's.

The following training objectives are recommended for first responder operational level. The primary source for this material is NETC Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

First Responder Operational Level:

Recommended Training Objectives

OPS-1 Given a hazardous materials incident scenario, demonstrate an understanding of the First Responder at the operations level.

OPS-1.1 Describe the responsibility to analyze the hazardous materials incident and determine the magnitude of the problem in terms of outcomes, and demonstrate the ability to do the following:

OPS-1.1.1 Identify the responsibility to survey the hazardous materials incident to determine the containers and materials involved, whether hazardous materials have been released, and the surrounding conditions.

OPS-1.1.2 Identify the responsibility to collect hazard and response information from MSDS, CHEMTREC and shipper / manufacturer contacts.

OPS-1.1.3 Identify the responsibility to predict likely behavior of a material and its container.

OPS-1.1.4 Identify the responsibility to estimate the potential harm at a hazardous materials incident.

OPS-1.2 Describe the responsibility to plan an initial response within the capabilities and competencies of available personnel, personal protective equipment and control equipment, and demonstrate the ability to do the following:

OPS-1.2.1 Identify the responsibility to describe the response objectives available for hazardous materials incidents.

OPS-1.2.2 Identify the responsibility to describe the defensive options available for a given response objective.

OPS-1.2.3 Identify the responsibility to determine whether the personal protective equipment provided is appropriate for implementing each defensive option.

OPS-1.2.4 Identify the responsibility to identify the emergency decontamination procedures.

OPS-1.3 Describe the responsibility to implement the planned response to favorably change the outcomes consistent with the local emergency response plan and the organization's SOP's, and demonstrate the ability to do the following:

OPS-1.3.1 Identify the responsibility to establish and enforce scene control procedures including control zones, emergency decontamination and communications.

OPS-1.3.2 Identify the responsibility to initiate the Incident Management System (IMS) for hazardous materials incidents.

OPS-1.3.3 Identify the responsibility to don, work in and doff personal protective equipment provided by the authority having jurisdiction.

OPS-1.3.4 Identify the responsibility to perform defensive control functions identified in the action plan.

OPS-1.4 Describe the responsibility to evaluate the progress of the actions taken to ensure that the response objectives are being met safely, effectively, and efficiently and demonstrate the ability to do the following:

OPS-1.4.1 Identify the responsibility to evaluate the status of the defensive actions taken in accomplishing the response objectives.

OPS-1.4.2 Identify the responsibility to communicate the status of the planned response.

Analyzing the Incident: Surveying the Hazardous Materials Incident

OPS-2 and Given examples of both facility and transportation situations involving hazardous materials, survey the hazardous materials incident to determine the container materials involved, whether hazardous materials have been released, and the surrounding conditions. The survey should include the following:

1. Inventory of the type of containers involved
2. Container identification markings
3. Container quantity or capacity
4. Involved materials
5. Release information
6. Surrounding conditions.

OPS-2.1 Given examples of various hazardous materials containers, identify the general shapes of containers for liquids, gases and solid hazardous materials that are typically found.

OPS-2.1.1 Given examples of the following tank cars, identify each tank car by type:
1. Nonpressure tank cars with and without expansion domes
2. Pressure tank cars
3. Cryogenic liquid tank cars
4. Pneumatically unloaded hopper cars
5. High-pressure tube cars.

OPS-2.1.2 Given examples of the following intermodal tank containers, identify each intermodal tank container by type; identify one material and its USDOT Hazard Class that is typically fond in each tank:
1. Nonpressure intermodal tank containers (IM-101 and IM 102)
2. Pressure intermodal tank containers
3. Special intermodal tanks (Cryogenic and tube modules).

OPS-2.1.3 Given examples of the following cargo tank by type:
1. Nonpressure liquid tanks (MC-306)
2. Low pressure chemical tanks (MC307)
3. Corrosive liquid tanks (MC-312)
4. High pressure tanks (MC-331)
5. Cryogenic liquid tanks (MC-338)
6. Dry bulk cargo tanks
7. Compressed gas tube trailers.

OPS-2.1.4 Given examples of the following facility tanks, identify at least one material and its hazard, that are typically found in each fixed facility tank by type:
1. Nonpressure tank
2. Pressure tank
3. Cryogenic liquid tank.

OPS-2.1.5 Given examples of the following non-bulk packages, identify each package by type:
1. Bags
2. Carboys
3. Cylinders
4. Drums.

OPS-2.1.7 Given examples of various radioactive material containers, identify each container/package by type:
1. Type A Package
2. Type B Package
3. Industrial
4. Excepted
5. Strong, tight containers.

OPS-2.2 Given examples of facility and transportation containers, identify the markings that differentiate one container from another.

OPS-2.2.1 Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:
1. Rail transportation vehicles, including tank cars
2. Intermodal equipment including tank containers
3. Highway transport vehicles, including cargo tanks.

OPS-2.2.2 Given examples of the facility containers, identify the markings indicating container size, product contained and /or site identification numbers.

OPS-2.3 Given examples of the facility and transportation scenario involving hazardous materials, identify the name(s) of the hazardous material(s) in each situation.

OPS-2.3.1 Identify the following information on a pipeline marker:
1. Product
2. Owner/operator
3. Emergency telephone number.

OPS-2.3.2 Given a pesticide label, identify each of the following pieces of information; then match the piece of information to its significance in surveying the hazardous material incident:
1. Name of pesticide
2. Signal word
3. Pest control product number
4. Precautionary statement
5. Hazard statement
6. Active ingredient.

OPS-2.3.3 Given a radioactive material label identify vertical bars, contents and activity and transport index.

OPS-2.4 Identify and list surrounding conditions that should be noted when surveying hazardous materials incidents. Surrounding conditions may include:
1. The topography, land use, bodies of water and accessibility
2. Weather conditions
3. Public exposure potential, adjacent land use (rail lines, roadways, ports and airports)
4. Utilities, pipelines, storm and sewer drains
5. Ignitions sources
6. Nature and extent of injuries
7. Building information such as floor drains, ventilation ducts and returns should be considered.

OPS-2.5 Give examples of ways to verify information obtained from the surveying of a hazardous materials incident.

OPS-2.6 Identify at least three additional hazards that could be associated with an incident involving criminal or terrorist activity. The following are some examples of hazards:
1. Secondary events intended to delay or incapacitate emergency responders
2. Armed resistance
3. Use of weapons
4. Booby traps
5. Secondary contamination from handling patients
6. Hostage barricade situations.

Analyzing the Incident: Collecting Hazard and Response Information

OPS-3 Given known hazardous materials, collect hazard and response information from MSDS, CHEMTREC and contacts with the shipper/manufacturer.

OPS-3.1 Match the definitions associated with the USDOT Hazard Classes and divisions of hazardous materials, including refrigerated gases and cryogenic liquids, with the class or division.

OPS-3.2 Identify two ways to obtain a MSDS in an emergency.

OPS-3.3 Using a MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for clean up of spills and leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first aid procedures.

OPS-3.4 Identify the following:

1. The type of assistance provided by CHEMTREC.
2. How to contact CHEMTREC.
3. The information to be furnished to CHEMTREC.

OPS-3.5 Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-3.6 Identify two type of assistance provided by local, state and federal authorities, with respect to criminal or terrorist activities involving hazardous materials.

OPS-3.6.1 Identify the procedure for contacting local, state and federal authorities as specified in the local emergency response plan (ERP) or the organization's SOP's.

OPS-3.7 Describe the properties and characteristics of the following:

1. Alpha particles
2. Bata particles
3. Gamma rays
4. Neutrons.

Analyzing the Incident: Predicting the Behavior of a Material and its Container

OPS-4 Given examples of a single facility and transportation hazardous materials incidents, predict the likely behavior of a material and its container in each incident.

OPS-4.1 Given situations involving known hazardous materials, interpret the hazard response information obtained from the current edition of the North American Emergency Response Guidebook, MSDS, CHEMTREC and shipper/manufacturer contacts.

OPS-4.1.1 Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)

5. Flash point
6. Ignition (autoignition) temperature
7. Physical state (solid, liquid, gas)
8. Specific gravity
9. Toxic products of combustion
10. Vapor density
11. Vapor pressure
12. Water solubility
13. Radiation (ionizing and non-ionizing).

OPS-4.1.2 Identify the differences among the following terms:
1. Exposure and hazard
2. Exposure and contamination
3. Contamination and secondary contamination
4. Radioactive material exposure.

OPS-4.2 Identify three types of stress that could cause a container system to release its contents:
1. Mechanical stress
2. Thermal stress
3. Chemical stress.

OPS-4.3 Identify five ways in which containers can breach:
1. Punctures
2. Splits or tears
3. Closures opening up
4. Disintegration
5. Runaway cracking.

OPS-4.4 Identify four ways in which containers can release their contents.
1. Catastrophic release or rupture
2. Detonation
3. Rapid relief
4. Spills or leaks.

OPS-4.5 Identify the general testing requirements for “Type A,” “Type B” and “Special Form” packaging used for radioactive materials transportations.

OPS-4.6 Identify common “industrial radiography” sources and any specialized large quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-4.7 Identify at least four dispersion patterns that can be created upon release of a hazardous material. The following are examples:
1. Cloud or hemisphere
2. Plume
3. Cone
4. Stream or pooling
5. Irregular.

OPS-4.8 Identify the three general time frames for predicting the length of time that exposures may be in contact with the hazardous material in an endangered area to be:
1. Short-term (minutes and hours)

2. Medium-term (days, weeks and months)
3. Long-term (years).

OPS-4.9 Identify the health and physical hazards that could cause harm to include:
1. Thermal
2. Etiologic
3. Asphyxiation
4. Mechanical
5. Corrosive
6. Poisonous
7. Radiation.

OPS-4.9.1 Identify the health hazards associated with the following terms:
1. Asphyxiant - cellular and pulmonary
2. Chronic health hazard
3. Convulsant
4. Irritants and corrosive
5. Sensitizer/allergen
6. Highly Toxic
7. Carcinogens
8. Infectious Agents
9. Systemic toxins
10. Mutagens
11. Teratogens
12. Alpha, beta gamma and neutron radiation.

OPS-4.10 Given the following types of warfare agents, identify the corresponding DOT hazard class and division:
Nerve agents
Vesicants (blister agents)
Blood agents
Choking agents
Irritants (riot control agents)
Biological agents and toxins.

Analyzing the Incident: Estimating the Potential Harm

OPS-5 Given simulated incidents involving hazardous materials, estimate the potential harm within the endangered area at a hazardous materials incident to include:
1. Determining the dimensions of the area
2. Estimating the number of exposures
3. Measuring or predicting concentrations of materials
4. Estimating the physical, health and safety hazards
5. Identifying the areas of potential harm
6. Estimating the potential outcomes.

OPS-5.1 Identify a resource for determining the size of an endangered area surrounding conditions at a hazardous materials incident to include:
1. The current North America Emergency Response Guidebook
2. Facility pre-incident plume dispersion modeling results .

OPS-5.2 Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials incident, estimate the number and type of exposures within that endangered area.

OPS-5.3 Identify resources available for determining the concentrations of a released hazardous material within an endangered area.

OPS-5.4 Identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials incident given the concentration of the released hazardous material.

1. Surrounding conditions
2. Indication of the behavior of the hazardous material and its container
3. Degree of hazard.

OPS-5.5 Describe the impact that time, distance and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-5.6 Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure and contamination concerns.

Planning the Response: Describing Response Objectives for Hazardous Materials Incidents

OPS-6 Given simulated facility and transportation hazardous materials problems, describe the first responder's response objectives for each problem.

OPS-6.1 Identify the steps for determining the number of exposures that could be saved by the Firefighter with the resources provided by the authority having jurisdiction and operating in a defensive fashion, given an analysis of the hazardous materials problem and the exposures already lost.

OPS-6.2 Describe the steps for determining defensive response objective given an analysis of the hazardous materials incident.

OPS-6.3 Describe how to assess the risk to response personnel for each hazard class in rescuing injured persons at a hazardous materials incident.

Planning the Response: Identifying Defensive Options

OPS-7 Given simulated facility and transportation hazardous materials problems, identify the defensive options for each response objective.

OPS-7.1 Identify the defensive options to accomplish a given response objective.

OPS-7.2 Identify the purpose for, and the procedures, equipment, and safety precautions used with each of the following control techniques:

1. Absorption
2. Dike, dam, diversion or retention
3. Dilution
4. Vapor dispersion
5. Vapor suppression
6. Remote valve shutoff.

Planning the Response: Determining Appropriateness of Personal Protective Equipment

OPS-8 Given the name of a hazardous material involved and the anticipated type of exposure, determine whether available personal protective equipment is appropriate for implementing a defensive option.

OPS-8.1 Identify the appropriate respiratory protection required for a given defensive option for the first responder at the operational level is positive pressure self-contained breathing apparatus.

OPS-8.1.1 Identify the three types of respiratory protection and the advantages and limitations presented by the use of each at hazardous materials incidents.

OPS-8.1.2 Identify the required physical capabilities and limitations of personnel working in positive pressure self-contained breathing apparatus.

OPS-8.2 Identify the appropriate personal protective equipment required for a given defensive option.

OPS-8.2.1 Identify skin contact hazards encountered at hazardous materials incidents.

OPS-8.2.2 Identify the purpose, advantages, and limitations of the following protective clothing at hazardous materials incidents:

1. Structural fire fighting clothing
2. High temperature protective clothing
3. Chemical protective clothing
4. Liquid splash protective clothing
5. Vapor protective clothing.

Planning the Response: Identifying Emergency Decontamination Procedures

OPS-9 Given a plan of action for a hazardous materials incident, identify emergency decontamination procedures.

OPS-9.1 Identify ways that personnel, personal protective equipment, apparatus and tools and equipment become contaminated.

OPS-9.2 Describe how the potential for secondary contamination determines the need for emergency contamination procedures.

OPS-9.3 Identify the purpose of emergency decontamination at hazardous materials incidents.

OPS-9.4 Identify the advantages and limitations of emergency decontamination procedures.

OPS-9.5 Identify appropriate, simple procedures for dealing with accident victims with life-threatening injuries who are known or suspected to be contaminated with radioactive material.

OPS-9.6 Describe the procedure listed in the Local Emergency Response Plan or the organization's SOP's for decontamination of a large number of people exposed to hazardous materials

OPS-9.7 Describe the procedure listed in the Local Emergency Response Plan or the organization's SOP's to preserve evidence at hazardous materials incidents involving suspected criminal or terrorist acts.

Implementing the Planned Response: Establishing and Enforcing Scene Control Procedures

OPS-10 Given scenarios for facility and/or transportation hazardous materials incidents, identify how to establish and enforce scene control including control zones, emergency decontamination and communications.

OPS-10.1 Identify the procedures for establishing scene control through control zones.

OPS-10.2 Identify the criteria for determining the locations of the control zones at hazardous materials incidents.

OPS-10.3 Identify the basic techniques for the following protective actions at hazardous materials incidents:
1. Evacuation
2. Sheltering in-place

OPS-10.4 Identify the considerations associated with locating emergency decontamination.

OPS-10.5 Demonstrate the ability to perform emergency decontamination.

OPS-10.6 Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:
1. Hazardous materials incident
2. Hazardous materials incident with criminal or terrorist activities

OPS-10.6.1 Identify the items to be considered in a safety briefing prior to allowing for criminal or terrorist related incidents to include:
1. Secondary events intended to incapacitate or delay emergency responders
2. Armed resistance
3. Use of weapons
4. Booby traps
5. Secondary contamination from handling patients.

Implementing the Planned Response: Initiating the Incident Management System (IMS)

OPS-11 Given a simulated facility and/or transportation hazardous materials incidents, initiate the Incident Management System (IMS) specified in the local emergency response plan and the organizations SOP's.

OPS-11.1 Identify the role of the Firefighter at the operational level during hazardous materials incidents as specified in the local emergency response plan and the organizations SOP's.

OPS-11.2 Identify the levels of hazardous materials incidents as defined in the SERC Uniform Classification System for Categorizing Hazardous Materials Incidents.
1. Level 1 – Minor
2. Level 2 – Moderate
3. Level 3 – Major

OPS-11.3 Identify the purpose, need, benefits, and elements of an IMS at hazardous materials incidents.

OPS-11.4 Identify the considerations for determining the location of the command post for a hazardous materials incident.

OPS-11.5 Identify the procedures for requesting additional resources at a hazardous materials incident.

OPS-11.6 Identify the responsibilities of the safety officer as follows:
1. Obtains a briefing from the Incident Commander

2. Advises the Incident Commander of incident safety considerations and dangerous situations
3. Monitors the implementation of incident safety considerations
4. Alters, suspends or terminates any activity that is deemed to be unsafe.

Implementing the Planned Response: Using Personal Protective Equipment

OPS-12 Demonstrate the ability to don, work in and doff the personal protective equipment provided by the authority having jurisdiction.

OPS-12.1 Identify the importance of the buddy system in implementing the planned defensive options.

OPS-12.2 Identify the importance of the backup personnel in implementing the planned defensive actions.

OPS-12.3 Identify the safety precautions to be observed when approaching and working at hazardous materials incidents.

OPS-12.4 Identify the signs and symptoms of heat and cold stress.

OPS-12.5 Identify the physical capabilities required for and the limitations of personnel working in the personal protective equipment as provided by the authority having jurisdiction.

OPS-12.6 Match the function of the operational components of the positive pressure self-contained breathing apparatus provided the responder to the name of the component.

OPS-12.7 Identify the procedures for cleaning, sanitizing and inspecting respiratory protective equipment.

OPS-12.8 Identify the procedures for donning, working in and doffing positive pressure self-contained breathing apparatus.

OPS-12.9 Demonstrate donning, working in and doffing positive pressure self-contained breathing apparatus. (Note: Firefighters should have extensive knowledge of the positive pressure self-contained breathing apparatus. This demonstration competency is to identify those individuals who may need additional training in the use of positive pressure SCBA.)

Implementing the Planned Response: Performing Defensive Control Actions

OPS-13 Given a plan of action for a hazardous materials incident within their capabilities, demonstrate the ability to perform the defensive control actions set out in the plan.

OPS-13.1 Understand the types of firefighting foam(s) or vapor-suppressing agent(s) and foam equipment furnished by the authority having jurisdiction, understand the proper application of the firefighting foam(s) or vapor-suppressing agents on a spill or fire involving hazardous materials.

OPS-13.2 Identify the characteristics and applicability of the following types of foams:
1. Protein
2. Fluoroprotein
3. Special purpose
   a. Polar solvent alcohol-resistant concentrates.

b. Hazardous materials concentrates
4. Aqueous film-forming foam (AFFF)
5. High expansion.

OPS-13.3 Given the appropriate tools and equipment, describe how to perform the following defensive control activities:
1. Absorption
2. Damming, diking, diversion, and retention
3. Dilution
4. Vapor dispersion
5. Vapor suppression.

OPS-13.4 Understand the location and use of the mechanical, hydraulic and air emergency remote shut-off devices.

OPS-13.5 Describe the objectives and dangers of search and rescue missions at hazardous materials incidents.

OPS-13.6 Describe methods for controlling the spread of radioactive contamination to the limit impact.

OPS-13.7 Describe procedures, such as those listed in the Local Emergency Response Plan or the organization's SOP's, to preserve evidence at hazardous materials incidents involving suspected criminal or terrorist acts.

Evaluating Progress: Evaluation the Status of Defensive Actions

OPS-14 Given simulated facility and/or transportation hazardous materials incidents, evaluate the status of the defensive actions taken in accomplishing the response objectives.

OPS-14.1 Identify the considerations for evaluating whether defensive options are effective in accomplishing the objectives.

OPS-14.2 Describe the circumstances under which it would be prudent to withdraw (pull back) from a hazardous materials incident.

Evaluating Progress: Communicating the Status of the Planned Response

OPS-15 Given simulated facility and/or transportation hazardous materials incidents, demonstrate communicating the status of the planned response to the Incident Commander through the normal chain of command.

OPS-15.1 Identify the methods for communicating the status of the planned response to the Incident Commander through the normal chain of command.

OPS-15.2 Identify the methods for immediate notification of the Incident Commander and other response personnel about critical emergency conditions at the incident.

The following training objectives are recommended for Incident Commander. The primary source for this material is National Emergency Training Center (NETC) Guidelines for Public Section Hazardous Materials Training (March 1998). Competencies are included for completeness.

Incident Commander competencies

Recommended Training Objectives

IC - 1 Given a hazardous materials incident scenario, demonstrate an understanding of the role of the Incident Commander.

IC - 1.1 Identify the responsibility to analyze a hazardous materials incident to determine the magnitude of the problem in terms of outcomes.

IC - 1.1.1 Identify the responsibility to collect and interpret hazard and response information from printed resources, technical resources, computer databases and monitoring equipment.

IC - 1.1.2 Identify the responsibility to estimate the potential outcomes within the endangered area at a hazardous materials incident.

IC - 1.2 Identify the responsibility to plan a response within the capabilities and competencies of available personnel, personnel protective equipment and control equipment.

IC - 1.2.1 Identify the response objectives for hazardous materials incidents.

IC - 1.2.2 Identify the potential action options (defensive, offensive and nonintervention) available by response objective.

IC - 1.2.3 Identify the responsibility to approve the level of personal protective equipment required for a given action option.

IC - 1.2.4 Identify the responsibility to develop a plan of action, including safety considerations consistent with the local emergency response plan and the organization's SOP's and within the capability of available personnel, personal protective equipment and control equipment.

IC - 1.3 Identify the responsibility to implement a response to favorably change the outcomes consistent with the local emergency response plan and the organization's SOP's.

IC - 1.3.1 Identify the responsibility to implement an Incident Management System (IMS) including the specified procedures for notification and utilization of non-local recourses, e.g., private, state and federal government personnel.

IC - 1.3.2 Identify the responsibility to direct resources (private, governmental and others) with expected task assignments and on-scene activities and provide management overview, technical review and logistical support to private and governmental sector personnel.

IC - 1.3.3 Identify the responsibility to provide a focal point for information transfer to media and local elected officials through the IMS structure.

IC - 1.4 Identify the responsibility to evaluate the progress of the planned response to ensure that the response objectives are being met safely, effectively and efficiently and adjust the plan accordingly.

IC - 1.5 Describe the responsibility to terminate the incident.

IC - 1.5.1 Identify the responsibility to transfer command and control when appropriate.

IC - 1.5.2 Identify the responsibility to conduct an incident debriefing.

IC - 1.5.3 Identify the responsibility to conduct a multi-agency critique.

IC - 1.5.4 Identify the reasonability to report and document the hazardous materials incident and submit the report to the proper entity.

Analyzing the Incident: Collecting and Interpreting Hazard and Response Information

IC - 2 Given access to printed resources, technical resources, computer data bases and monitoring equipment, collect and interpret hazard and response information not available from the current edition of the *North American Emergency Response Guidebook* or a MSDS.

IC - 2.1 Identify the types of hazard and response information available from each of the following resources and explain the advantages and disadvantages of each resource:

1. Reference manuals
2. Hazardous materials data bases
3. Technical information centers
4. Technical information specialists
5. Monitoring equipment.

Analyzing the Incident: Estimating Potential Outcomes

IC - 3 Given simulated facility or transportation incidents involving hazardous materials, the surrounding conditions and the predicted behavior of the container and its contents, estimate the potential outcomes within the endangered area.

IC - 3.1 Given dimensions and the surrounding conditions of an endangered area of a hazardous materials incident, identify the steps for estimating the number of exposures within the endangered area.

IC - 3.2 Match the following toxicological terms and exposure values with their significance in predicting the extent of health hazards in a hazardous materials incident:

1. Immediately Dangerous to Life and Health (IDLH)
2. Lethal Concentrations (LC50)
3. Lethal Dose (LD50)
4. Permissible Exposure Limit (PEL)
5. Threshold Limit Value Ceiling (TLV-C)
6. Threshold Limit Value Short-term Exposure Limit (TLV-STEL)
7. Threshold Limit Value Time-weighted Average (TLV-TWA)
8. Parts per million (ppm), parts per billion (ppb)
9. Emergency Response Planning Guide (ERPG)
10. RAD, Millirem, Roentgen Equivalent Man (REM) and Roentgen.

IC - 3.3 Match the following terms associated with radioactive materials with their significance in predicting the extent of health hazards in a hazardous materials incident:

1. Alpha radiation
2. Beta radiation
3. Gamma radiation
4. Half-life
5. Protective actions (time, distance, and shielding).

IC - 3.4 Describe the health risks associated with the following:

1. Nerve agents (Sarin, Soman and Tabun)
2. Vesicants agents (blister agents as Mustard and Lewsite)
3. Blood agents

4. Choking agents
5. Biological agents (bacteria, viruses and toxins)
6. Irritants (riot control agents).

IC - 3.5 Identify the methods for predicting the areas of potential harm within the endangered area of a hazardous materials incident.

IC - 3.6 Identify the methods available to the organization for obtaining local weather conditions and predictions for short-term future weather changes.

IC - 3.7 Explain the basic toxicological principles relative to assessment and treatment of personnel exposed to hazardous materials, including the following:
1. Acute and Chronic (delayed) toxicity
2. Routes of exposure to toxic materials
3. Local and systemic effects
4. Dose response
5. Synergistic effects

Planning the Response: Identifying Response Objectives

IC - 4 Given simulated facility and transportation hazardous materials incidents, the Incident Commander will describe the possible action options by response objectives for each problem.

IC - 4.1 Describe the steps for determining response objectives (defensive, offensive and nonintervention) given an analysis of a hazardous materials incident.

Planning the Response: Identifying the Potential Action Options

IC – 5 Given simulated facility and transportation hazardous materials incidents, identify the possible action options (defensive, offensive and nonintervention) by response objective for each problem.

IC – 5.1 Identify the possible action options to accomplish a given response objective.

IC – 5.2 Identify the purpose of each of the following techniques for hazardous materials control:
1. Absorption
2. Neutralization
3. Overpacking
4. Patching
5. Plugging.

Planning the Response: Approving the Level of Personal Protective Equipment

IC - 6 Given situations with known and unknown hazardous materials, approve the appropriate personal protective equipment for the action options specified in the plan of action in each situation.

IC - 6.1 Identify the four levels of chemical protection (EPA/NIOSH) and match the equipment required for each level with the conditions under which each level is used:
1. Level A
2. Level B

3. Level C
4. Level D.

IC - 6.2 Describe the following terms and explain their impact and significance on the selection of chemical-protective clothing:

1. Degradation
2. Penetration
3. Permeation.

IC - 6.3 Describe the three safety considerations for personnel wearing vapor-protective, liquid splash-protective and high temperature-protective clothing.

IC - 6.4 Identify the physiological and psychological stresses that can affect users of personal protective clothing.

IC - 6.5 Identify the limitations of military chemical/biological protective clothing.

Planning the Response: Developing a Plan of Action

IC - 7 Given simulated facility and transportation hazardous materials incidents, develop a plan of action consistent with the local emergency response plan and the organization's SOP's that is within the capability of the available personnel, personal protective equipment and control equipment.

IC - 7.1 Identify the steps for developing a plan of action.

IC - 7.2 Identify the factors to be evaluated in selecting public protective actions including evacuation and in-place protection.

IC - 7.3 Given the local emergency response plan or the organization's SOP's, identify which agency will:

1. Receive the initial notification
2. Provide secondary notification and activation of response agencies
3. Make on-going assessments of the situation
4. Command on-scene personnel (Incident Management System)
5. Coordinate support and mutual aid
6. Provide law enforcement and on-scene security (crowd control)
7. Provide traffic control and rerouting
8. Provide resources for public safety protective action (evacuation or in-place protection)
9. Provide fire suppression services when appropriate
10. Provide on-scene medical assistance (ambulance) and medical treatment (hospital)
11. Provide public notification (warning)
12. Provide public information (news media statements)
13. Provide on-scene communications support
14. Provide on-scene decontamination when appropriate
15. Provide operational-level hazard control services
16. Provide technician-level hazard mitigation services
17. Coordinate environmental remedial action ("cleanup") services
18. Provide environmental monitoring

19. Implement on-scene personnel accountability
20. Provide for on-scene responder identification
21. Provide for command post security
22. Provide for crime scene investigation
23. Provide for evidence collection and sampling.

IC - 7.4 Identify the process for determining the effectiveness of an action option on the potential outcomes.

IC - 7.5 Identify the safe operating practices/procedures that are required to be followed at a hazardous materials incident.

IC - 7.5.1 Identify the importance of pre-incident planning relating to safety during responses to specific sites.

IC - 7.5.2 Identify the procedures for presenting a safety briefing prior to allowing personnel to work on a hazardous materials incident.

IC - 7.5.3 Identify at least three safety precautions associated with search and rescue missions at hazardous materials incidents.

1. Buddy systems
2. Backup team
3. Personal protective equipment.

IC - 7.5.4 Identify the advantages and limitations and describe an example where each of the following decontamination methods would be used:

1. Absorption
2. Adsorption
3. Chemical degradation
4. Dilution
5. Disposal
6. Evaporation
7. Neutralization
8. Solidification
9. Vacuuming
10. Washing.

IC - 7.5.5 Identify the atmospheric and physical safety hazards associated with hazardous materials incidents involving confined spaces.

<u>Atmospheric hazards</u>

1. Oxygen-deficient atmosphere
2. Oxygen-enriched atmosphere
3. Flammable/explosive atmosphere
4. Toxic atmosphere

<u>Physical hazards</u>

1. Engulfment hazards
2. Slips and falls
3. Electrical hazards
4. Structural hazards
5. Mechanical hazards.

<u>Implementing the Planned Response: Implementing the Incident Management System</u>

IC - 8 Given a copy of the local emergency response plan, identify the requirements of the plan for managing an incident utilizing a Unified Command Structure and the procedures for

notification and utilization of non-local resources (private, state and federal government personnel).

IC - 8.1 Identify the role of the Incident Commander during an incident involving hazardous materials.

IC - 8.2 Identify the duties and responsibilities of the following hazardous materials branch functions within the incident management system:

1. Backup Team
2. Decontamination
3. Entry
4. HazMat Branch Management
5. Haz Mat Branch Safety
6. Research/Information
7. Reconnaissance
8. Resources

IC - 8.3 Identify the steps for implementing the local and related emergency response plans as required under SARA Title lll Section 303 of the federal regulations or other local emergency response planning legislation.

IC - 8.4 Given the local emergency response planning documents, identify the elements of each of the documents.

IC - 8.5 Identify the elements of the incident management system necessary to coordinate response activities at hazardous materials incidents and the Incident Commander's responsibilities for establishing the appropriate incident organizational structure.

IC - 8.6 Identify the primary local, State, regional and federal government agencies and identify the scope of their regulatory authority (including the regulations) pertaining to the production, transportation, storage, use of hazardous materials, disposal of hazardous wastes and the governmental regulations and procedures for funding cleanup and mechanisms for cost recovery.

IC - 8.7 Identify the governmental agencies and private sector resources offering assistance during a hazardous materials incident, and identify their role and the type of assistance or resources available.

IC - 8.8 Develop a plan of action to effectively deal with a hazardous materials incident, obtaining the necessary resources, coordinating and directing the plan of action, the procedures for the recovery, cleanup and removal of any hazardous wastes.

IC - 8.9 Identify the process and procedures for obtaining cleanup and restoration of services in the local emergency response plan or organization's SOP's.

Implementing the Planned Response: Directing Resources (Private and Governmental)

IC - 9 Given a simulated hazardous materials incident and the necessary resources to implement the planned response, demonstrate the ability to direct the resources in a safe and efficient manner consistent with the capabilities of those resources.

1. Identify task assignment (based upon strategic and tactical operations)
2. Identify operational safety
3. Identify operational effectiveness
4. Identify planning support
5. Identify logistical support

6. Identify administrative support.

Implementing the Planned Response: Providing a Focal Point for Information Transfer to Media and Elected Officials

IC - 10 Given a simulated hazardous materials incident, identify appropriate information to provide to the media and federal, State and local officials.

IC - 10.1 Identify the local policy for providing information to the media.

IC - 10.2 Identify the responsibilities of the public information officer at a hazardous materials incident.

Evaluating Progress: Evaluating Progress of the Plan of Action

IC - 11 Given simulated facility and transportation hazardous materials incidents, evaluate the progress of the plan of action to determine whether the efforts are accomplishing the response objectives.

IC - 11.1 Identify the procedures for evaluating whether the action options are effective in accomplishing the response objectives.

IC - 11.2 Identify the steps for comparing actual behavior of the material and the container to that predicted in the analysis process.

IC - 11.3 Given a simulated hazardous materials incident, determine the effectiveness of:
1. Personnel being used
2. Personal protective equipment
3. Established control zones
4. Decontamination process.

Terminating the Incident: Transferring Command/Control

IC - 12 Given the details of a simulated incident, the local emergency response plan and the organizations SOP's demonstrate the ability to effectively transfer command.

IC - 12.1 Identify the appropriate steps to be taken to transfer command/control of the incident.

IC - 12.2 Demonstrate the transfer of command/control.

IC – 12.2.1 Brief incoming Incident Commander.

IC – 12.2.2 Communicate the transfer to involved agencies.

IC - 12.3 Given a hazardous materials incident, terminate the emergency phase of the incident.

IC – 12.4 Identify the steps required in terminating the emergency phase of a hazardous materials incident.

IC – 12.5 Identify the steps in transferring authority as prescribed in the local emergency response plan or the organization's SOP's.

Terminating the Incident: Conducting a Debriefing

IC - 13 Given the details of a simulated multi-agency hazardous materials incident, conduct a critique of the incident.

IC - 13.1 Describe three components of an effective debriefing.

IC - 13.2 Describe the key topics in an effective debriefing.

IC - 13.3 Describe when a debriefing should take place.

IC - 13.4 Describe who should be involved in a debriefing.

IC - 13.5 Identify the procedure for conducting debriefings at a hazardous materials incident.

Terminating the Incident: Conducting a Multi-Agency Critique

IC – 14 Given a simulated multi-agency hazardous materials incident, demonstrate the ability to conduct a critique of the incident.

IC – 14.1 Describe three components of an effective critique.

IC – 14.2 Describe who should be involved in a critique.

IC – 14.3 Describe why an effective critique is necessary after a hazardous materials incident.

IC – 14.4 Describe what written documents should be prepared as a result of the critique.

IC – 14.5 Implement the procedure for conducting a critique of the incident.

Terminating the Incident: Reporting and Documenting the Hazardous Materials Incident

IC – 15 Given a simulated hazardous materials incident, demonstrate the ability to report and document the incident consistent with the local, state and federal requirements.

IC - 15.1 Identify the reporting requirements of local, state and federal agencies.

IC - 15.2 Identify the importance of documentation for a hazardous materials incident including training records, exposure records, incident reports and critique reports.

IC - 15.3 Identify the steps in keeping an activity log and exposure records for hazardous materials incidents.

IC - 15.4 Identify the requirements for compiling hazardous materials incident reports found in the local emergency response plan and the organization's SOP's.

IC - 15.5 Identify the requirements for filing documents and maintaining records found in the local emergency response plan and the organization's SOP's.

IC - 15.6 Identify the procedures required for legal documentation and chain of custody/continuity described in the organization's SOP's or the local emergency operating plan.

Summary: Incident Commander

OSHA minimum requirement = 24 hours Operational level training + Incident Commander training.

Audience

Moderate in size. Responders whose level of command responsibility may include Incident Commander at all phases of a HAZMAT incident, from initial response through stabilization to incident termination.

Prerequisites

1. First Responder Awareness training.
2. First Responder Operations training (minimum 24 hours required).

Training

- First Responder Operational level plus 24 hours.
- Classroom and simulator/field instruction, with emphasis on incident management and resource coordination.
- Competencies:
    1. Knowledge of role of incident commander within Incident Command System and responsibilities within employer's emergency response plan.
    2. Knowledge of State and federal emergency response plans.
    3. Ability to manage and coordinate a hazmat incident response, including supervising hazard and risk assessment, coordinating control, containment and confinement operations, ensuring proper use of personal protective equipment, employing proper notification procedures and ensuring correct decontamination procedures.
    4. Ability to implement transfer of command and incident termination procedures.

Refresher Training

To occur annually:

1. Review of command structure SOP's.
2. Information updates on local, State and federal response plans.
3. Refresher practice incident scene management, coordination and decision-making using simulated emergencies.

FLORIDA STATE EMERGENCY RESPONSE COMMISSION

Guidelines for Instructor Qualifications of Hazardous Materials Trainers

October 1, 2002
~Revised~

Guidelines for Instructor Qualifications of Hazardous Materials Trainers

Instructor Qualifications

OSHA 1910.120(q)(7) states: "Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. National Fire Academy, or they shall have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach."

To implement the OSHA regulations and to encourage quality instruction, it is recommended that ideally instructors possess the following:

- **Job knowledge** - thorough knowledge of the content to be taught; knowledge of how the information, techniques and principles apply to performing the job; understanding the difficulties and problems that arise on the job; and specific training or education in the subject matter being taught.

- **Job experience** - actual work experience directly related to the subject matter (have performed the job being taught) and experience in hazardous materials response.

- **Training knowledge -** successful completion of an instructor training course that covers the principles of learning, methods and sequencing of instruction, methods of testing and evaluation, preparing performance objectives and lesson plans, training liability (Reference: NFPA 1041), and oral and written communication skills

- **Personal qualities**—patience and understanding, enjoyment of and respect for students and flexibility.

- **Sensitivity** to cultural diversity among students.

Several organizations certify hazardous materials instructors. Professional organizations, such as NFPA, have established professional standards for instructors (NFPA 1041) that can be used to evaluate instructor training and certification. Employers and trainers should carefully examine the following criteria for certification of hazardous materials instructors.

- What standards have been applied?

- Are potential instructors tested in their area of subject matter expertise?

- Are candidates required to demonstrate their skills and knowledge in the classroom setting?

- Are there follow-up evaluations or recertification requirements?

- Are both instructional and technical skills addressed by certification?

- Is hands-on experience in hazardous materials response considered?

- Have the instructors performed the tasks being taught?

It is recommended that the individual delivering First Responder Programs demonstrate competency at least one level above the planned training program delivery. For instance, an instructor delivering a First Responder Awareness Program should be competent at the First Responder Operational level or above. The instructor should also be competent in adult instructional techniques. When selecting instructors for the technician and Incident Commander levels the material becomes increasingly more technical and decision oriented. It is imperative that instructors have the job experience and presentation skills necessary to successfully deliver the selected program. Train the trainer programs provide the opportunity for *existing* instructors to become familiar with a program and instructional techniques associated with the program delivery.

Federal Requirements For First Responder Awareness Training

OSHA establishes the following training requirements for first responders at the awareness level. Length of training and method of testing are not specified, but employers are required to ensure the employees demonstrate competency in the skills defined.

OSHA 29 CFR 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 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:

(A) An understanding of what hazardous substances are and the risks associated with them in an incident.
(B) An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
(C) The ability to recognize the presence of hazardous substances in an emergency.
(D) The ability to identify the hazardous substance, if possible
(E) An understanding of the role 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.
(F) The ability to realize the need for additional resources, and to make appropriate notifications to the communications center.

Required Training can be translated directly into the following six sample principal objectives.

Required Training Objectives

1. Define the different types of hazardous substances and identify the risks associated with them in an incident.
2. Given a simulated incident involving hazardous materials, identify the potential outcomes.
3. Given the data available during an incident response, demonstrate recognition of the presence of hazardous substances.
4. Given the data available during an incident response, identify hazardous substances present.
5. Define the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the North American Emergency Response Guidebook.
6. Given a simulated incident, determine the need for additional resources, and make appropriate notifications to the communication center.

Federal Requirements For First Responder Operations Training

OSHA establishes the following training requirements for first responders at the operations level: a minimum of 8 hours of training beyond the awareness level or, as an alternative, certification of sufficient experience. Training in excess of 8 hours may be necessary, especially for additional skills and knowledge such as for flammable gas firefighting. Employers are required to ensure that employees demonstrate competency in the skills defined.

OSHA 29 CFR 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 8 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:

(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 responder operational level.
(C) An understanding of basic hazardous materials terms.
(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.
(E) Know how to implement basic decontamination procedures.
(F) An understanding of the relevant standard operating procedures and termination procedures.

Required Training can be translated into the following six sample principal objectives.

Required Training Objectives

1. Given a simulated incident involving hazardous materials, demonstrate knowledge of basic hazard and risk assessment techniques.
2. Given a simulated incident involving hazardous materials, select and demonstrate correct use of proper personal protective equipment.
3. Define basic hazardous materials terms.
4. Given a simulated incident involving hazardous materials, describe basic control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available within the student's unit.
5. Given a simulated incident involving hazardous materials, list and define appropriate basic decontamination procedures.
6. Given a simulated incident involving hazardous materials, identify relevant SOP's and termination procedures.

Federal Requirements For Hazardous Materials Technician Training

OSHA establishes the following training requirements for hazardous materials technicians. Methods of testing are not specified. Technicians shall have awareness training and operations training (for a minimum of 24 hours) and training at the technician level. Employers are required to ensure that employees demonstrate competency in the skills defined.

OSHA CFR 1910.120 (q)(6)(iii)
HAZARDOUS MATERIALS TECHNICIAN

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

(A) Know how to implement the employer's 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 advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit.
(G) Understand and implement decontamination procedures.
(H) Understand termination procedures.
(I) Understand basic chemical and toxicological terminology and behavior.

OSHA 29 CFR 1910.120(q)(10)
(10) Chemical protective clothing. Chemical protective clothing and equipment to be used by organized and designated HAZMAT team members, or to be used by hazardous materials specialists, shall meet the requirements of paragraphs (g)(3) through (5) of this section.

Required Training is specified in the OSHA regulations listed above. For the convenience of course assessment, the requirements are translated directly into the following nine sample principal objectives.

Required Training Objectives

1. Given a simulated incident involving hazardous materials, demonstrate implementation of the employer's emergency response plan.
2. Using field survey instruments and equipment, classify, identify, and verify known and unknown hazardous materials.
3. Given a simulated incident involving hazardous materials, demonstrate functioning within an assigned role in the incident command system.
4. Given a simulated incident involving hazardous materials, select and demonstrate use of proper specialized chemical personal protective equipment provided to the HAZMAT Technician.
5. Identify hazard and risk assessment techniques.
6. Given simulated incidents involving different hazardous materials containers and released, demonstrate advanced control, containment and/or confinement operations.
7. Given a simulated incident involving hazardous materials, identify and demonstrate decontamination procedures.
8. List and describe hazardous materials incidents termination procedures.

9. Define basic chemical and toxicological terms and describe basic chemical and toxicological behavior.

Federal Requirements For Incident Commander Training

OSHA establishes the following training requirements for incident commanders: a minimum of 24 hours of training at the first responder operations level plus training to the competencies described below or certification of sufficient experience as an alternative. Employers are required to ensure that employees demonstrate competency in the skills defined.

OSHA 29 CFR 1910.120(q)(6)(v)
ON-SCENE INCIDENT COMMANDER

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

(A) Know and be able to implement the employers incident command system.
(B) Know how to implement the employer's emergency response plan.
(C) Know and understand the hazards and risks associated with employees working in chemical protective clothing.
(D) Know how to implement the local emergency response plan.
(E) Know of the state emergency response plan and of the Federal Regional Response Team.
(F) Know and understand the importance of decontamination procedures.

The following are additional OSHA requirements that must be reflected in the development of training objectives.

OSHA 29 CFR 1910.120(q)(3)(i-ix)

(i) 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 (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 officials arrive (i.e., battalion chief, fire chief, State law enforcement official, state coordinator, etc.) the position is passed up the line of authority, which has been previously established.

(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.

(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.

(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 the 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.

(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 the 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.

(vi) Back-up personnel shall stand 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.

(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.

(viii) When activities are judged by the safety officer to be an IDLH and/or 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 action needed to be taken to correct these hazards at the emergency scene.

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

See also OSHA 29 CFR 1910.120 Appendix C, Compliance Guidelines (6) in ICS and (7) Site Safety and
Control Plans.

The safety and security of response personnel and others in the area of an emergency response incident site should be of primary concern of the incident commander. The use of a site safety and control plan could greatly assist those in charge of assuring the safety and health of employees on the site.

A comprehensive site safety and control plan should include the following: summary analysis of hazards on the site and risk analysis of those hazards; site map or sketch; site work zones (clean zone transition or decontamination zone, work or hot zone); use of the buddy system; site communications; command post or command center; standard operating procedures and safe work practices; medical assistance and triage area; hazard monitoring plan (air contamination monitoring, etc.); decontamination procedures and area; and other relevant areas. This plan should be part of the employer's emergency response plan or an extension of it to the specific site.

Required Training can be translated directly into the following fourteen sample objectives:

Required Training Objectives

1. Given a simulated incident involving hazardous materials, demonstrate implementation of the employer's incident command system.
2. Demonstrate establishing command, organizing resources and assigning subordinate units and personnel, and establishing lines of communication. OSHA 29 CFR 1910.120(q)(3)(i)
3. Demonstrate transfer of command. OSHA 29 CFR 1910.120(q)(3)(i)
4. Define the roles and responsibilities of the safety officer. OSHA 29 CFR 1910.120(q)(3)(vii and viii)
5. Given a simulated incident involving hazardous materials, demonstrate implementation of the employer's emergency response plan.

6. Identify all hazardous substances or conditions present and describe as appropriate site analysis, use of engineering controls, maximum exposure limits, hazardous substance handling procedures, and use of any new technologies. OSHA 29 CFR 1910.120(q)(3)(ii)
7. Determine and describe appropriate emergency operations, including correct use of personal protective equipment, based on the hazardous substance and/or conditions present. OSHA 29 CFR 1910.120(q)(3)(iii)
8. Given a simulated incident involving hazardous materials, identify the hazards and risks associated with employees working in chemical protective clothing.
9. Identify the process to determine, through the use of air monitoring, when it is safe for subordinate personnel to discontinue use of positive pressure self-contained breathing apparatus. OSHA 29 CFR 1910.120(q)(3)(iv)
10. Identify strategies and tactics to minimize the number of emergency response personnel working in areas of potential or actual exposure to incident or site hazards, while using the buddy system in groups of two or more. OSHA 29 CFR 1910.120(q)(3)(v)
11. Identify requirements for backup assistance and rescue personnel and qualified basic life support personnel, equipment, and transportation capability. OSHA 29 CFR 1910.120(q)(3)(vi)
12. Given a simulated incident involving hazardous materials, demonstrate implementation of the local emergency response plan.
13. Identify and describe the State emergency response plan and the federal regional response team.
14. Given a simulated incident involving hazardous materials, identify and demonstrate management of decontamination procedures.

Florida

Hazardous Materials Field Operations Guide

SERC Approved
January 7th, 2011

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Preamble

The Florida State Emergency Response Commission (SERC) has developed the Florida Hazardous Materials Field Operations Guide (FOG) to provide guidance for hazardous material events that do not regularly occur within a community.

The manual is designed to be a job aid for those in charge during a hazardous materials incident. The manual is not intended to override any federal, state and local laws or any local standard operating procedures.

Although this manual provides information for all levels of a response, personnel should conduct themselves in such a manner that does not exceed their level of training.

Index

Appx B Forms

1.1 Site Management

First Responders shall manage operations around a hazardous materials incident. The management of an incident may include evacuations/isolation, notifications and unit placements required to handle an emergency.

Methodology:

- Obtain information from dispatch about the incident
- Identify and request the appropriate resources.
- Use the Emergency Response Guidebook (ERG) for initial guidance and notify all other responding units as to the guide number being referenced.
- Gather weather information
- Approach incident from the upwind/uphill side of an incident. Notify incoming units as to potential traffic routes and staging.
- Once on the scene conduct an immediate size-up of the situation.
    - Establish Command
    - Hazard Risk Assessment
        - Occupancy type
        - Visible vapor cloud
        - Evacuation/possible victims

- Staging locations
- Notification of local/state authorities if appropriate.

NOTE: Any actions taken shall be communicated to incoming units.

- Determine isolation/evacuation distances based upon the ERG reference guides and/or agency standard operating procedures.
  - Isolation
    - Determine contaminated areas, areas of safe refuge, and cold zone
    - If isolation of the scene is required, proper notifications shall be made to provide appropriate information including
      - Stay in location
      - Close windows and doors
      - Turn off HVAC systems
  - Evacuation
    - Activate the local evacuation plan designed by the agency having jurisdiction.
- Determine the feasibility to perform life saving rescues based upon scene

information provided. The major factor in determining a rescue shall be the viability of the victim. Activate EMS system to handle any potential victims

- Establish emergency decon for both civilians and first responders.
- Determine appropriate level of PPE based upon ERG and/or standard operating procedures.
- Establish a command post and institute NIMS for the incident.

Hazardous Materials Response team arrives on scene:

- The hazmat team group leader shall identify themselves to the IC
- Establish a staging area for the hazmat team
- Establish a hazmat group
- Size-up the situation and develop a hazard risk assessment based upon First Responder actions
- Initiate a site-specific action plan based upon location, materials involved, weather conditions, resources, etc

Site Management

No Life Safety

Hazmat Arrival

- ❑ Meet with Command / Establish Hazmat Group / Branch
- ❑ Confirm first responder activities / information
- ❑ Hazmat Size-up
- ❑ Confirm Notifications
- ❑ Assess isolation zones
- ❑ Weather monitoring
- ❑ Determine Hazmat operations area
- ❑ Hazmat Staging
- ❑ Develop Incident Action Plan
- ❑ Assess Capabilities
- ❑ Develop site specific safety plan
- ❑ Research
- ❑ Decon set-up
- ❑ Pre-entry medical evaluation
- ❑ Pre-entry safety briefing
- ❑ Monitoring / identification
- ❑ Suit up
- ❑ Entry / Recon
- ❑ Decontamination
- ❑ Rehab / Hazmat Medical Monitoring / Debriefing

Entry to be made within 45 minutes allowing for a 30-minute work time (based on a 60 min bottle).

Compromised Life Safety

Hazmat Arrival

- Meet with Command / Establish Hazmat Group / Branch
- Confirm first responder activities / information / Hazmat Size-up
- Develop Incident Action Plan / Site Specific Safety Plan
- Pre-entry safety briefing / Suit up
- Entry / Environmental Monitoring
- Rescue
- Emergency Decontamination (established by first responders)

From time of arrival when there are viable patients needing rescue, first entry will begin within 20 minutes and terminate in 50 minutes total operation time, allowing for 30 minute working time (this time is based on a 60 min. bottle

1.2 Identification

This procedure acts as a job aid for the first responders to conduct identification and verification of a hazardous substance. The Hazmat Technician can use these steps to assist in the classification/identification of hazardous materials at an emergency.

Methodology:

- **Initial Size-up for identification includes**
  - Occupancy
  - Container Shapes
  - Placards and Labels
  - Shipping papers
  - Facility Documents/ Pre-Fire Plans
  - Senses
- In addition to the initial size-up, the following shall be used to verify or identify/classify all potentially hazardous materials which shall be assessed for the following characteristics. All hazardous materials team members shall be capable of performing these procedures.
  - **Radioactivity:** With radiation survey meter, determine if the material presents ionizing radiation greater than identified background levels.

- **Corrosives:** At the same time, assess the material for corrosive vapors by using a pH strip moistened with distilled water. Then touch any of the product with the pH paper to determine if the material has corrosive characteristics.
- **Oxygen Concentration and Flammability**: If the material is a gas, liquid or potentially sublimating solid, then oxygen concentration should be check in low-lying or enclosed areas and combustible/flammable vapors should be assessed.
- **PID/FID:** If the material is a gas, liquid or potentially sublimating solid then a total vapor analysis shall be performed using Photo-ionization Detector (PID) or combination Photo-ionization Detector/ Flame Ionization Detector (PID/FID). This will aid in identifying organic or inorganic nature of the material as well as provide quantitative analysis of concentration once the true identity of the materials is determined.

- **Additional Analysis Procedures:**
  - Depending upon potential risks or need to determine the material's

actual identity, the following additional measures may be selected to provide further field analysis.

- **For vapors, gases and high vapor pressure liquid**s:
  - Gas Infrared Spectrometry using the Thermo Miran-Sapphire® or MS/GC
  - Colorimetric detector tube (Drager) qualitative analysis procedures
  - APD 2000 for potential chemical warfare agents or pepper spray
  - Haz-Mat Chemical Agent Detector (CAD) for chemical warfare agents
  - Consider obtaining 10mL liquid sample or 20 liter gas sample in a clean, un-used container for lab or support zone analysis
- **For solids and low vapor pressure liquids:**
  - M8 – M9 Chemical warfare agent detector paper
  - M256A1 Chemical warfare agent wet chemistry detection kit
  - Consider field biological agent immunoassay for substances with significant credibility or risk.
  - Solid or liquid Infrared Spectrometry of head space vapors

- Haz-Cat® wet chemistry qualitative analysis.
- Consider obtaining 10mL liquid or solid sample in a clean, unused sample container for lab or support zone analysis.

- **Documentation of Analysis**
  - The attached HAZARDOUS MATERIALS GROUP LEADER – TACTICAL WORKSHEET shall be used to develop and document the air monitoring strategy. If this form is used during an incident, it shall become a part of the permanent and final incident report.
  - At a minimum, all analysis procedures used shall be noted in the “Hazard/Risk Assessment” narrative of the hazardous materials incident report.
  - If the analysis is conducted in conjunction with a law enforcement investigation (e.g. suspicious powder incident or other criminal investigation) then all appropriate chain of custody, sample submission forms and sample container labels will be completed as per appropriate SOP or Directives.

1.3 Hazard Risk Assessment

Hazmat Team Group leaders shall use this document to provide benchmarks required to complete a thorough hazard risk assessment

Methodology:

- Confirm actions of First Responders
- Confirm information received by First Responders
- Determine the physical and chemical properties of the material involved and the status of the material.
- Evaluate the condition of the container and the possible associated hazards
- Evaluate the environmental conditions
    - Weather
    - Topography
    - Incident location
    - Population
- Analyze exposure hazards
    - Evacuation/Isolation
    - Air monitoring
    - Plume models
- Evaluate on-scene resources vs. current conditions
- Evaluate future resources based upon predicted outcomes

1.4 Resource Allocation

Assist the Incident Commander with identifying resources required to notify and mitigate an incident.

Emergency Contact Methodology:

- ❑ Activate local emergency response plan to include local notifications which may include regional Haz Mat Team
- ❑ Notify State Watch Office and potentially one or more of the following:
  - o For Radiological Emergencies contact Bureau of Radiation Control and DOH
  - o For Military ordnance, notify the State Fire Marshall and the nearest Military Base.
  - o For potential explosive materials contact FDLE, ATF and local Bomb Squad
  - o For Industrial/transportation responses contact ChemTrec
  - o For WMD responses notify FDLE and FBI
  - o For Biological response assistance notify Department of Health
  - o For propane and natural gas contact local gas distributor

- For coastal response contact National Response Center
- For poisonings and exposures contact Poison Control
- For railroad response contact: _____
- For air emergencies contact FAA

Local Emergency Contacts:

_____

_____

_____

_____

_____

_____

_____

_____

1.5 Selection and Use of Specialized Chemical Protective Ensembles

This policy shall be utilized to guide the selection and use of various protective ensembles based upon the identified or anticipated hazards to be encountered during a hazardous materials emergency. It is the incident commander's responsibility to ensure that the procedures outlined in this policy are implemented using the technical input of a knowledgeable Safety Officer and HazMat Group Supervisor.

Specialized Chemical Protective Ensembles:

Chemical protective ensembles shall be selected based upon the hazards that are anticipated in the work area. When selecting the ensemble the following information shall be evaluated:

- Identity of the material involved (if known) and its associated hazards
- Physical state of the material (solid, liquid, gas)
- Potential routes of chemical exposure (inhalation, contact, absorption, etc..)
- Anticipated job function, proximity to and contact with the materials (incidental contact, repeated contact, immersion)
- If the airborne concentration of the material is known or anticipated to exist above published exposure limits or the Immediately Dangerous to Life and Health (IDLH) concentration
- Anticipated oxygen concentrations

- Other physical hazards that may exist (sharp metals, confined spaces, fire hazards, dangerous noise levels, etc.)
- Chemical compatibility of the protective garment based first upon manufacturer test data including ASTM chemical test battery.

Based upon the assessment of this information, the following table represents general considerations for ensemble selection.

Ensemble Description Using Performance-Based Standard(s)	OSHA/EPA Level
NFPA 1991, worn with NIOSH CBRN SCBA	A
NFPA 1994 Class 2 worn with NIOSH CBRN SCBA	A or B
NFPA 1994 Class 2 worn with NIOSH CBRN APR	C
NFPA 1994 Class 3 worn with NIOSH CBRN SCBA	B
NFPA 1994 Class 3 worn with NIOSH CBRN APR	C

Source: DMS Interagency Board

NFPA 1991 VAPOR PROTECTIVE (LEVEL A) Compliant for Thermal and Abrasion Resistance			
	Generally Used When	**Not to be used when**	**Chemical Protective Ensemble**
NFPA 1991 VAPOR PROTECTIVE (LEVEL A) Compliant for Thermal and Abrasion Resistance	▪ Atmospheres with known or potential IDLH concentrations with skin route of exposure ▪ When contact, repeated splash or immersion in product that is dangerous to the skin is anticipated ▪ For entries into enclosed or poorly ventilated areas during releases of gases or high vapor pressure liquids (> 100mm/Hg) that are dangerous to the skin ▪ Unidentified, poorly ventilated atmospheres in which situations indicate a possibility of an IDLH environment and other engineering controls can not be used to reduce concentrations, ▪ Material has **flammable properties** and the presence of a flammable atmosphere cannot be controlled, or ▪ Scene hazards and work mission indicates **high potential for abrasion and/or puncture** and tears to the garment.	Engineering controls can be implemented that will reduce flammability and abrasion /tear hazards to acceptable levels **Note:** Due to the extreme limitations of movement, communications, vision and dexterity that are created by this level of protection, every effort should be made to reduce scene hazards through engineering controls and monitoring prior to implementation.	▪ PP/SCBA ▪ NFPA 1991 Level A garment with appropriate flash protective layer ▪ Surgical gloves ▪ Inner chemical resistant gloves ▪ Outer chemical resistant gloves ▪ Outer puncture/tear resistant gloves. ▪ In-suit radio system ▪ Chemical resistant outer boots

VAPOR PROTECTIVE (LEVEL A) Non-NFPA 1991			
	Generally Used When	Not to be used when	Chemical Protective Ensemble
VAPOR PROTECTIVE (LEVEL A) Non-NFPA 1991	▪ Atmospheres with known or potential IDLH concentrations with skin route of exposure, or ▪ When contact, repeated splash or immersion in product that is dangerous to the skin is anticipated (other than incidental contact), or ▪ For entries into enclosed or poorly ventilated areas during releases of gases or high vapor pressure liquids (> 100mm/Hg) that are dangerous to the skin, or ▪ Unidentified, poorly ventilated atmospheres in which situations indicate a possibility of an IDLH environment and other engineering controls can not be used to reduce concentrations	**Flammable Environments** ▪ Use engineering controls to reduce flammability hazards, then ▪ Upgrade to NFPA 1991 compliant garment **High physical Cut and tear hazards** ▪ Upgrade to NFPA 1991 compliant garment **Low Temperatures** ▪ Low temperatures requiring additional thermal protection. Then Upgrade to NFPA 1991 Compliant Garment.	▪ PP/SCBA ▪ Vapor Protective Garment ▪ Surgical gloves ▪ Inner chemical resistant gloves ▪ Outer chemical resistant gloves ▪ In-suit radio system ▪ Chemical resistant outer boots

Level "B" Protective Ensemble (Non-Encapsulating) (Solid or liquid contact, High respiratory protection)			
	Generally Used When	**Not to be used when**	**Chemical Protective Ensemble**
Level "B" Protective Ensemble (non-encapsulating) (Solid or liquid contact, High respiratory protection)	▪ IDLH-Inhalation environment known or possible, and ▪ No IDLH Skin atmosphere present or likely (e.g. low vapor pressure liquids or high concentrations of water soluble/skin absorbable vapors/gases or, hydroscopic corrosive gases/vapors) ▪ Possible oxygen deficient atmosphere ▪ Direct contact with product that can injure the skin is limited only to an incidental splash. Repeated contact is unlikely ▪ Minimum level of protection for un-identified environment and will be used in conjunction with appropriate air monitoring procedures	▪ Potential IDLH-Skin conditions exist ▪ When in enclosed or confined areas with spills of high vapor pressure liquids or gases that may be injurious to/or absorbed through the skin are possible ▪ When repeated contact or immersion in the product is likely. **Flammable Environments** ▪ Use engineering controls to reduce flammability hazards. Otherwise, additional thermal protective garments will be required.	▪ PP/SCBA ▪ Liquid splash protective coverall garment **or,** ▪ Particulate contact protective coverall garment ▪ Surgical gloves ▪ Chemical resistant outer gloves ▪ In-suit radio system ▪ Chemical resistant outer boots

Level "B" Protective Ensemble (Encapsulating) (Solid or liquid contact, High respiratory protection)			
	Generally Used When	**Not to be used when**	**Chemical Protective Ensemble**
Level "B" Protective Ensemble (encapsulating) (Solid or liquid contact, High respiratory protection)	▪ IDLH-Inhalation environment known or possible, and ▪ No IDLH Skin atmosphere present or likely ▪ Possible oxygen deficient atmosphere ▪ Direct contact with product that can injure the skin is limited only to an incidental splash. Repeated contact is unlikely ▪ Minimum level of protection for un-identified environment and will be used in conjunction with appropriate air monitoring procedures ▪ There is a need to reduce splash contact hazards and to protect SCBA or other protective equipment ▪ There is a desire to minimize extensive decon operations. ▪ There is a desire to reduce heat stress of personnel stand-by modes of operation (e.g. decon personnel).	▪ Potential IDLH-Skin conditions exist ▪ When in enclosed or confined areas with spills of high vapor pressure liquids or gases that may be injurious to/or absorbed through the skin are possible ▪ When repeated contact or immersion in the product is likely. **Flammable Environments** ▪ Use engineering controls to reduce flammability hazards. Otherwise, additional thermal protective garments will be required.	▪ PP/SCBA ▪ Encapsulating liquid splash protective garment ▪ Surgical gloves ▪ Chemical resistant outer gloves ▪ In-suit radio system ▪ Chemical resistant outer boots

Level "C" Protective Ensemble (Solid or liquid contact, Known Respiratory Hazards)			
	Generally Used When	**Not to be used when**	**Chemical Protective Ensemble**
Level "C" Protective Ensemble (Solid or liquid contact, Known Respiratory Hazards)	▪ No IDLH environment known or possible, and ▪ Oxygen between 19.5 and 23.5% ▪ Identity of the material is known, and ▪ Airborne concentrations are known to be below IDLH concentrations and within the protection factor of the respirator to be used, and ▪ The appropriate respirator cartridge is available for the material, and ▪ Warning properties are sufficient to indicate that breakthrough has occurred ▪ No Flammability hazards are present	▪ Any potential for IDLH either skin or inhalation is present ▪ When in enclosed or confined areas with spills of high vapor pressure liquids (>100 mm/Hg) or gases and air monitoring has not been performed to measure the potential exposure levels ▪ When repeated contact or immersion in the product is likely **Flammable Environments** ▪ Use engineering controls to reduce flammability hazards	▪ Full Face Negative Pressure Air Purifying Respirator (APR) with a NIOSH assigned protection factor of 10:1 or Powered Air Purifying Respirator (PAPR) with a NIOSH assigned protection factor of not less than 50:1, and ▪ Used with either P100 particulate cartridge or, Organic Vapor/Acid Gas/P100, or contaminate specific filter which ever can be used for the environment to be encountered **and**, ▪ Liquid splash protective coverall garment of **or**, ▪ Particulate contact protective coverall garment of Dupont Tyvek® or Laminated Tyvek® **and,** ▪ Surgical gloves ▪ Chemical resistant outer gloves. ▪ Chemical resistant outer boots

PPE AND WMD

- **Radiological**
  - For radiological materials which are particles
    - Respiratory protection prevents inhalation and ingestion
    - Particulate protective garments will enhance the ability to decontaminate
    - NFPA 1994 Class 4 ensembles with PAPR
    - If available, use radiation shielding suits with PAPR or appropriate contained breathing apparatus
- **Nerve agents**
  - Nerve agents are mostly low volatility liquids
  - Positive pressure SCBA is selected in IDLH environments
    In low vapor concentrations, NFPA 1994 Class 2 ensembles are indicated
- **Blister agents**
  - Blister agents also are low volatility liquids
  - Positive pressure SCBA is selected in IDLH environments
  - In low vapor concentrations, NFPA 1994 Class 2 ensembles are indicated
- **Biological agents**
  - Biological materials are particulates
  - Particulate respiratory protection
  - Particulate protective garment found in NFPA 1994 Class 4

1.6 Response Objectives

Hazardous Materials Technicians shall develop an action plan based upon hazard risk assessment.

Methodology:

- Based upon initial size-up and hazard risk assessment identify the strategic goals
  - Life Safety/Rescue
  - Protective Actions
    - Isolation/Evacuation
    - Establish proper level of PPE
    - Establish Decontamination Corridors for both responders and civilians
  - Containment
    - Spill control
    - Leak control
    - Fire control
  - Recovery
    - Environmental clean-up
    - Equipment clean-up
  - Termination
    - Cost Recovery
    - Debriefing
    - After-action review

1.7 Decontamination

Safety of personnel throughout a hazardous materials incident is imperative and will be stressed and addressed in all areas of this section. The degree of DECON needed can range from no DECON to total DECON of all personnel and equipment, depending on the nature of the incident, contamination levels and the situation involved.

GENERAL CONSIDERATIONS

- Emergency Decon may be required by initial personnel. This may be accomplished by using a hose line off a engine/pumper. After the life safety issues have been addressed then environmental/ property contamination would need to be evaluated.
- Before beginning decon, the HazMat Group Supervisor must decide how much DECON is necessary and to what extent DECON will be done at the incident. Consideration for additional resources for a more advanced DECON. This decision will be based upon factors including, but not limited to:
    - Physical state of the contaminant (solid, liquid, gas)
    - Solubility of the contaminant (Water and other solvents)
    - Person or equipment's proximity to the contaminant and likelihood of contamination

DECONTAMINATION PLAN

STATION 1: TOOL AND EQUIPMENT DROP

EQUIPMENT: Secure and dry area with bucket or small trap to place equipment.
CONSIDERATIONS: Must be dry to protect electronic equipment.
OPERATIONS: Drop reusable equipment in secure area.

STATION 2: OUTER GLOVE & BOOT COVER REMOVAL (or Wash)

EQUIPMENT: Stool for sitting and lined trash bucket
CONSIDERATIONS: If outer work gloves and boot covers are not worn then this station would be used as a glove/boot wash.
OPERATIONS: Sit on stool and remove boot covers and outer work gloves and place in trash can.

STATION 3: GROSS WASH

EQUIPMENT: Decontamination shower with retention or retention system with water wands. Hand pump and recovery drum highly recommended.
CONSIDERATIONS: All run-off must be retained for proper treatment or disposal.
OPERATIONS: Step into the shower and flush thoroughly with water from head downward paying particular attention to folds and suit opening.

STATION 4: PRIMARY WASH/RINSE

EQUIPMENT: Pool or basin, 5 to 10 gallons of decon solution and scrub brushes.

CONSIDERATIONS: Decon solution should be material specific, most commonly liquid emulsifier (i.e. Tide solution).

OPERATIONS: Step into retention. Assistant washes and rinses garment from head to toe paying particular attention to suit opening.

STATION 5: FINAL WASH/RINSE

EQUIPMENT: Pool or basin, supply hose and water wand. Hand pump and recovery drum may be required to control run-off.

CONSIDERATIONS: Used to wash and rinse scrub solution and contaminants from garment. This station may not be necessary depending upon material involved and effectiveness of previous stations.

OPERATIONS: Step into retention. Assistant washes and flushes garment from head to toe. As you step out of retention, rinse soles of feet.

Evaluation of effectiveness with detection equipment if applicable

STATION 6: GARMENT REMOVAL (or Tank Change)

EQUIPMENT: Stool for sitting, lined drums, or secured dry area to place garment.

CONSIDERATIONS: If subject is wearing level "B" garment under air pack, the pack would have to be removed but the wearer must remain on air.

OPERATIONS: Sit on stool, remove boots then garment while minimizing contact with the outside of the garment. Leave inner-most surgical gloves on and remain "on-air".

STATION 7: OFF AIR STATION

EQUIPMENT: Clean, dry area suitable for placement of air packs and further cleaning.

CONSIDERATIONS: Should be at least 10 feet from the garment removal station.

OPERATIONS: Come off air, remove air pack and place in secure area. LOG OFF AIR TIME. Leave face piece in place and step to cold zone.

STATION 8: INNER GLOVE AND FACE PIECE REMOVAL

EQUIPMENT: Small lined waste container and face-piece disinfection solution.

CONSIDERATIONS: Remove gloves first.

OPERATIONS: Remove inner-most surgical gloves and dispose. Rinse face-piece with disinfecting solution.

Decontaminated personnel should proceed to the MEDICAL/REHAB area for evaluation.

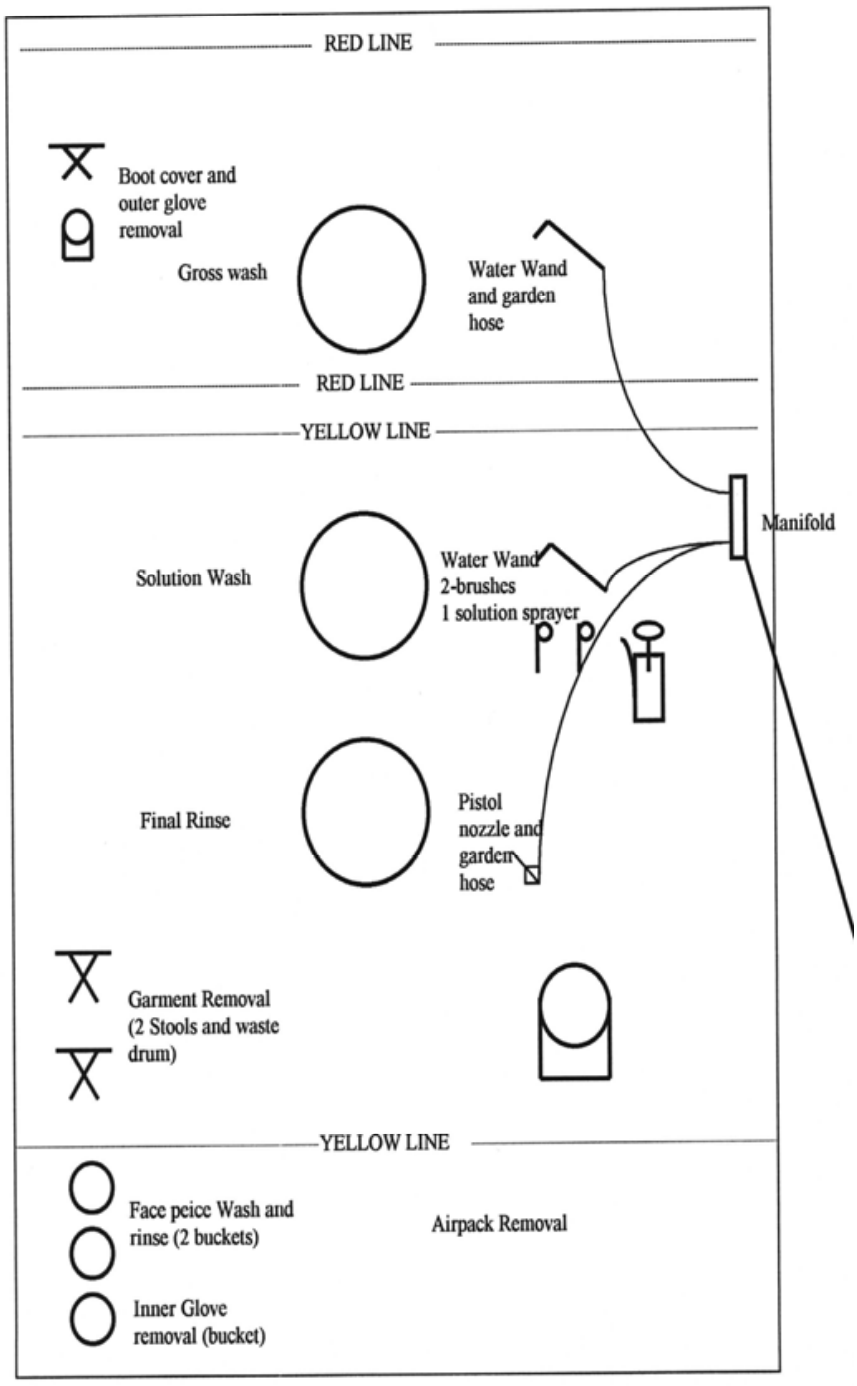
STATION 9: MEDICAL EVALUATION AND REHAB

CONSIDERATIONS: Assess vitals; assess need for personal hygiene shower, fluid intake.

In the event of a medical emergency in the Exclusion Zone, refer to "Decontamination during Medical emergencies for Entry Workers."

Step 1: Tool Drop
(Blue tarp, four cones and packing drm)

Simplified Decontamination for Level A Garments



1.8 Termination

Termination procedures at a hazardous materials incident consists of documenting safety procedures, site operations, hazards encountered, lessons learned, and making sure follow-up activities are conducted.

Termination activities are divided into three phases:

Prior to the three phases the following must take place:

- Decontaminate all personnel and equipment
- Put unit back into serviceable condition
- Confirm with Incident Commander
- Obtain appropriate environmental approval for cleanup

1. Incident debriefing - The debriefing will be conducted at the incident during the termination stage.

- ❑ Personnel will be informed of the signs and symptoms of exposure from hazardous materials at the incident and what to do if they experience them after leaving the scene.
- ❑ Identify equipment damage and items needing immediate attention.
- ❑ Review the hazmat incident

- Summarize the activities performed by the Hazardous Materials Response Team
- Identify any unsafe acts and any damaged equipment
- Identify any follow-up activities required.
- Identify the person responsible for the preparation of the follow-up report and documentation.

2. Post-Incident Analysis - The post incident analysis is scheduled as soon as practical and is for the purpose of reviewing the incident to establish a clear picture of the events that took place during the incident and provide information for future incidents. The following guidelines are adhered to when conducting the post incident analysis:

- Reconstruct the incident to establish clear picture of events that took place
- Identify items or procedures that can be improved upon.
- Document safety procedures, site operations, hazards faced, and lessons learned

3. Critique - The critique can be combined with the post incident analysis or done separately. Information obtained in the critique can improve performance by pinpointing weaknesses and assuring personnel that they will be corrected. The following should be addressed in the critique:

- Was the proper PPE utilized?

- Did the HazMat Team use the appropriate equipment?
- Were the correct procedures used?
- Were steps taken to minimize contamination?
- Was each responder and piece of equipment properly decontaminated?
- If disposal containers were used, were they used properly then marked and labeled correctly?
- Identify what worked, what didn't work and what needs to change.
- Do not assign blame

Additional Requirements:

1. A report should be prepared for dissemination to personnel to improve performance and safety
2.
3. Identify any corrective actions that will be needed for future events.

If exposures were identified then make sure proper paperwork and follow-up are done.

2.0 General Operations

The following is a checklist applicable to all ICS personnel:

- ❑ Receive assignment from your agency, including:
  - o Job assignment, e.g., Haz Mat/Strike Team designation, overhead position, etc. resource order number and incident number, reporting location, reporting time, travel instructions.
  - o E-Plan review for facility and related hazards information.
  - o Command Post Contact information.
  - o Any special communications instructions, e.g., travel frequency.

- ❑ Upon arrival at the incident, check in at designated Check-in location, Check-in may be found at:
  - o Incident Command Post.
  - o Base or camps.
  - o Staging Areas.
    - ▪ If you are instructed to report directly to a line assignment, check in with the Division/Group Supervisor.

- ❑ Receive briefing from immediate supervisor.

- ❑ Acquire work materials.

- Supervisors shall maintain accountability of their assigned personnel as to their exact location(s), personal safety, and welfare at all times, especially when working in or around incident operations.

- Organize and brief subordinates.

- Know your assigned frequency(s) for your area of responsibility and ensure that communication equipment is operating properly.

- Use clear text and ICS terminology (no codes) in all radio communications. All radio communications to the Incident Communications Center will be addressed: "(Incident Name) Communications" e.g., "Webb Communications."

- Complete all ICS forms, checklists and reports required of the assigned position and send through supervisor to Documentation Unit.

- Respond to demobilization orders and brief subordinates regarding demobilization.

UNIT LEADER RESPONSIBILITIES:

The following check list is applicable to Unit Leaders.

- Participate in incident planning meetings, as required.

- Determine current status of unit activities.
- Confirm dispatch and estimated time of arrival of staff and supplies.
- Assign specific duties to staff; supervise staff.
- Develop and implement accountability, safety and security measures for personnel and resources.
- Supervise demobilization of unit, including storage of supplies.
- Provide Supply Unit Leader with a list of supplies to be replenished.
- Maintain Unit/activity Log (ICS Form 214).

The Hazardous Materials Group Supervisor reports to the Operations Section Chief.

The Hazardous Materials Group Supervisor is responsible:

- Implementation of the phases of the Incident Action Plan dealing with the Hazardous Materials Group operations.
- Assignment of resources within the Hazardous Materials Group, reporting on the progress of control operations and the status of resources within the Group.

- Directs the overall operations of the Hazardous Materials Group.

- Ensure the development of Control zones and Access Control Points and the placement of appropriate control lines.
- Evaluate and recommend public protection action options to the Operations Chief or Branch Director (if activated).

- Ensure that current weather data and future weather predictions are obtained.

- Ensure a review of E-Plan has been conducted.

- Establish environmental monitoring of the hazard site for contaminants.

- Ensure that a Site Safety and Control Plan (ICS Form 208-HM) is developed and implemented.

- Conduct safety meetings with the Hazardous Materials Group.

- Participate in the development of the Incident Action Plan.

- Ensure that recommended safe operational procedures are followed.

- Ensure that the proper Personal Protective

- Equipment is selected and used.

- ❑ Ensure appropriate medical team is available.

- ❑ Ensure that the appropriate agencies are notified through the Incident Commander.

- ❑ Maintain Unit/Activity Log (ICS Form 214).

The Entry Team Leader:

Responsible for the overall entry operations of assigned personnel within the Exclusion Zone (Hot Zone)

- ❑ Review Safety Plan (ICS 208-HM)

- ❑ Supervise entry operations.

- ❑ Recommend actions to mitigate the situation within the Exclusion Zone.

- ❑ Carry out actions, as directed by the Hazardous Materials Group Supervisor, to mitigate the hazardous materials release or threatened release.

- ❑ Maintain communications and coordinate operations with the Decontamination Leader.

- ❑ Maintain communications and coordinate operations with the Site Access Control Leader and the Safe Refuge Area Manager (if activated).

- Maintain communications and coordinate operations with Technical Specialist or Hazardous Materials Reference.

- Maintain control of the movement of people and equipment within the Exclusion Zone, including contaminated victims.

- Direct rescue operations, as needed, in the Exclusion Zone.

- Maintain Unit/activity Log (ICS Form 214).

Decontamination Leader:
reports to the Hazardous Materials Group Supervisor.

The Decontamination Leader is responsible for:

- Operations of the decontamination element, providing decontamination as required by the Incident Action Plan.

- Establish the Contamination Reduction Corridor(s).

- Identify contaminated people and equipment.

- Identify appropriate decon technique and/or solutions

- Identify post decon screening (technology)

- Supervise the operations of the decontamination element in the process of decontaminating people and equipment.
- Maintain control of movement of people and equipment within the Contamination Reduction Zone.
- Maintain communications and coordinate operations with the Entry Team Leader.
- Maintain communications and coordinate operations with the Site Access Control Leader and the Safe Refuge Area Manager (if activated).
- Coordinate the transfer of contaminated patients requiring medical attention (after decontamination) to the Medical Group.
- Coordinate handling, storage, transfer and disposal of contaminants within the Contamination Reduction Zone.
- Coordinate efforts with Law Enforcement if deemed to be potential crime scene for evidence preservation.
- Consideration for those people with Special Needs.
- Consideration for pets and service animal needs.

- ❑ Maintain Unit/Activity Log (ICS Form 214).

Site Access Control Leader:

reports to the Hazardous Materials Group Supervisor.

The Site Access Control Leader is responsible for the control of the movement of all people and equipment through appropriate access routes at the hazard site and ensures that contaminants are controlled and records are maintained.

- ❑ Organize and supervise assigned personnel to control access to the hazard site.
- ❑ Oversee the placement of the Exclusion Control Line and the Contamination Control Line.
- ❑ Ensure that appropriate action is taken to prevent the spread of contamination.
- ❑ Establish the Safe Refuge Area within the Contamination Reduction Zone. Appoint a Safe Refuge Area Manager (as needed).
- ❑ Ensure that injured or exposed individuals are decontaminated prior to departure from the hazard site.
- ❑ Maintain site access control log/accountability.
- ❑ Coordinate with the Medical Group for proper tracking of all individuals.

- ❑ Coordinate efforts with Law Enforcement if deemed to be potential crime scene.

- ❑ Maintain observations of any changes in climatic conditions or other circumstances external to the hazard site.

- ❑ Maintain communications and coordinate operations with the Entry Team Leader.

- ❑ Maintain communications and coordinate operations with the Decontamination Leader.

- ❑ Maintain Unit/activity Log (ICS Form 214).

Assistant Safety Officer-Hazardous Materials: coordinates safety related activities directly relating to the Hazardous Materials Group operations as mandated by 29 CFR part 1910.120 and applicable State and local laws.

This position advises the Hazardous Materials Group Supervisor (or Hazardous Materials Branch Director) on all aspects of health and safety and has the authority to stop or prevent unsafe acts. It is mandatory that an Assistant Safety Officer-Hazardous Materials be appointed at all hazardous materials incidents. In a multi-activity incident the Assistant Safety Officer-Hazardous Materials does not act as the Safety Officer for the overall incident.

- □ Obtain briefing from the Hazardous Materials Group Supervisor.

- ☐ Coordinate with Decon Officer to certify the Decontamination Corridor.

- ☐ Participate in the preparation of, and implement the Site Safety and Control Plan (ICS Form 208-HM)

- ☐ Advise the Hazardous Materials Group Supervisor (or Hazardous Materials Branch Director) of deviations from the Site Safety and Control Plan (ICS Form 208-HM) or any dangerous situations.

- ☐ Has the authority to alter, suspend, or terminate any activity that may be judged to be unsafe and must communicate that intent or action to the Hazardous Materials Group Supervisor.

- ☐ Ensure the protection of the Hazardous Materials Group personnel from physical, environmental, and chemical hazards/exposures.

- ☐ Ensure the provision of required emergency medical services for assigned personnel and coordinate with the Medical Unit Leader.

- ☐ Ensure that medical related records for the Hazardous Materials Group personnel are maintained.

- □ Maintain Unit/Activity Log (ICS Form 214).

Technical Specialist – Hazardous Materials Reference

reports to the Hazardous Materials Group supervisor (or Hazardous Materials Branch Director if activated).

This position provides technical information and assistance to the Hazardous Materials Group using various reference sources such as computer databases, E-Plan, technical journals, CHEMTREC, and phone contact with facility representatives.

The Technical Specialist-Hazardous Materials Reference may provide product identification using hazardous categorization tests and/or any other means of identifying unknown materials.

- ❑ Obtain briefing from the Planning Section Chief.
- ❑ Provide technical support to the Hazardous Materials Group Supervisor.
- ❑ Maintain communications and coordinate operations with the Entry Team Leader.
- ❑ Coordinate with Entry Team and Decon Team Leaders for a risk based response.
- ❑ Provide and interpret environmental monitoring information.

- Provide analysis of hazardous material sample.

- Determine personal protective equipment compatibility to hazardous material.

- Provide technical information of the incident for documentation

- Provide technical information management with public and private agencies i.e.: Poison Control Center, CHEMTREC, State Department of Food and Agriculture, National Response Team.

- Assist Planning Section with projecting the potential environmental effects of the release.

- Maintain Unit/Activity Log (ICS Form 214).

Safe Refuge Area Manager reports to the Site Access Control Leader and coordinates with the Decontamination Leader and the Entry Leader.

- The Safe Refuge Area Manager is responsible for evaluating and prioritizing victims for treatment, collecting information from the victims, and preventing the spread of contamination by these victims.

- If there is a need for the Safe Refuge Area Manager to enter the Contamination Reduction Zone in order to fulfill assigned responsibilities then the appropriate Personal Protective Equipment shall be worn.

- Establish the Safe Refuge Area within the Contamination Reduction Zone adjacent to the Contamination Reduction Corridor and the Exclusion Control Line.

- Coordinate with technical specialist on issues concerning proper handling of potentially contaminated victims/responders including short and long term care, e.g. food, medications.

- Monitor the hazardous materials release to ensure that the Safe Refuge Area is not subject to exposure.

- Assist the Site Access Control Leader by ensuring the victims are evaluated for contamination.

- Manage the Safe Refuge Area for the holding and evaluation of victims who may have information about the incident, or if suspected of having contamination.

- Maintain communications with the Entry Leader to coordinate the movement of victims from the Refuge Area(s) in the Exclusion Zone to the Safe Refuge Area.

- Maintain communications with the Decontamination Leader to coordinate the movement of victims from the Safe Refuge

Area into the Contamination Reduction Corridor, if needed.

- ❑ Maintain Unit/Activity Log (ICS Form 214).

Medical Group Supervisor:

reports to the Operations Section Chief.

The Medical Group Supervisor is responsible for the implementation of the phases of the Incident Action Plan dealing with the all-medical Group operations for protection, monitoring, treatment of the entry teams and coordination of appropriate medical treatment of contaminated patients with Local Emergency Medical Services and Hospital Providers.

The Medical Group Supervisor is responsible for:

- ❑ Assigning of resources within the Hazardous Material Team Medical Group, reporting on the progress of control operations and the status of resources within the Group.

- ❑ Direct the overall operations of the Medical Group assigned to the Hazardous Material Team and additional medical areas if requested by local EMS.

- ❑ Ensure the development of Medical Control zones and Medical Control Points of monitoring and the placement of appropriate assets and resources.

- Evaluate and recommend entry team and public medical monitoring and treatment options to the Operations Chief or Branch Director (if activated).

- Ensure that the appropriate State typed Medical Team is in place for the entry and Hazardous Material Personnel protection and treatment.

- Ensure coordination with local Emergency Medical Service providers through command has been accomplished.

- Establish medical monitoring of the hazard site.

- Ensure that a Medical Control Plan is developed and implemented.

- Conduct medical update meetings with appropriate Group Supervisors.

- Participate in the development of the Incident Action Plan.

- Ensure that recommended medical operational procedures are followed.

- Ensure that the proper Personal Protective Equipment is selected and used in Medical treatment areas.

- Ensure appropriate medical information is available and provided to area Hospitals and responders through Incident Command.

- ❑ Ensure appropriate confidential medical information on team members is provided to appropriate Hazardous Material Team Agency post incident.

- ❑ Ensure that the appropriate State and Federal Health agencies are notified through the Incident Commander.

- ❑ Maintain Unit/Activity Log (ICS Form 214).

Medical Surveillance Team Leader:

Reports to the Medical Group Supervisor and coordinates with the Site Access Control Leader and coordinates with the Decontamination Leader and the Entry Team Leader.

- ❑ Review Safety Plan (ICS 208-HM)

- ❑ Supervise all aspects of medical monitoring both pre and post entry of entry teams.

- ❑ Supervise and coordinate with the local or assigned State Type medical asset assigned to treat entry team in event of emergency.

- ❑ Recommend medical actions to mitigate the situation within the Hot Zone.

- ❑ Carry out actions, as directed by the Medical Group Supervisor, to protect, monitor and treat hazardous materials team members.

- Maintain communications and coordinate operations with the Decontamination Leader and the Entry Leader.

- Maintain control of the medical needs of people and equipment within the Exclusion and Entry Zones, including contaminated team members and support personnel.

- Direct medical treatment operations, as needed, in the Exclusion Zone.

- Document all medical information on each entry team or hazardous material member evaluated or treated is maintained and given to the Medical Group Supervisor post incident.

- Maintain Unit/activity Log (ICS Form 214).

2.1 911 Intake Procedures

- ☐ Name of Business/Responsible Party
  - o Phone
  - o Address
  - o License Plate
- ☐ DOT Shipper Number
- ☐ Primary POC
- ☐ Type of Occupancy
- ☐ Name of the hazardous material
- ☐ Type of situation
  - o Leak
  - o Spill
  - o Fire
- ☐ Estimated amount of product released
- ☐ Number of potentially contaminated individuals
- ☐ Evacuation in progress
- ☐ Seriousness of injuries/exposure
- ☐ Preplans of incident (E-Plan)
- ☐ Contact information of caller

The dispatcher shall:

1. Notify appropriate units for response
2. Notify local authorities about the incident
3. Make other appropriate notifications
4. Refer to E-Plan and other references for additional information

2.2 Hazardous Materials Incident Timeline

Dispatch:

- Call intake information
- Appropriate resources dispatched
- Check E-Plan if available

First Responder Arrival:

- Size up / Hazard Assessment
- Establish Command / Unified Command
- Identify safety officer
- Rescue
- PPE
- Emergency Decontamination
- Establish isolation zone
- Public Protection
- Recognition
- Notification / Resource Request (medical)
- Patient triage and care
- Situation report to responding units

No Life Safety

Check E-Plan en-route

Hazmat Arrival

- ❑ Meet with Command / Establish Hazmat Group / Branch
- ❑ Confirm first responder activities / information
- ❑ Hazmat Size-up
- ❑ Confirm Notifications
- ❑ Assess isolation zones
- ❑ Weather monitoring
- ❑ Determine Hazmat operations area
- ❑ Hazmat Staging
- ❑ Develop Incident Action Plan
- ❑ Assess Capabilities
- ❑ Develop site specific safety plan
- ❑ Research
- ❑ Decon set-up
- ❑ Pre-entry medical evaluation (ToxMedic)
- ❑ Pre-entry safety briefing
- ❑ Monitoring / identification
- ❑ Suit up
- ❑ Entry / Recon
- ❑ Decontamination
- ❑ Rehab / Hazmat Medical Monitoring / Debriefing

Entry to be made within 45 minutes allowing for a 30-minute work time (based on a 60 min bottle).

Compromised Life Safety

Check E-Plan en-route

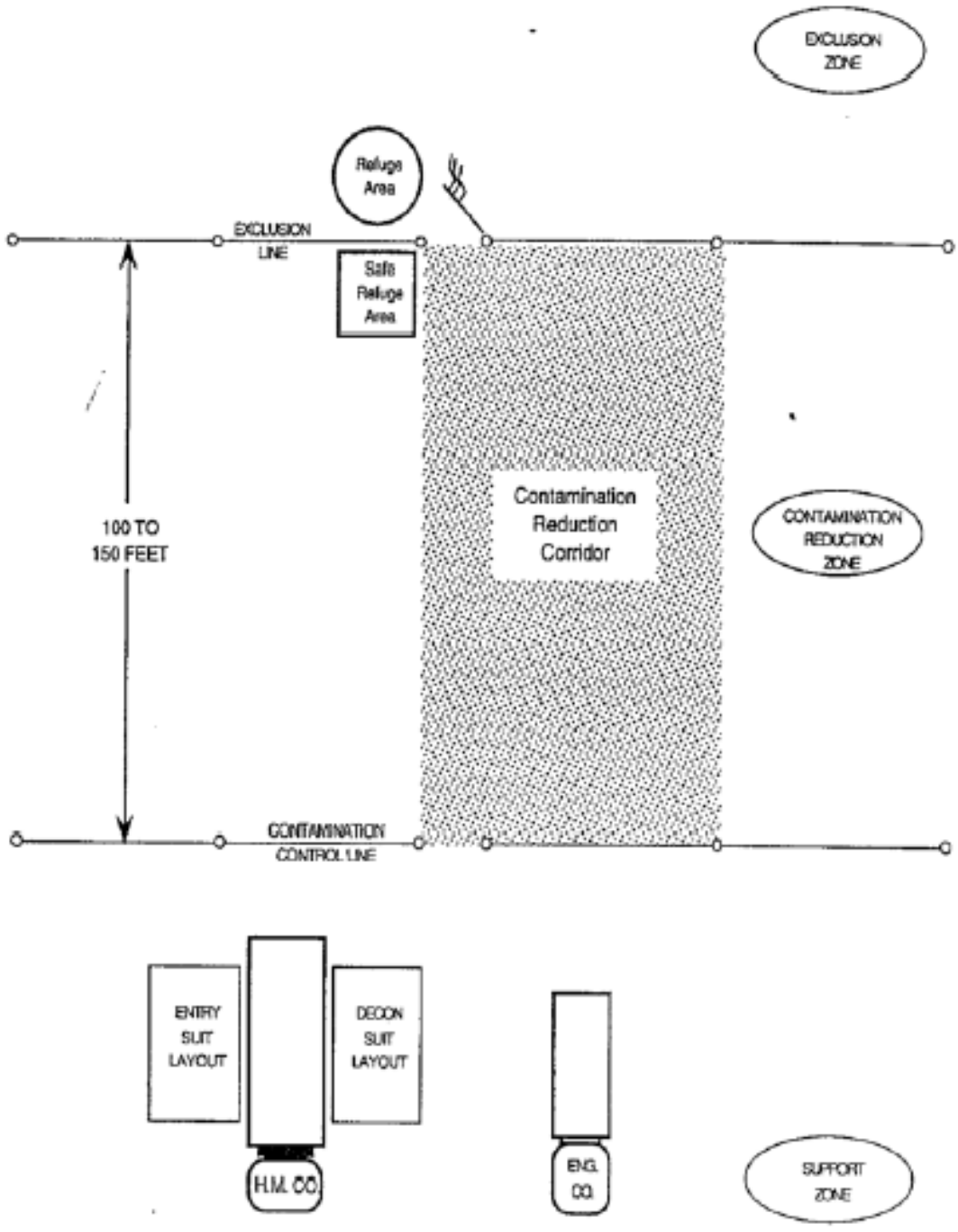
Hazmat Arrival

- ❑ Meet with Command / Establish Hazmat Group / Branch
- ❑ Confirm first responder activities / information / Hazmat Size-up
- ❑ Develop Incident Action Plan / Site Specific Safety Plan
- ❑ Pre-entry safety briefing / Suit up
- ❑ Entry / Environmental Monitoring
- ❑ Rescue
- ❑ Emergency Decontamination (established by first responders)

From time of arrival when there are viable patients needing rescue, first entry will begin within 20 minutes and terminate in 50 minutes total operation time, allowing for 30 minute working time (this time is based on a 60 min. bottle

2.3 Control Zones

CONTROL ZONE LAYOUT



Appx A 1 EMERGENCIES INVOLVING CORROSIVES

1. Identify the material(s) involved and determine what if anything it would be reactive with. Refer to **1.2 Identification** for unidentified potentially hazardous materials.

2. Keep non-essential personnel away. This includes non-essential emergency service personnel.

3. Establish control zones including contamination reduction zone.

4. Select and wear the proper respiratory protection and chemical protective clothing.

5. Stay upwind and keep out of low areas.

6. Avoid exposure to smoke, fumes, vapors, dusts, or direct contact. Highly toxic fumes are often present.

7. Ventilate confined areas before entering. Consider the use of foam to suppress corrosive vapors.

8. Consider the need for additional resources and equipment;, i.e. diking material, absorbents, over-pack containers, liquid transfer equipment, private clean-up contractors, etc.

9. Report spills to State Watch Office and NRC, request a call back from the DEP.

Environmental cleanups are often required at spill sites

10. Determine and implement appropriate decontamination procedures for personnel and equipment. Make sure decontamination procedures are set up and ready prior to beginning any control operations.

11. Consult CHEMTREC for product information and assistance.

SPILL OR LEAK

1. Avoid contact with the spilled material. Make sure the proper PPE is used for the hazards involved. Respiratory protective equipment should be protected against the possibility of exposure to corrosive vapors.

2. Extinguish all sources of ignition in the vicinity. Corrosives can react with metals to generate highly flammable hydrogen gas.

3. Contact with water may cause the generation of large quantities of vapors and heat. Check compatibility of absorbent materials and spill control materials prior to using. Dilution of the material with water should only be considered after determining the ratio required to achieve a safe pH range, realizing it still may have other hazardous properties such as toxicity.

4. Do not get water inside container(s). Explosive reactions can take place.

5. Do not permit the run-off to enter storm, sewer, or water systems.

6. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

7. If it can be done safely, attempt to close valves, plug, or otherwise reduce or stop the amount of leakage. Check compatibility of plugging materials prior to using them.

8. Dig trenches or build dikes ahead of the flow to contain the spill for later disposal or recovery.

9. Powder spills can be covered with a plastic sheet or tarp to minimize spreading.

10. Do not attempt neutralization without consulting with the manufacturer, distributor, or other reliable source. Refer to Neutralization SOG.

11. Consider use of foam equipment to spread vapor suppression material and/or neutralization agents on to spills.

FIRE CONDITIONS

1. Many corrosive chemicals react violently with water, liberating heat and toxic gases.
2. If it can be done safely, move undamaged containers away from the fire area.
3. Do not get water inside containers.
4. Use water to cool containers that are exposed to flames until well after the fire is out.

Appx A 2 INCIDENTS INVOLVING EXPLOSIVES

****This procedure is not intended to address WMD incidents.**

Methodology:

1. Identify the material(s) (explosive or blasting agent) involved.

2. Keep non-essential personnel away. (This includes non-essential emergency service personnel.)

3. Establish control zones if not already done. (Isolate area and deny entry.)

4. Extinguish all sources of ignition in the vicinity. Do not allow vehicles or other sources of ignition in the area.

5. Maintain a radio safe perimeter at the direction of Explosives experts. Remember that trunked radio systems broadcast periodically even when the microphone button is not depressed. Cell phones are also powerful sources of radio transmissions and may broadcast even when not in use.

6. Wear positive pressure SCBA and full bunker gear as a minimum.

7. Avoid exposure to smoke, fumes, vapors, dust, or direct contact. The products of combustion of many explosives are poisonous.

8. Do Not Allow personnel to touch or move explosives. Explosives should be removed only with the advice and supervision of trained explosive personnel.

9. Contact local police bomb disposal unit or military explosives team for assistance.
    a. Naval Bomb Disposal Unit
    b. State Fire Marshal
    c. Army EOD Unit

10. If the HazMat Team is requested to respond to a bomb threat involving hazardous materials the HazMat Team should not conduct building or area searches, except to search the staging area for possible secondary devices. The HazMat Team will stage in a safe area, and should use expert advice, reference material and the emergency response guidebook to estimate a safe standoff distance. The HazMat Team will act as a technical resource for the bomb squad. This may involve the loaning of chemical protective clothing to bomb squad personnel, researching chemical data, etc.

11. Illegal drug labs where the possibility of explosive hazardous materials being

present should be treated as a police incident, but in no case should the HazMat Team perform any operations beyond the scope of their training and equipment. The HazMat Team will provide technical assistance for the safe handling of hazardous materials, scene stabilization, personnel decontamination, and similar activities. When possible the DEA should be consulted before conducting operations at a clandestine drug laboratory.

12. Handling of shock sensitive energetic chemicals, for example: crystallized picric acid or nitrocellulose film, oxidized ethers, and organic peroxides stored outside of safe storage parameters, should be left to properly equipped explosives handling experts. HazMat Teams should work together with them to safely mitigate these incidents.

SPILL OR LEAK

Overturned Vehicle:

1. While en-route obtain as much information as possible about the incident from dispatch.
2. Request police assistance immediately to stop all traffic and evacuate 2500 ft. In all directions.
3. Identify the cargo; determine whether it is an unstable material.

4. Deploy fire suppression equipment to protect cargo.
5. Any minor spill of flammable liquids (i.e. diesel, gasoline) should be removed immediately to reduce the fire hazard. Environmental contamination is a secondary consideration. Larger spills should be diked and covered with a protective foam barrier if flammable vapors are possible. Air monitoring for flammable vapors should be conducted.
6. Measures should be taken to prevent static discharge such as bonding and grounding of the vehicle and cargo. Be especially careful when disconnecting electrical connections.
7. Contact the shipper, manufacturer, and CHEMTREC for assistance then notify NRC.
8. The cargo must be inspected by qualified personnel and off-loaded to another vehicle prior to shipment continuing in transport. Also get approval of state DOT and local authorities. It may require a special permit for the area.

Spill:

1. In addition to the procedures for a wrecked or overturned vehicle, direct your efforts toward preventing further contamination and/or mixing of the products that may render the product(s) unstable.
2. If the pigtail connection between the trailer and cab is to be disconnected make sure you are not in a flammable atmosphere to prevent an electrical discharge from causing an ignition.

3. **SLURRY** – a liquid mixture of ingredients forming an explosive compound. It has a viscosity similar to wet cement.
   - Dike and contain the spill preventing flow from entering sewers, drains and waterways.
   - Contact shipper, manufacturer and CHEMTREC for technical assistance.
4. **DRY POWDER, CRYSTAL OR PELLETS** – some examples include black powder, gunpowder and smokeless powder, mercury fulminate, lead azide, PETN, Ammonium nitrate, Tetryl, and di or tri nitro compounds.
   - Dike and contain product in anticipation of inclement weather to reduce the chance of spread and from entering sewers, drains, and waterways.
   - DO NOT WALK on or in the material spilled.
   - Consider covering the spilled product to reduce the spread by the wind and to prevent it from becoming wet if water reactive. Make sure the material used to cover the spill does not cause a static discharge and is compatible with the material.
   - Contact shipper, manufacturer, and CHEMTREC for technical assistance.

FIRE CONDITIONS

1. Follow DOT EMERGENCY RESPONSE GUIDEBOOK directions for 1.1 class explosive hazards guide page 112.

CARGO Fire:

a. DO NOT fight fire when fire reaches cargo! Cargo may **EXPLODE!**
b. Stop all traffic and clear the area for at least 1600 meters (1 mile) in all directions and let burn.
c. Do not move cargo or vehicle if cargo has been exposed to heat.

TIRE or VEHICLE Fire:

a. Use plenty of water - FLOOD it! If water is not available, use CO2, dry chemical or dirt.

b. If possible, and WITHOUT RISK, use unmanned hose holders or monitor nozzles from maximum distance to prevent fire from spreading to cargo area.

c. Pay special attention to tire fires as re-ignition may occur. Stand by with extinguisher ready.

2. Refer to ATF's Vehicle Bomb Explosion Hazard and evacuation distance table

Appx A 3 Radiological Emergency

****This procedure is not intended to address WMD radiological incidents.**

1. While en-route, report incident to the State Watch Office. Request a call back from the Department of Health Bureau of Radiation Control.

2. Approach the scene from upwind; minimize personal exposure by utilizing shielding when possible. Consult RAD experts and monitoring equipment for safe distance from suspected source.

3. Begin documentation – assign specific person to be responsible for documentation.

4. Don Personal Protective Equipment (minimum – hooded jump suit, positive pressure SCBA, gloves and chemical boots). Wear surgical-type disposable gloves.

5. Assign each person a dosimeter – zero dosimeter, record time, don dosimeter.

6. Prepare radiological detection equipment – establish background level.

7. Obtain as much information about radiological source as possible before

approaching it. Use placards, labels and other sources of information.

8. Make sure zones are established – use survey meter to establish. Establish Exclusion Zone at the 1-2 mR/hr level above normal background for a full 360 degrees. Designate with physical barrier.

9. Set up contamination survey area and decon area. This will be the warm zone.

10. Make any immediate rescue of victims as required. Consider all personnel that were in radiation hot zone to be contaminated until monitoring proves otherwise, if radioactive material was released or spilled. (Advise the local hospital to prepare for possible radioactive contaminated patients).

11. Avoid exposure to smoke, fumes, vapors, dust, or direct contact.

12. Verify downwind evacuation.

13. Do not touch damaged containers or contact any spilled material.

14. Identify physical and chemical form of radioactive material.

15. Identify radiological characteristics and hazards of radioactive material.

Additional Requirements:

If exposures were identified, make sure proper paperwork and follow-up are completed.

Keep all personnel that may have been exposed/contaminated in the warm zone until evaluated and/or decontaminated.

The maximum exposure for personnel is 25 rem for lifesaving activities.

****NO ONE SHOULD ENTER THE RADIATION AREA EXCEPT TO MAKE A RESCUE.**

Label	Radiation at surface of package
Radioactive I	**None to 0.5 mR/hr**
Radioactive II	**1mR/hr**
Radioactive III	**10 mR/hr**

Sole Use Vehicle	At the vehicle surface
Radioactive LSA	**200 mR/hr**

TO AVOID UNNECESSARY RADIATION EXPOSURE, RELY ON THESE KEY ELEMENTS:

TIME **– The rule is: Keep contact time with packages short. Handle packages of radioactive material without delay when moving them. Do not do time-consuming tasks near packages.**

DISTANCE **– The rule is: Avoid staying close to packages unnecessarily.**

SHIELDING **- CAN BE USED IN SOME CASES TO REDUCE OR MINIMIZE EXPOSURE**

Appx A 4 Hazardous Materials Tanker Vehicle Incidents including Rollover

1. Confirm scene management

   - Proper positioning of vehicles
   - Hazard Control zones secured
   - Identify emergency escape route
   - Know emergency evacuation signal
   - Never allow righting of low pressure tanker without first off-loading the contents of the tank.
   - Always ensure correct bonding and grounding is done prior to any off-loading of a flammable or combustible product. Ground damaged tanker first then bond damaged tanker to recovery tanker, (see grounding chart).

2. Confirm identity of hazardous material
   **Be aware of mixed loads

   - If flammable/combustible liquid
     - Monitor downwind, low lying areas
     - Secure all potential ignition sources
3. Use SCBA and appropriate PPE when entering hot zone
4. Identify the owner of the tanker truck, and try to determine contact information.

5. Contact the State Watch Office and report the incident: include owner information if known, and request assistance from the Department of Environmental Protection.
6. Emergency response contactors are often required at these types of incidents.
7. Contact CHEMTREC & NRC.

Rollover - No Leaks

- Determine amount of product present.
- Do not upright any tank until the product has been off-loaded (Note: This does not apply to high pressure gas tanker vehicles).
- Secure area and eliminate any potential ignition sources including disconnecting the battery system. Do not turn off any electrical switches on the vehicle without eliminating the possibility of a static spark being generated.
- If cables from the battery must be removed to eliminate ignition source, an inert environment should be created around it to reduce spark production and ignition of any vapors.
- Have police stop all traffic in the vicinity and evacuate up to 1,000 feet away or as determined by testing and technical guidance. (ERG can be used for initial distance determination.)

- Check for flammable vapors with flammable gas detectors, take necessary measures to suppress or eliminate vapors. All spilled fuel should be covered with foam.
- Make sure all emergency shut-off valves have activated. Secure any hatch covers, piping covers, and vents.
- Make sure the tank and cab is stable, chock as needed. Do not separate the cab from the trailer. Do not rely on trailer support legs to hold up the trailer with product in it. Consider possible need for air bags.
- Dike area and direct flow if present to containment area, Block all drains, etc.
- Request transfer equipment for product off-loading. Make sure the proper pumps are available.
- To prevent the build-up of static electricity, bond and ground containers and equipment before product transfer begins.
- Any power tools used to cut or drill must not generate a spark or excessive heat, hose-lines can be used for cooling.
- Determine the best way to off-load tank; by drilling the tank, using the loading valves/pipes, use vapor recovery lines, or a dome using a funnel.
- Supervision of scene shall be maintained while wreckers upright the tanker and cab.

- Empty tanks can still present a fire vapor hazard.

Rollover - Leaking:

- In addition to all procedures for a non-leaking tank the following should be done.
- In addition to selecting the appropriate PPE a harness retrieval system should be considered for personnel that have to enter spills to control leaks.
- Prevent spilled product from entering sewers and waterways, request additional assistance to provide diking and directing the flow of product.
- Make sure sufficient hose-lines with appropriate agent (water or foam) are in place prior to making entry for leak control.
- Stabilize tank vehicle using cribbing or other means.
- Leaks from the bottom of tanks that cannot be readily stopped may be reduced by introducing water into the tank after careful consideration and if it's not contraindicated.

**Be aware of overhead power lines.

Bonding:

Drive two ground rods uphill and upwind of the incident. (The full tanker/drum will be bonded to one ground rod; the empty tanker/drum will be bonded to the other.) Then make connections in the following order:

1. Connect a bonding cable to the tanker/drum to be pumped out, then to the ground rod.

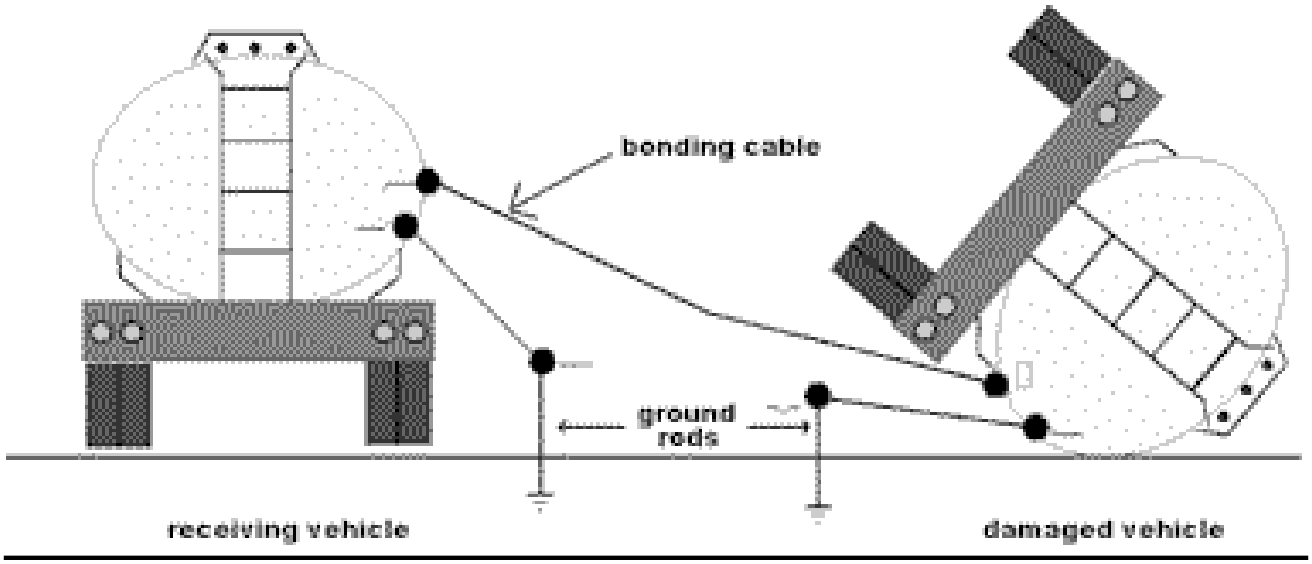
2. Connect a bonding cable to the tanker/drum to be filled, then to the other ground rod.

3. Connect a bonding cable between the two tankers/drums.

4. Ground the pump (connect to one of the ground rods) or bond it to the tanker/drum being emptied (since the tanker/drum is already grounded).

5. Bond any other equipment (hoses, air drills, etc.) to the tanker/drum being emptied. Connections should always be made to the tanker/drum first, then to the equipment.

Note: As connections are made, check them with an ohmmeter to ensure there is zero resistance.



Disconnecting:

1. After the transfer is complete, break the bond between the two tankers/drums by disconnecting at the full tanker/drum first, then at the tanker/drum that is now empty (the empty tanker/drum is now the more dangerous).

2. Disconnect the pump ground or bond, then disconnect all extraneous equipment (make sure the connection at the equipment is disconnected first, then the connection at the tanker/drum).

3. If applicable, roll the damaged tanker onto its wheels.

4. Remove the ground rod connections last.

**Off-loading of flammable liquids should be undertaken only by properly trained personnel with the ability to monitor for O2 and LEL.

Additional Requirements:

If entry into spilled product is required to effect a rescue or to control a leak, extra caution must be taken as to selecting PPE keeping in mind that break-through times are not based on direct immersion of PPE into a product.

Appx A 5 Biomedical or Biological Waste Emergency

****This is not intended to address WMD biological agents**

Definitions:

Biomedical waste – means any solid waste or liquid waste which may present a threat of infection to humans. The term includes, but is not limited to, non-liquid human tissue and body parts; laboratory and veterinary waste which contain human-disease-causing agents; discarded disposable sharps; human blood, and human blood products and body fluids; and other materials which in the opinion of the Department of Health represent a significant risk of infection to persons outside the generating facility. The term does not include human remains that are disposed of by persons licensed under chapter 470, Florida Statutes (F.S.).

Biological waste – means solid waste that causes or has the capability of causing disease or infection and includes, but is not limited to, biomedical waste, diseased or dead animals, and other wastes capable of transmitting pathogens to humans or animals. The term does not include human remains that are disposed of by persons licensed under chapter 470, F.S.

Methodology:

1. **Isolate the area and set up control zones if not already established.**

**The unauthorized disposal of biological or biomedical wastes may violate State Statutes, section 402.727 F.S., and should be referred to local law enforcement.

2. **Contact the State Watch Office, and request a call back from the Department of Health**
   Each county has a Biohazard coordinator that can respond to the incident. They can help with the determination as to the amount of biological waste and who will dispose of it. Biohazard coordinators can remove small amounts of bio-medical waste from the site. If a large amount of material is present the Department of Environmental Protection can assist with making arrangements for a contractor to dispose of the bio-waste.
   a. Provide the following information to the State Watch Office.
      - Location: to include address, be specific (i.e. in bag, in box, in dumpster, etc.).
      - Approximate amount, example: 1 bag, 2 bags, large bag, small bag, etc.

- The identity of spiller or owner of biomedical waste if known.
- If material has entered a storm drain or sewer system.

3. **Set up decontamination procedures**
   a. Use a freshly mixed 10% or stronger bleach/water solution unless advised otherwise by CDC or the Health Department.

4. **Clean-up of biomedical waste**
   Confined to the following types of incidents (generally these types of incidents are not handled by a HazMat Team):

   a. Transportation accidents involving DOT labeled/placarded etiological agents.
   b. Any situation where a HazMat Team is requested to handle blood or other body fluids that would expose the public or personnel to them. Example: roadway, sidewalk, ground, etc.
   c. Use of universal precautions is usually adequate unless the material is DOT placarded as Division 6.2 or labeled as an infectious substance, requiring a level 'A' or 'B' PPE for entry with puncture proof boots.

5. **Clean up procedure if spilled material:**

    a. Pour bleach (undiluted) directly onto biomedical waste. Keep material contained.
    b. Place enough absorbent material on the bleach and bio-waste to make it a dry solid.
    c. Scoop or sweep up the dry bio-waste and place into a 'red' bio-waste plastic bag and seal bag.
    d. Decontaminate any tools used with a bleach solution and rinse with water.
    e. Dispose of bio-waste at local hospital or with bio-waste contractor.

6. **Transportation Container Emergencies** –
Incidents that involve materials labeled, placarded, or marked as biohazards or medical-waste. This type of incident is treated as a hazardous materials incident.

    a. Locate upwind/uphill/upstream and recon site from a distance,
    b. Identify product/substance – use manifest, shipping papers, type of container packaging and container markings,
    c. Make sure scene is secure,
    d. Wear appropriate PPE,

e. Identify anyone that was in contact with product,
f. Notify:
    - State Watch Office
    - Department of Health

7. Leaking Container

a. Cover with a sheet or other porous material,
b. Pour bleach over sheet and keep damp with solution. Can use garden type sprayer with bleach solution to spray immediate surrounding area,
c. Place dike, sock boom, or spill pillows around area to contain run-off, and
d. Wait for disposal instructions from one of the above contacts.

Appx A 6 Container Emergencies - Flaring of Liquefied Petroleum Gases (LPG)

Used to achieve three basic objectives:

- Reduce the pressure inside of a cargo tank.
- Dispose of vapors remaining inside of the tank after liquid has been transferred.
- Burn off liquid when other transfer methods are not possible.

It is also an alternative to expedite recovery operations and when other product transfer operations are not available or not possible.

1. **Identify Exclusion Zone if not already done and secure area.**
    a. The Exclusion Zone will include the area of radiant heat exposure
    b. All items and structures exposed to radiant heat must be protected
    c. Hose streams must be of sufficient size to adequately dissipate the radiant heat.
    d. Caution - Large volumes of water can cause flooding and movement of containers.
    e. Only personnel essential to the operation should be in Hot Zone.

2. **Determine what the problem is:**
    a. Fire
    b. Leak
    c. Container failure / damage

3. **Verify contents of container.**
    a. Determine whether it is safe to conduct flaring operation.
    b. Identify exposures
    c. Area free of combustible vapors.
    d. Overhead power lines removed or de-energized.
    e. Leaking containers should be flared in place

4. **Specific site safety considerations which should be addressed during this phase of the incident include:**
    a. Ensure that backup crew is in place
    b. A minimum of two 1 ¾" hose-lines shall be deployed.
    c. Personnel should know the emergency evacuation signal and the escape route.
    d. Continuously monitor the hazard area with flammable gas monitors.
    e. Maintain hazard control zones throughout the flaring operation and enforce personnel protective equipment requirements.
    f. Frequent relief and rotation of personnel should be considered
    g. Remember flaring of liquid product produces much greater radiant heat than gas.

FLARING RATES FOR 1-INCH DIAMETER HOSE

Flow Rates for 1 Inch Diameter Hose				
Propane Temperature in F°	Flow Rate Gallons/Hour	Flow Rate Pounds/Hour	Flow Rate BTU/Hour	Time to Empty 30,000 Gallons/Hours
0	169	710	15435277	177.5
10	215	903	19636595	139.5
20	258	1084	23563914	116.3
30	312	1310	28495896	96.2
40	364	1529	33245212	82.4
50	420	1764	38359860	71.4
60	501	2104	45757833	59.9
70	541	2272	49411153	55.5
80	701	2944	64024433	42.8
90	775	3255	70783075	38.7
100	825	3465	75349725	36.4
110	957	4019	87405681	31.3

Appx A 7 TOXIC MATERIALS, POISONS, AND PESTICIDES

1. Identify the material(s) involved (refer to **1.2 Identification** for unidentified potentially hazardous materials).

2. Keep non-essential people away. (This includes non-essential emergency service personnel.)

3. Establish control zones. (Isolate area and deny entry / 330 ft min. distance for unknown)

4. Wear positive pressure SCBA and appropriate full protective clothing (refer to **1.5 PPE** for appropriate protective clothing). Due to construction and materials used for firefighter turnout clothing, the clothing may actually absorb and hold the pesticide or poison if contact with the smoke, fumes, vapors, dust, or material occur. (Bag and decon according to manufactures recommendation).

5. Stay upwind and keep out of low areas. Avoid exposure to smoke, fumes, vapors, dust, or direct contact.

7. Determine signs and symptoms of exposure and advise all personnel operating at the site. Some symptoms may not become present for up to 48 hours following exposure.

8. Ventilate confined areas, entry not advised unless risk/ benefit for life saving actions. (Use air monitor device to establish LEL).

9. If the spilled material has entered a storm drain or waterway, consideration should be given to diking ahead of the flow. (Fish kills are often associated with pesticide releases into water bodies)

10. Determine and implement appropriate decontamination procedures for personnel and equipment.

11. Flush any contacted material from skin immediately.

12. Remove and isolate any contaminated clothing and equipment at the site and avoid spreading contamination to non-contaminated areas.

13. Report the spill to the State Watch Office and request a call back from the Department of Environmental Protection.

14. Consult CHEMTREC (800) 424-9300 for product information and assistance, or product label / MSDS as well as Poison Control

FIRE CONDITIONS:

1. Consider protecting exposures and allowing the fire to burn. This may create less of a hazard to people and the environment, especially if run-off cannot be confined.

2. For fires, use appropriate extinguishing agent.

3. Considering withholding extinguishment of fire unless the flow can be stopped.

4. If sufficient water is available, use water spray to cool containers exposed to the fire.

5. Dike fire control water for later analysis and/or disposal.

SPILL OR LEAK:

1. For liquid pesticide spills, extinguish or eliminate all sources of ignition in the vicinity. Use combustible gas detectors to determine the boundary of the flammable vapors if the pesticide is flammable. The absence of a reading on a CGI does NOT indicate the absence of a toxic atmosphere.

2. Do not allow vehicles or other sources of ignition in the area as long a spill or leak is active.

3. If it can be done safely, attempt to close valves, plugs, or otherwise reduce the amount of leakage.

4. Water spray can be used to absorb water miscible vapors, and water spray or explosion proof fan can be used to disperse vapors. Do not get water inside containers. Run-off must be contained for later analysis and possible disposal.

5. Keep material out of storm, sewer, and water systems.

6. Dig trenches or build dikes ahead of the flow to confine the spill for later disposal or recovery.

7. Powder spills can be covered with an explosion proof sheet or tarp to minimize spreading.

8. Environmental cleanups are often required at spill sites.

Appx A 8 Drums and Abandoned Containers Emergency

Drums and containers not leaking:

1. All unmarked drums and abandoned containers should be considered as containing hazardous materials until proven otherwise.
2. Drums and abandoned containers can be under pressure.
3. Always use appropriate protective gear when working with unknown drums or containers.
4. Try to obtain as much information as possible about container from people in the area or from person who made notification.
5. Examine the drum or container from a distance using binoculars prior to approaching. Check for labels, markings, bungs, relief devices, seals, plugs, leakage, deterioration of container, and bulging. Also note any visible vapors, stresses vegetation or dead wildlife.
6. Secure the area and place visible barriers or markings to establish zones.
7. Establish decontamination sector prior to entry.
8. Initial monitoring should concentrate on checking for the presence of radioactivity, flammable vapors, elevated oxygen, and corrosive vapors. If radioactive follow **Appx A 3 Radiological.**
9. If initial monitoring does not give any indications, determine if further testing or examination is needed. Use of thermal imaging camera may be helpful in evaluating

drum/container. Temperature differences on the surface of the container can provide clues to the amount and type of content.

10. Drums and abandoned containers should only be handled if necessary. Contents should be classified or characterized prior to moving a drum/container. Most chemicals can be classified or characterized with testing. Drums that appear to be under pressure should be opened by remote means.
11. All Lab Packs should be considered to be explosive or shock-sensitive until proven otherwise.

Leaking drums and abandoned containers:

1. If possible raise any leaking hole in drum above the level of liquid in container.
2. Make sure any material to be used to patch, plug or stop a leak is compatible with the product in the drum.
3. Patched or plugged drums should be placed inside a recovery drum. Absorbent pads should be placed with the drum when over-packed to collect any leaking material.
4. If placing drum inside a metal recovery drum consider bagging the drum first.
5. Properly mark the recovery drum for transport and disposal.
6. Decide whether referral will be done or further action such as testing of contents and movement of container.
7. Location of the container, its contents, and if leaking will determine whether it needs to be

moved. This also determines if it can be over-packed or not.

8. If sampling and field testing is done then the container should be marked as to the main hazard identified. Use non-sparking bung opener and tools to open container.
9. If a container is leaking, then repositioning, patching, plugging, and over-packing can be used. Transferring the product from the leaking container can also be used to control leak. Make sure pump for transfer is designed for and compatible with the product.

Additional Requirements:

No container should be left on scene unless it has been determined it is safe to leave it and that it has been secured against tampering. If it remains on scene then it should be secured until picked up or transferred to another agency. (refer to DEP guidelines)

If a drum or container was found to be leaking then ground samples should be taken unless the drum/container was on a non-permeable surface.

Always notify the State Watch Office and request a call back from the Department of Environmental Protection. DEP has an abandoned drum removal contract for the entire State.

Appx A 9 GAS CYLINDER AND CONTAINER EMERGENCIES

1. Stay upwind and keep out of low lying areas
2. Determine what the problem is:
3. Identify contents of container
4. Monitor and ventilate any confined areas prior to entering
5. Consider multiple hazards of gas in addition to flammability.
6. Use Positive pressure SCBA.
7. Never place hands or face over or near relief devices.
8. APRs and other types of filter masks are not safe if the gas leak is uncontrolled.
9. Cylinders that contain highly poisonous or highly toxic gases do not have relief valves.

Flammable Gas Spill or Leak

1. Eliminate all sources of ignition in the area.
2. Shut off gas supply remotely if possible.
3. Use combustible gas detector to determine area affected
4. Seek technical assistance/advice prior to closing any valves on systems (it could create a greater problem).
5. Close all valves on individual cylinders
6. Disperse vapor clouds if compatible with product.
7. Water miscible gases can be absorbed by fog streams (remembering run-off will be contaminated).

8. Reduce pressure in cylinders by reducing temperature of container.
9. Caution should be used in putting water on container/cylinder so as not to intensify the size of the leak.
10. Isolate cylinder/container Bond and ground all cylinders/containers prior to transferring product

Compressed Gas Emergency:

1. Identify product
2. Avoid spill
3. Do not put water spray or fog on pool of liquefied gas
4. Be aware that oxygen deficient atmosphere will affect combustible gas readings on monitors).
5. position cylinder/container to minimize leak
6. Liquefied gases evaporating can cause freeze injuries and failure of protective suits if they come into contact.

Cryogenic Liquid Emergency:

1. Cryogenic containers can also involve high vacuums.
2. LOX (liquid oxygen) can upon contact cause petroleum-based products to ignite or become shock sensitive.
3. Rapid expansion volumes can quickly make an area IDLH.

4. Specialized PPE is required for safe handling of cryogenics.

Abandoned Cylinders:

1. Most abandoned cylinders contain gases used for welding.
2. The two most common gases are oxygen, and acetylene.
3. Most welding cylinders are rented from a vender.
4. The vendor contact information is usually stamped on the surface of the cylinder.
5. Report abandoned cylinders to the State Watch Office, and request a call back from the Department of Environmental Protection.

Appx A 10 Field Sampling for Tar Balls

Since the USCG is the lead agency on all tar ball incidents, immediately report the discovery to the National Response Center at 800-424-8802.

The following sampling protocols were developed to address the need to fingerprint tar balls that wash up onto Florida shorelines. These protocols were obtained from guidance documents found at the United States Coast Guard Marine Safety Laboratory Website. For significant incidents spanning large geographic areas, coordinate with the oversight agency (USCG, NOAA, DEP, etc.) to ensure compliance with the field sampling plan.

Required Equipment for Sampling Tar Ball(s)

- 4oz/250 ml pre-cleaned sampling jars
- Sterile tongue depressors
- Latex/nitrile sampling gloves
- Para film
- Cardboard mailing tubes
- Jar labels
- Waterproof marker

Tar Ball Selection

Sample locations will be based on the following factors.

- Area of impacted shoreline.
- Number of tar balls.
- Size of tar balls.
- Select a tar ball that is representative of the overall characteristics of the impacted area.

If a large area of shoreline is impacted by tar balls, measure the total area and collect a sample from the center (length X width).

Sample Collection

The following procedures should be used during the collection of the samples. Split samples may be required if requested by the RP or the USCG.

- Glove changes are required between collections of each sample including the **Reference Sample.**
- The reference sample is taken by breaking a clean tongue depressor and placing it into a clean 4oz/250 ml jar.
- If the selected tar ball is large enough, use a sterile tongue depressor to divide the sample area into equal parts.

- Scoop one of the equal parts or the entire tar ball (depending on the size) into the 4 oz/250 ml glass jar.
- Break the used tongue depressor into equal sections, and place a section into the sample jar, and tighten the lid.
- Secure the sample by completely wrapping Para film around the perimeter of the jar lid.
- Place adhesive label on jar, fill out required information.
- If split samples are required, repeat process with remaining portion of divided sample.

Sample Handling

- Samples should be stored in a cool, dark place to minimize any degradation of the sample due to sunlight or heat.
- 4oz glass jars should be secured in the cardboard mailing tubes (two per tube)
- The samples may be placed in coolers – ***DO NOT ICE SAMPLES***

Chain of Custody Form

- Complete all information on Chain of Custody Form.
- Include Latitude and Longitude coordinates in notes for each sample
- USCG samples and Responsible Party samples should be on separate Chain of Custody Forms.

- When taking split samples, Sample ID should include notation that designates the USCG samples and Responsible Party samples. To maintain consistency, add an "A" at the end of the sample ID for USCG samples and add a "B" for the responsible party.

Shipping of Samples

- Samples should be shipped in a DOT compliant cardboard box or a cooler.
- Follow all DOT regulations for shipping of samples.

Transfer of Samples

- The USCG/Responsible Party should receive the sample(s) in a timely manner, situation dependent.
- Maintain Chain of Custody.

ICS Form 201

INCIDENT BRIEFING	1. Incident Name	2. Date Prepared	3. Time Prepared
4. Map Sketch			
ICS 201 Page 1 of 4	**5. Prepared by (Name and Position)**		

6. Summary of Current Actions	
ICS 201	Page 2

7. Current Organization	
ICS 201	Page 3

8. Resources Summary				
Resources Ordered	**Resource Identification**	**ETA**	**On Scene**	**Location/Assignment**

ICS 201	Page 4

ICS Form 202

INCIDENT OBJECTIVES	1. INCIDENT NAME	2. DATE	3. TIME

4. OPERATIONAL PERIOD (DATE/TIME)

5. GENERAL CONTROL OBJECTIVES FOR THE INCIDENT (INCLUDE ALTERNATIVES)

6. WEATHER FORECAST FOR OPERATIONAL PERIOD

7. GENERAL SAFETY MESSAGE

8. Attachments (☑ if attached)

☐ Organization List (ICS 203)	☐ Medical Plan (ICS 206)	☐ Current Weather
☐ Assignment List (ICS 204)	☐ Incident Map	☐
☐ Communications Plan (ICS 205)	☐ Traffic Plan	☐

9. PREPARED BY (PLANNING SECTION CHIEF)	10. APPROVED BY (INCIDENT COMMANDER)

Organization Assignment List, ICS Form 203

ORGANIZATION ASSIGMENT LIST

1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED

POSITION NAME

4. OPERATIONAL PERIOD (DATE/TIME)

5. INCIDENT COMMAND AND STAFF

INCIDENT COMMANDER	
DEPUTY	
SAFETY OFFICER	
INFORMATION OFFICER	
LIAISON OFFICER	

6. AGENCY REPRESENTATIVES

AGENCY	NAME

7. PLANNING SECTION

CHIEF	
DEPUTY	
RESOURCES UNIT	
SITUATION UNIT	
DOCUMENTATION UNIT	
DEMOBILIZATION UNIT	
TECHNICAL SPECIALISTS	

8. LOGISTICS SECTION

CHIEF	
DEPUTY	

a. SUPPORT BRANCH

DIRECTOR	
SUPPLY UNIT	
FACILITIES UNIT	
GROUND SUPPORT UNIT	

b. SERVICE BRANCH

DIRECTOR	
COMMUNICATIONS UNIT	
MEDICAL UNIT/REHAB	
FOOD UNIT	

9. OPERATIONS SECTION

CHIEF		
DEPUTY		
a. BRANCH I- DIVISION/GROUPS		
BRANCH DIRECTOR		
DEPUTY		
DIVISION/GROUP		
DIVISION/ GROUP		
DIVISION/ GROUP		
DIVISION/GROUP		
DIVISION /GROUP		
b. BRANCH II- DIVISIONS/GROUPS		
BRANCH DIRECTOR		
DEPUTY		
DIVISION/GROUP		
DIVISION/GROUP		
DIVISION/GROUP		
DIVISION/GROUP		
c. BRANCH III- DIVISIONS/GROUPS		
BRANCH DIRECTOR		
DEPUTY		
DIVISION/GROUP		
DIVISION/GROUP		
DIVISION/GROUP		
d. AIR OPERATIONS BRANCH		
AIR OPERATIONS BR. DIR.		
AIR TACTICAL GROUP SUP.		
AIR SUPPORT GROUP SUP.		
HELICOPTER COORDINATOR		
AIR TANKER/FIXED WING CRD.		

10. FINANCE/ADMINISTRATION SECTION

CHIEF	
DEPUTY	
TIME UNIT	
PROCUREMENT UNIT	
COMPENSATION/CLAIMS UNIT	
COST UNIT	

PREPARED BY (RESOURCES UNIT)

Assignment List, ICS Form 204

1. BRANCH	2. DIVISION/GROUP	**ASSIGNMENT LIST**
3. INCIDENT NAME	4. OPERATIONAL PERIOD DATE _____ TIME _____	

5. OPERATIONAL PERSONNEL

OPERATIONS CHIEF		DIVISION/GROUP SUPERVISOR	
BRANCH DIRECTOR		AIR TACTICAL GROUP SUPERVISOR	

6. RESOURCES ASSIGNED TO THIS PERIOD

STRIKE TEAM/TASK FORCE/ RESOURCE DESIGNATOR	EMT	LEADER	NUMBER PERSONS	TRANS. NEEDED	PICKUP PT./TIME	DROP OFF PT./TIME

7. CONTROL OPERATIONS

8. SPECIAL INSTRUCTIONS

9. DIVISION/GROUP COMMUNICATIONS SUMMARY

FUNCTION		FREQ.	SYSTEM	CHAN.	FUNCTION		FREQ.	SYSTEM	CHAN.
COMMAND	LOCAL				SUPPORT	LOCAL			
	REPEAT					REPEAT			
DIV./GROUP TACTICAL					GROUND TO AIR				

PREPARED BY (RESOURCE UNIT LEADER)	APPROVED BY (PLANNING SECT. CH.)	DATE	TIME

Incident Communications Plan, ICS Form 205

INCIDENT RADIO COMMUNICATIONS PLAN	1. Incident Name	2. Date/Time Prepared	3. Operational Period Date/Time

4. Basic Radio Channel Utilization

System/Cache	Channel	Function	Frequency/Tone	Assignment	Remarks

5. Prepared by (Communications Unit)

MEDICAL PLAN	1. Incident Name	2. Date Prepared	3. Time Prepared	4. Operational Period

5. Incident Medical Aid Station

Medical Aid Stations	Location	Paramedics Yes	Paramedics No

6. Transportation

A. Ambulance Services

Name	Address	Phone	Paramedics Yes	Paramedics No

B. Incident Ambulances

Name	Location	Paramedics Yes	Paramedics No

7. Hospitals

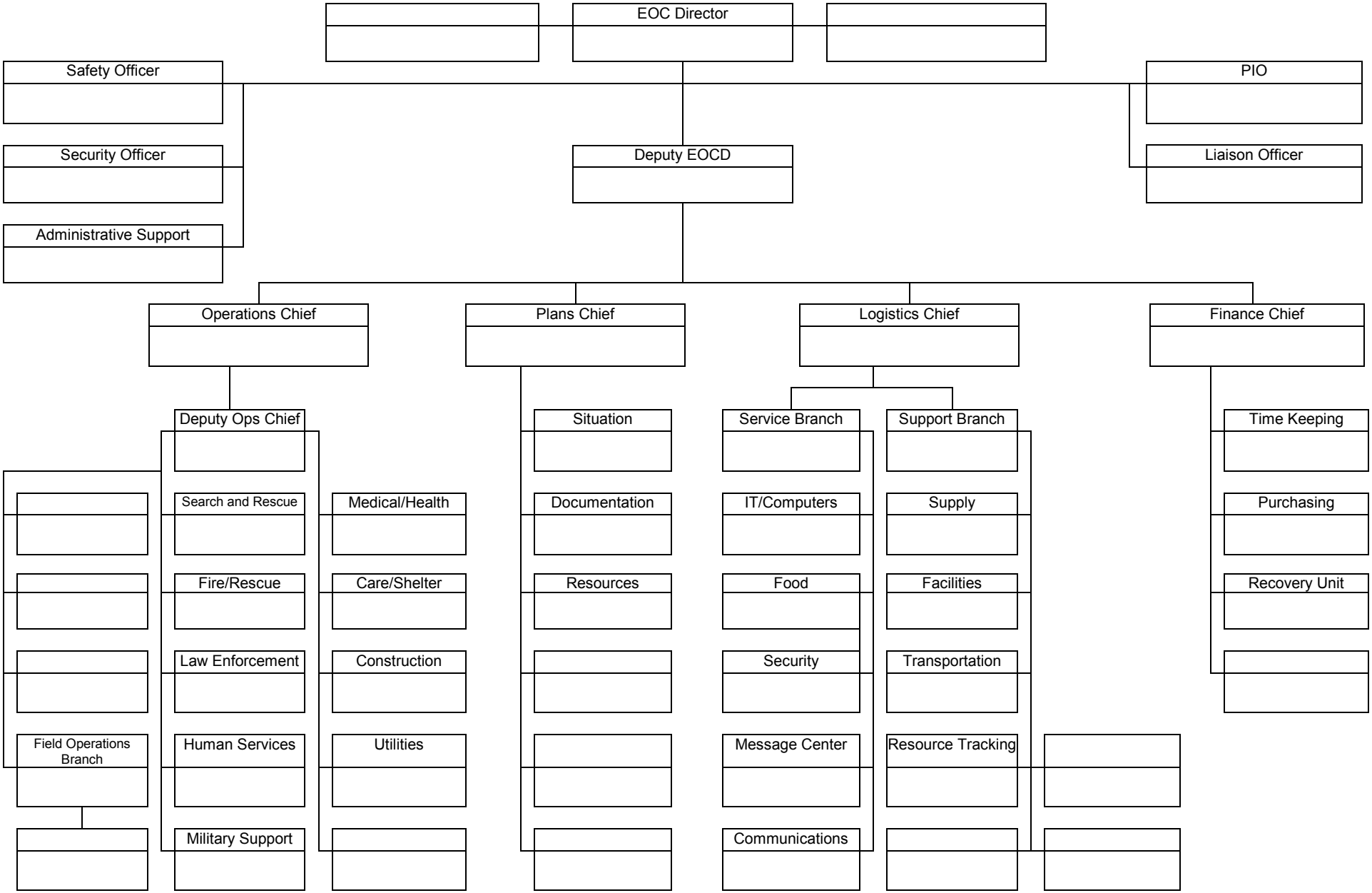
Name	Address	Travel Time Air	Travel Time Ground	Phone	Helipad Yes	Helipad No	Burn Center Yes	Burn Center No

8. Medical Emergency Procedures

Prepared by (Medical Unit Leader)	10. Reviewed by (Safety Officer)

Incident Organization Chart **ICS 207**

Incident Name:	Date Prepared:	Time Prepared:
Operational Period:	Operational Period Date/Time: From: To:	



Prepared By: (Name/Title)	**Approved by EOC Director:**

ICS 207 (07/25/2005)

UNIT LOG	1. Incident Name	2. Date Prepared	3. Time Prepared
4. Unit Name/Designators	5. Unit Leader (Name and Position)		6. Operational Period

7. Personnel Roster Assigned

Name	ICS Position	Home Base

8. Activity Log

Time	Major Events

9. Prepared by (Name and Position)

ICS Form 215

OPERATIONAL PLANNING WORKSHEET	1. Incident Name	2. Date Prepared Time Prepared	3. Operational Period (Date/Time)

4. Division/Group or Other Location	5. Work Assignments		Resource by Type (Show Strike Team as ST)														6. Reporting Location	7. Requested Arrival Time
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
		Req																		
		Have																		
		Need																		
		Req																		
		Have																		
		Need																		
		Req																		
		Have																		
		Need																		
9. Total Resources - Single		Req																		
		Have																		
		Need																		
Total Resources - Strike Teams		Req																	Prepared by (Name and Position)	
		Have																		
		Need																		

Incident Action Plan Safety & Risk Analysis Form, ICS 215A

INCIDENT ACTION PLAN SAFETY ANALYSIS	1. Incident Name							2. Date	3. Time
Division or Group	**Potential Hazards**							**Mitigations (e.g., PPE, buddy system, escape routes)**	
	Type of Hazard:	**Type of Hazard:**	**Type of Hazard:**	**Type of Hazard:**	**Type of Hazard:**	**Type of Hazard:**	**Type of Hazard:**	**Type of Hazard:**	
Prepared by (Name and Position)									

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives

Vehicle Bomb Explosion Hazard and Evacuation Distance Tables

IF YOU SUSPECT UNLAWFUL POSSESSION OR USE OF EXPLOSIVES OR BOMBS CALL 1-888-ATF-BOMB OR YOUR LOCAL ATF OFFICE FOR ASSISTANCE

- Minimum evacuation distance is the range at which a life-threatening injury from blast or fragment hazards is unlikely. However, non-life-threatening injury or temporary hearing loss may occur.
- Hazard ranges are based on open, level terrain.
- Minimum evacuation distance may be less when explosion is confined within a structure.
- Falling glass hazard range is dependent on line-of-sight from explosion source to window. Hazard is from falling shards of broken glass.
- Metric equivalent values are mathematically calculated.
- Explosion confined within a structure may cause structural collapse or building debris hazards.
- Additional hazards include vehicle debris.

This information was developed with data from the Dipole Might vehicle bomb research program conducted by ATF, with technical assistance from the U.S. Army Corps of Engineers. Goals for Dipole Might include creating a computerized database and protocol for investigating large-scale vehicle bombs. Dipole Might is sponsored by the Technical Support Working Group (TSWG). TSWG is the research and development arm of the National Security Council interagency working group on counterterrorism.

ATF Information 5400.1

ATF	Vehicle Description	Maximum Explosives Capacity	Lethal Air Blast Range	Minimum Evacuation Distance	Falling Glass Hazard
	Compact Sedan	500 Pounds 227 Kilos *(In Trunk)*	100 Feet 30 Meters	1,500 Feet 457 Meters	1,250 Feet 381 Meters
	Full Size Sedan	1,000 Pounds 455 Kilos *(In Trunk)*	125 Feet 38 Meters	1,750 Feet 534 Meters	1,750 Feet 534 Meters
	Passenger Van or Cargo Van	4,000 Pounds 1,818 Kilos	200 Feet 61 Meters	2,750 Feet 838 Meters	2,750 Feet 838 Meters
	Small Box Van *(14 Ft Box)*	10,000 Pounds 4,545 Kilos	300 Feet 91 Meters	3,750 Feet 1,143 Meters	3,750 Feet 1,143 Meters
	Box Van or Water/Fuel Truck	30,000 Pounds 13,636 Kilos	450 Feet 137 Meters	6,500 Feet 1,982 Meters	6,500 Feet 1,982 Meters
	Semi-Trailer	60,000 Pounds 27,273 Kilos	600 Feet 183 Meters	7,000 Feet 2,134 Meters	7,000 Feet 2,134 Meters

Department of the Treasury
Bureau of Alcohol, Tobacco & Firearms
BOMB THREAT CHECKLIST

1. **When is the bomb going to explode?**
2. **Where is the bomb right now?**
3. **What does the bomb look like?**
4. **What kind of bomb is it?**
5. **What will cause the bomb to explode?**
6. **Did you place the bomb?**
7. **Why?**
8. **What is address?**
9. **What is your name?**

EXACT WORDING OF BOMB THREAT:

_____

_____

_____

_____

_____

Sex of caller: _____ **Race:** _____

Age: _____ **Length of call:** _____

Telephone number at which call is received: _____

Time call received: _____

Date call received: _____

CALLER'S VOICE

- ☐ **Calm**
- ☐ **Nasal**
- ☐ **Soft**
- ☐ **Angry**
- ☐ **Stutter**
- ☐ **Loud**
- ☐ **Excited**
- ☐ **Lisp**
- ☐ **Laughter**
- ☐ **Slow**
- ☐ **Rasp**
- ☐ **Crying**
- ☐ **Rapid**
- ☐ **Deep**
- ☐ **Normal**
- ☐ **Distinct**
- ☐ **Slurred**
- ☐ **Whispered**
- ☐ **Ragged**
- ☐ **Clearing Throat**
- ☐ **Deep Breathing**
- ☐ **Cracking Voice**
- ☐ **Disguised**
- ☐ **Accent**
- ☐ **Familiar** ***(If voice is familiar, who did it sound like?)*** _____

BACKGROUND SOUNDS:

- ☒ **Street noises**
- ☐ **Factory machinery**
- ☐ **Voices**
- ☐ **Crockery**
- ☐ **Animal noises**
- ☐ **Clear**
- ☐ **PA System**
- ☐ **Static**
- ☐ **Music**
- ☐ **House noises**
- ☐ **Long distance**
- ☐ **Local**
- ☐ **Motor**
- ☐ **Office machinery**
- ☐ **Booth**
- ☐ **Other** ***(Please specify)***

_____

BOMB THREAT LANGUAGE:

- ☐ **Well spoken (education)**
- ☐ **Incoherent**
- ☐ **Foul**
- ☐ **Message read by threat maker**
- ☐ **Taped**
- ☐ **Irrational**

REMARKS: _____

_____

Your name:

_____

Your position:

_____

Your telephone number:

_____

Date checklist completed: _____

HAZARDOUS MATERIALS GROUP LEADER TACTICAL WORKSHEET

RECOGNITION / IDENTIFICATION

Incident Description: _____
_____
_____

Material	Quantity	Hazard Class	Container Status

ISOLATION & PROTECTION

ISOLATION / PROTECTIVE ACTION DISTANCES (Initial)

Guide Page # ____ Isolation Distance: _____ Protective Distance: _____
Comments: _____

ISOLATION / PROTECTIVE ACTION DISTANCES (Revised)

Basis of Revision: _____
Distances, boundaries & action _____
_____

PROTECTION

Protective ensembles shall be selected based upon recommendations of Science Group and approved by safety.

☐ Minimum level of protection PP/SCBA and FF/Protective Clothing until monitoring

Location / Mission	Respiratory	Dermal	Accessories

NOTIFICATION

Science / Communications personnel must complete and fax (or call in) the field information to the State Warning Point

Agency	Numbers	Agency	Numbers
State Warning Point ☐ Time _____	Voice: 800-320-0519 Fax: 850-488-7841	County HazWaste	Off: DC:
Florida DEP ☐ Time _____	State Warning Point	Other _____ ☐ Time _____	
Coast Guard ☐ Time _____	State Warning Point	Other _____ ☐ Time _____	

HAZARDOUS MATERIALS GROUP LEADER TACTICAL WORKSHEET

SPILL CONTROL

SPILL CONTROL MEASURES

Gas/Air	Liquid/Surface	Liquid/Water	Solid Surface
□ Monitor □ Ventilate □ Disperse □ Dissolve □ _____	□ Blanket □ Suppress □ Dike □ Divert □ Retain □ Neutralization □ Degradation □ Disinfection □ _____	□ Dam □ Underflow □ Overflow □ Filter □ Boom □ Absorbent □ Diversion □ Retain □ Collect □ _____	□ Cover □ Moisten □ Neutralization □ Degradation □ Disinfection □ _____

LEAK CONTROL

OFFENSIVE CONTROL MEASURES

(Assess all offensive actions for associated hazards and risk/benefit
Consider: Exposure, contamination, mechanical hazards, static, etc.…)

Tactic	Associated Hazards

FIRE CONTROL

Agent Selection

□ Class B Foam □ Dry Chemical □ Purple "K" (Potassium Bicarb)
□ Metal-X □ Carbon Dioxide □ Liquid Nitrogen (Argon or Helium)
□ Dry Sand □ Moist Sand □ Other: _____
□ Combination Agents _____ and _____

Foam Calculation

Foam Application Rate: 0.10 gpm/sq.ft. to 0.16 gpm/sq.ft.
Foam Induction Rate: 3% (0.03) Hydrocarbons and 6% (0.06)Polar Solvents

$$\frac{\text{Sq.ft.}}{\text{Sq.ft.}} \times \frac{\text{Application Rate}}{\text{Application Rate}} = \frac{\text{Finished Foam (gpm)}}{\text{Finished Foam (gpm)}} \times \frac{\text{Induction Rate}}{\text{Induction Rate}} = \frac{\text{Gallons Conc. per minute}}{\text{Gallons Conc. per minute}} \times \frac{30}{\text{mins}} = \frac{\text{Gal conc. needed}}{\text{Gal conc. needed}}$$

RECOVERY & TERMINATION

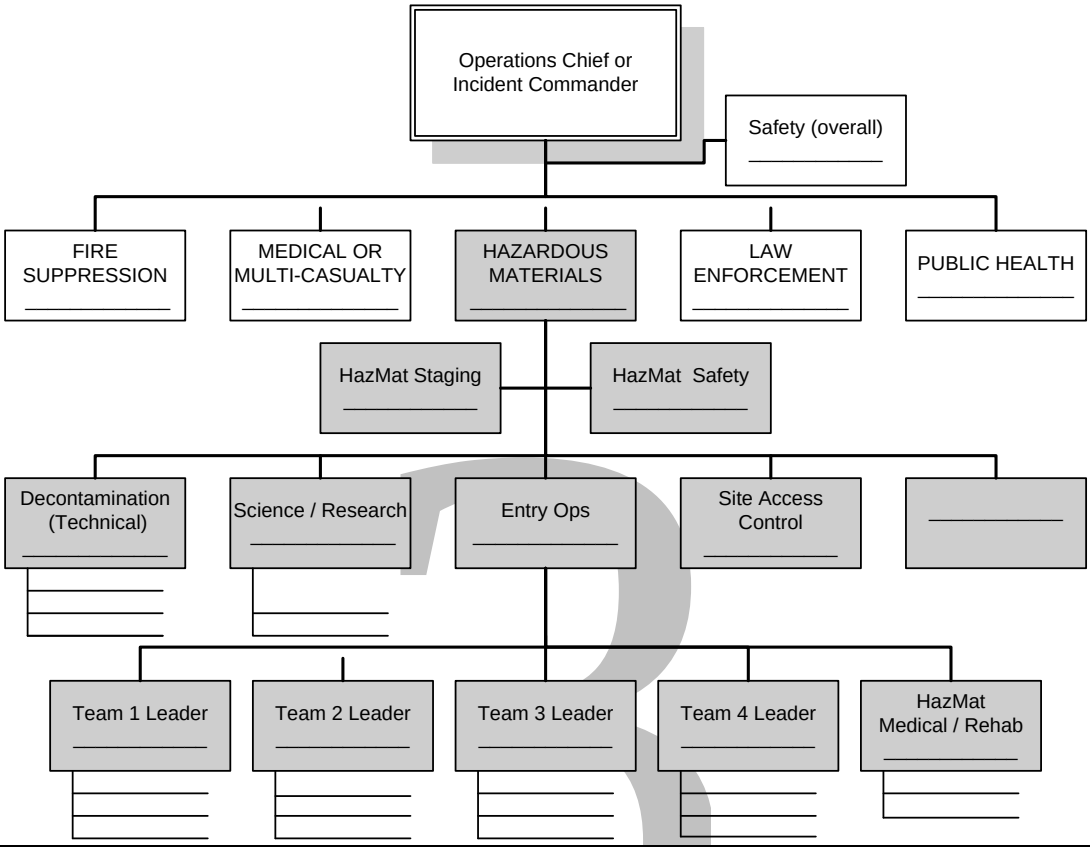
Document all Actions as Applicable	
Contractor Release	□ No IDLH environment □ Sufficient personnel □ Sufficient equipment □ Safety and Health Plan for Personnel □ DEP/HazWaste Oversight Comments:
Onscene Debriefing	□ Hazard Communication Briefing □ Medical Point of Contact □ Documentation Requirements (__111's, __214's) □ Other issues:
Cost Recovery	□ Document Manhours □ Identify expendable materials
PIA	□ Tailboard PIA □ Scheduled PIA □ Training Div. Involvment

HAZARDOUS MATERIALS GROUP LEADER TACTICAL WORKSHEET

INCIDENT COMMAND STRUCTURE AND COMMUNICATIONS

Communication Assignments

HazMat Group to Command: System _____ Channel(Talk Group) _____
Within the HazMat Group: System _____ Channel(Talk Group) _____
Entry Ops to Entry Team: System _____ Channel(Talk Group) _____
HazMat Group Reachback: System _____ Channel(Talk Group) _____
Other: _____ System _____ Channel(Talk Group) _____



INCIDENT SITE PLAN

Page 3 of 4

HAZARDOUS MATERIALS GROUP LEADER TACTICAL WORKSHEET

ENTRY CHECK-LISTS AND APPROVALS

EVALUATION ITEMS	ENTRY 1	ENTRY 2	ENTRY 3	ENTRY 4
Objectives Established				
Hazard Risk Assessment	□	□	□	□
PPE Selected	□	□	□	□
Decontamination Established	□	□	□	□
Medical / Rehab Available	□	□	□	□
Equipment Readied	□	□	□	□
Safety Plan Developed	□	□	□	□
Radio Check With Entry Team	□	□	□	□
Time	_____hrs	_____hrs	_____hrs	_____hrs
FINAL GO / NO-GO				
Entry	□ Go	□ Go	□ Go	□ Go
Medical	□ Go	□ Go	□ Go	□ Go
Decontamination	□ Go	□ Go	□ Go	□ Go
Site Access Control	□ Go	□ Go	□ Go	□ Go
Science / Research	□ Go	□ Go	□ Go	□ Go
Safety	□ Go	□ Go	□ Go	□ Go
Command “Permission for Entry”	□ Granted	□ Granted	□ Granted	□ Granted
Entry Approved	_____hrs	_____hrs	_____hrs	_____hrs

OPERATIONAL NOTES

Time	Major actions, occurrences or findings

Page 4 of 4

HAZARDOUS MATERIALS GROUP LEADER – TACTICAL WORKSHEET

INCIDENT #: _____ DATE: ____/___/___ PLAN DEVELOPMENT TIME: _____ OPERATIONAL PERIOD: __/__/__ _____hrs to __/__/__ _____hrs

RECOGNITION / IDENTIFICATION

Incident Description: _____

Material	Quantity	Hazard Class	Container Status

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SPILL CONTROL

SPILL CONTROL MEASURES

Gas/Air	Liquid/Surface	Liquid/Water	Solid Surface
☐ Monitor ☐ Ventilate ☐ Disperse ☐ Dissolve ☐ _____	☐ Blanket ☐ Suppress ☐ Dike ☐ Divert ☐ Retain ☐ Neutralization ☐ Degradation ☐ Disinfection ☐ _____	☐ Dam ☐ Underflow ☐ Overflow ☐ Filter ☐ Boom ☐ Absorbent ☐ Diversion ☐ Retain ☐ Collect ☐ _____	☐ Cover ☐ Moisten ☐ Neutralization ☐ Degradation ☐ Disinfection ☐ _____

LEAK CONTROL

OFFENSIVE CONTROL MEASURES

(Assess all offensive actions for associated hazards and risk/benefit
Consider: Exposure, contamination, mechanical hazards, static, etc….)

Tactic	Associated Hazards

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Agent Selection

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☐ Metal-X ☐ Carbon Dioxide ☐ Liquid Nitrogen (Argon or Helium)
☐ Dry Sand ☐ Moist Sand ☐ Other: _____
☐ Combination Agents _____ and _____

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RECOVERY & TERMINATION

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Onscene Debriefing	☐ Hazard Communication Briefing ☐ Medical Point of Contact ☐ Documentation Requirements (__111's, __214's) ☐
Cost Recovery	☐ Document Manhours ☐ Identify expendable materials
PIA	☐ Tailboard PIA ☐ Scheduled PIA ☐ Training Div. Involvment

HAZARDOUS MATERIALS GROUP LEADER – TACTICAL WORKSHEET

INCIDENT COMMAND STRUCTURE AND COMMUNICATIONS

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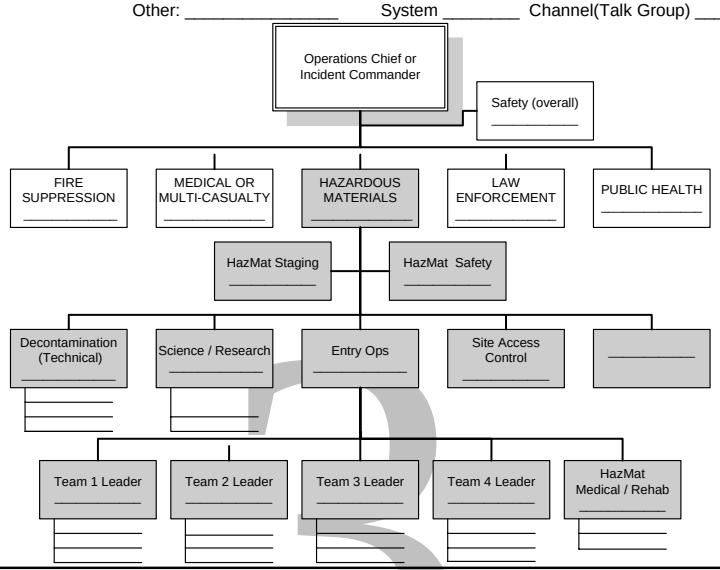


INCIDENT SITE PLAN

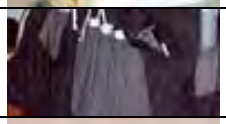
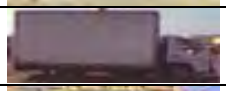
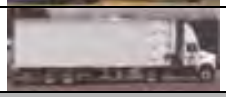
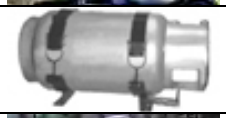
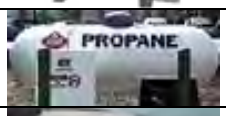
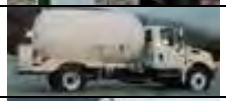
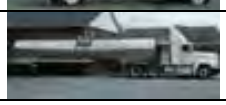
ENTRY CHECK-LISTS AND APPROVALS

EVALUATION ITEMS	ENTRY 1	ENTRY 2	ENTRY 3	ENTRY 4
Objectives Established				
Hazard Risk Assessment	☐	☐	☐	☐
PPE Selected	☐	☐	☐	☐
Decontamination Established	☐	☐	☐	☐
Medical / Rehab Available	☐	☐	☐	☐
Equipment Readied	☐	☐	☐	☐
Safety Plan Developed	☐	☐	☐	☐
Radio Check With Entry Team	☐	☐	☐	☐
Time	_____hrs	_____hrs	_____hrs	_____hrs
FINAL GO / NO-GO				
Entry	☐ Go	☐ Go	☐ Go	☐ Go
Medical	☐ Go	☐ Go	☐ Go	☐ Go
Decontamination	☐ Go	☐ Go	☐ Go	☐ Go
Site Access Control	☐ Go	☐ Go	☐ Go	☐ Go
Science / Research	☐ Go	☐ Go	☐ Go	☐ Go
Safety	☐ Go	☐ Go	☐ Go	☐ Go
Command “Permission for Entry”	☐ Granted	☐ Granted	☐ Granted	☐ Granted
Entry Approved	_____hrs	_____hrs	_____hrs	_____hrs

OPERATIONAL NOTES

Time	Major actions, occurrences or findings

Improvised Explosive Device (IED) Safe Standoff Distance Cheat Sheet

	Threat Description		Explosives Mass[1] (TNT equivalent)	Building Evacuation Distance[2]	Outdoor Evacuation Distance[3]
High Explosives (TNT Equivalent)		Pipe Bomb	5 lbs 2.3 kg	70 ft 21 m	850 ft 259 m
		Suicide Belt	10 lbs 4.5 kg	90 ft 27 m	1,080 ft 330 m
		Suicide Vest	20 lbs 9 kg	110 ft 34 m	1,360 ft 415 m
		Briefcase/Suitcase Bomb	50 lbs 23 kg	150 ft 46 m	1,850 ft 564 m
		Compact Sedan	500 lbs 227 kg	320 ft 98 m	1,500 ft 457 m
		Sedan	1,000 lbs 454 kg	400 ft 122 m	1,750 ft 534 m
		Passenger/Cargo Van	4,000 lbs 1,814 kg	640 ft 195 m	2,750 ft 838 m
		Small Moving Van/ Delivery Truck	10,000 lbs 4,536 kg	860 ft 263 m	3,750 ft 1,143 m
		Moving Van/Water Truck	30,000 lbs 13,608 kg	1,240 ft 375 m	6,500 ft 1,982 m
		Semitrailer	60,000 lbs 27,216 kg	1,570 ft 475 m	7,000 ft 2,134 m
	Threat Description		**LPG Mass/Volume[1]**	**Fireball Diameter[4]**	**Safe Distance[5]**
Liquefied Petroleum Gas (LPG - Butane or Propane)		Small LPG Tank	20 lbs/5 gal 9 kg/19 l	40 ft 12 m	160 ft 48 m
		Large LPG Tank	100 lbs/25 gal 45 kg/95 l	69 ft 21 m	276 ft 84 m
		Commercial/Residential LPG Tank	2,000 lbs/500 gal 907 kg/1,893 l	184 ft 56 m	736 ft 224 m
		Small LPG Truck	8,000 lbs/2,000 gal 3,630 kg/7,570 l	292 ft 89 m	1,168 ft 356 m
		Semitanker LPG	40,000 lbs/10,000 gal 18,144 kg/37,850 l	499 ft 152 m	1,996 ft 608 m

[1] Based on the maximum amount of material that could reasonably fit into a container or vehicle. Variations possible.
[2] Governed by the ability of an unreinforced building to withstand severe damage or collapse.
[3] Governed by the greater of fragment throw distance or glass breakage/falling glass hazard distance. These distances can be reduced for personnel wearing ballistic protection. Note that the pipe bomb, suicide belt/vest, and briefcase/suitcase bomb are assumed to have a fragmentation characteristic that requires greater standoff distances than an equal amount of explosives in a vehicle.
[4] Assuming efficient mixing of the flammable gas with ambient air.
[5] Determined by U.S. firefighting practices wherein safe distances are approximately 4 times the flame height. Note that an LPG tank filled with high explosives would require a significantly greater standoff distance than if it were filled with LPG.

Incident Rehab Worksheet

INCIDENT LOCATION: _____ INCIDENT NUMBER: _____ DATE: _____

Name												
Assigned Unit												
Initial Evaluation Time												
Blood Pressure												
Pulse Rate												
Respirations												
Temperature **[tympanic] [core] [oral]** Circle												
SpO2 Level												
SpCO Level**												
SpMet Level**												
Injuries	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
C/O illness	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
FF Hydrated?	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Treatment Given*	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
2nd Eval. Time (10 minutes from initial)												
Blood Pressure												
Pulse Rate												
Respirations												
Tympanic Temp.												
SpO2 Level												
SpCO Level**												
SpMet Level**												
3rd Eval. Time (20 minutes from initial)												
Blood Pressure												
Pulse Rate												
Respirations												
Tympanic Temp.												
SpO2 Level												
SpCO Level**												
SpMet Level**												
Return to Work Time												
[Initials of IC refusing recommendations]												

*If Medical Tx given see Patient Care Report
**If Equipment Available

Symptoms Requiring Transport to ER
Chest Pain
SOB
Dizziness
Altered Mental Status
Nausea

Parameters that must be met to be released
Temperature: Between 98.6° and 100.6°F
Heart Rate: <100bpm
Respiratory Rate: Between 12-20/min
Blood Pressure: Systolic <160 and Diastolic <100
Pulse Oximetry (SpO2): >91% on room air
CO Levels (SpCO): <10% of baseline
(parameters established by NFPA 1584)
Any signs or symptoms outside these parameters shall be sent to Treatment Area

*****NO PERSON SHOULD BE RELEASED FROM REHAB UNTIL CLEARED BY THE REHAB OFFICER**

* As Incident Commander I am overriding the recommendations made by the Rehab Officer by initialling above and take full responsibility of my actions by signing here: _____ print: _____

Rehab Officer: (Print) _____ (Signature) _____ Page ___ of _

TAB PAGE B

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM STANDARD OPERATING PROCEDURES MANUAL

ATTACHMENT B

DEPLOYMENT CHECKLIST

Deployment Checklist

Deployment Date: Return Date: Location of Deployment:

	PERSONAL SUPPLIES/EQUIPMENT		DEPT/TEAM SUPPLIES/EQUIPMENT
	Appropriate amount of Clothing		Dept/County Cell Phone w/charger
	Hygiene Kit (soap/toothpaste/etc)		Dept/County Fuel Card
	Sanitary Napkins		Dept/County Credit Card
	Toilet Paper		Dept/County Phone Contact List
	Q-Tips		Forestry Radio(s) w/spare batteries
	Medication (Prescription)		Portable Radio(s) w/spare batteries
	Sun Screen		Florida Field Ops Guide (FOG Manual)
	Lip Balm		Daily Apparatus Check Sheet(s)
	entertainment (books, chess, etc)		Dept Appropriate Injury Packet
	Sunglasses		Business Cards
	Insect Repellant		Portable GPS Unit
	Sleeping Bag/Ground Mattress		Pens/Pencils/Notepads
	Small Tent		Uniform(s) to include Hat and Rain Gear
	Garbage Bag (3)		Dept PPE (Structural Gear, PFD, Safety Vest)
	Dirty Laundry Bag (s)		SCBA Facepiece w/accessories
	Laundry Soap		Eye and Hearing Protection
	Bath Towel(s)		Work Gloves
	Ziploc Bag(s)		Dust/Filter Masks (ex: N-95)
	Flashlight W/Extra Batteries		Drinking Water
	Fire Starter (lighter, matches/candle)		Cans of Fix-A-Flat (or similar)
	Pocket Knife		State Mutual Aid Deployment Forms (SERP)
	Compact Folding Chair		-FFCA Form 214 (Unit Log) -FFCA Form 2 (Team Personnel List) -FFCA Form 3 (Personnel Emergency Contact List) -FFCA Form 4 (Expense Report Form)
	Food/Water for 72 hours		
	Cell Phone and Charger		
	$50.00 - $75.00 personal cash		
	Casual Clothing		ALS Equipment for Team Use (if available)
	Water Purifying Filter (tablets)		Basic BLS Kit to include the following:
	Personal first aid kit (Tylenol, ibuprofen, ant-acids, anti-diarrhea, cold medicine, etc)		-Antibacterial Solution -Hand Sanitizer -Assortment of Bandages -Assortment of Elastic Bandages -Cling -Triangular Bandages -Hot/Cold Packs -Assorted Rolls of Medical Tape -Assorted Sizes of Medical Gloves
	Identification		
LIST UPDATED SEPTEMBER 2011			

TAB PAGE C

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM STANDARD OPERATING PROCEDURES MANUAL

ATTACHMENT C

UNIT INVENTORY LIST

HAZ MAT 5		
CAB	**Third Shelf**	**Third Shelf**
Pinellas County Response Atlas	9 - 5 Gallon Containers of AR-AFFF	Hazmat Vests/Clip Boards
Master Map Book	**Fourth Shelf**	Jumpsuits
Portable Radio (FP-1077) w/shoulder mic	9 - 5 Gallon Containers of AR-AFFF	Radio Head Sets
MDT		Cool Vests
Door Opener	**COMPARTMENT 4**	**Bottom Drawer**
Insect Repellent (glove compartment)	**Top Shelf**	Assorted Nitrile Gloves
Streets and Courts Book	Roll of Visqueen	Silver Shield Gloves
Vehicle I.D.	2 - Hoses	Talc Powder
Vehicle Registration Packet(in red pouch)	Decon Water Manifold	Chem. Tape
Vehicle Red Book	**Second Shelf**	Duct Tape
Portable Charger	Crate with Hoses, nozzles, cones	8 - Sets of Goggles
Fire/Rescue Vest	Crate with Bleach, TSP, Spray bottle	Tyvek Booties
2-Ponchos	Crate with Fire line tape, HM tape,	N-95 Masks
Tractor Manuals (Red Pouch)	Brush heads, sponges, Terri wipes	Ice Packs / Hot Packs
Rescue Disc	Crate with simple green, ammonia,	
Roll red air hose	dawn dish soap, spic/span, sponges	**COMPARTMENT 7**
Binoculars	2 - 2-1/2 Gallon Pump Sprayers	**Top Shelf**
Status Board	Privacy Kits	Mercury Clean Up Kit
	Third Shelf	State Mutual Aid Radios
COMPARTMENT 1	Container with sponges, soap	**Second Shelf**
Generator	Container with pools	MSA Sirius Cal. Gas Kit
Large Trash Can	Container with assorted bags	Extractor IR
Cardboard Drum with Lid	body bag (white)	Mecury Vapor Analyzer
Box of Burlap	4 - 2 Gallon Bucket with Lids	ITX Cal. Gas Kit
Timberline Clamp 1/2" - 1"	5 - 5 Gallon Buckets with Lids	TVA 1000B Cal. Gas Kit
Timberline Clamp 1" - 2"	2 - 1 Gallon Evidence Cans with Lids	**Third Shelf**
	Bottom Shelf	Ludlum
COMPARTMENT 2	2 - DECON Line Cans	Raman Case
Top Shelf	1 - 30 Gallon Trash Can	Thermo Identifinder
2 - 1-1/2" Foam Eductors	12 - Orange Cones	Big Blue Sausage (scintillator)
1 - 2-1/2" Foam Eductor	Cooler with cool vest inserts	**Bottom Shelf**
Foam Midget		Bio Terrorism Bucket
Second Shelf	**COMPARTMENT 5**	Centech
Wagon	**Top Shelf**	Gas ID Case
Metal X Extinghuisher check exp. date	empty	Gas ID Pump Case
Third Shelf	**Second Shelf**	Hazmat ID Case
9 - 5 Gallon Containers of AR-AFFF	RIG Kit	
Fourth Shelf	RIG Sled	**COMPARTMENT 8**
9- 5 Gallon containers of AR - AFFF	4 - SCOTT SCBA	**All Shelves**
	4 - Spare SCOTT Bottles	6 - XL Level B Suits
COMPARTMENT 3		2 - XXL Level B Suits
Top Shelf	**COMPARTMENT 6**	2 - XXXL Level C Suits
2 - Folding Saw Horses	**Top Shelf**	4 - X XL Level C Suits
Folding DECON Walker	3 - Containers of SCOTT Masks	
8 - Folding Chairs	**Second Shelf**	**Glove Box**
Second Shelf	Tyvek Suits	2 - Cryogenic
Single DECON Tent	Tyvek Booties	6 - Neoprene
DECON Accessory Bag	6 - Hard Hats	8 - Butyl

HAZ MAT 5 (continued)		
Glove Box	**Bottom Shelf**	**Second Drawer**
1 - Box 4 mil. Nitrile	Drum Dolly	3 - Box Cutters
8 - Nitrile	Pneumatic Pump Hose	Seal All
6 - PVC	4 - 5 Gallon Buckets with Lids	Assorted Syringes
6 - Viton	95 Gallon Overpack Drum	**Third Drawer**
	55 Gallon Overpack Drum	Grounding Wire
COMPARTMENT 9	30 Gallon Overpack Drum	Air Hose Fittings
All Shelves		2 - Allen Wrench Sets(standard/metric)
2 - L Level A Suit	**COMPARTMENT 13**	Nylon Fittings
2 - XXL Level A Suit	**Top Shelf**	**Fourth Drawer**
4 - XL Level A Suit	Sand Bags	Spark Plugs
	Cribbing	Deep Sockets
COMPARTMENT 10	Utility Line	Breaker Bars
Top Shelf	2 - Road Triangle Markers	**Fifth Drawer**
7 - Cases Duo Dotes	**Second Shelf**	12 - Standard Screwdrivers
Red Drug Kit	Air Bag Kit	8 - Phillips Screwdrivers
First Aid Kit	Metal Dowel Kit with Wire Brush	2 - S shaped Screwdrivers
NG Tubes	Lockout/ Tagout Kit	**Sixth Drawer**
Bottom Shelf	Cromwell Kit C3 NS	10pc SAE Combo Wrenches
Hazmat IV Box #1	Cromwell Kit Drum & Tank Kit	17- Combo Wrenches
Hazmat IV Box #2	**Third Shelf**	**Seventh Drawer**
Hazmat IV Box #3	Leak Kit	1 - Channel Locks
1 - Case Lactated Ringers	5 - Cromwell Kits	1 - Lineman's Pliers
1 - Container Vegetable Oil & Charcoal	Plug & Dike	3 - Needlenose Pliers
NAAK Kit (locked) #_____	Soda Ash	1 - Wire Cutters
NAAK Kit 2-Pam & Atropine	Dry Chem. Powder	1 - Battery Wrench
	Bottom Shelf	4 - Standard Wrench
COMPARTMENT 11	Chlorine A Kit	6 - Vise Grip
Top Shelf	Chlorine B Kit	1 - Needlenose Vise Grip
6 - 5 Gallon Gas Cans	Chlorine C Kit	1- Flat jaw Vise Grip
Second Shelf	Folding table	1 - Gas Clamp Vise Grip
2 - Catch Pans		**Ninth Drawer**
4 - Turkey Pans	**COMPARTMENT 14**	Hacksaw with Blades
Large Funnel	**Tool Box**	12" Pipe Wrench
Bottom Shelf	**Top**	8" Pipe Wrench
6 - Bags Oil Dry	Claw Hammer	15" Crescent Wrench
Pnuematic pump	Ball Pein Hammer	12" Crescent Wrench
	Rubber Malllet	10" Crescent Wrench
COMPARTMENT 12	Bung Wrench	6" Crescent Wrench
Top Shelf	Foam Container Wrench	Metal File
Pipe Clamp Sleeves	Sm. Water Key	Tin Snips
Air Tools	Wire Brush	Valve Wrench
Grounding Kit	Pipe Cutter	**Tenth Drawer**
Compressed Air Cylinder Bonnets	4 - C Clamps	Various Rubber Plugs
3- MSA Air Bottles	**First Drawer**	**Eleventh Drawer**
	Electrical Tape	2 - Socket Sets
	Brass Filters	Drill Bit set
	Teflon Tape	
	Assorted Hose Clamps	

HAZ MAT (continued)		
Bottom Drawer	**DRIVERS' SIDE COFFIN BOX 2**	**Upper Compartment 1**
2 - Drills with Assorted Drill Pumps	Weather Pak	**Top Shelf**
2 - Cans WD 40	**DRIVERS' SIDE COFFIN BOX 3**	3 Liter Tedlar Bags
PVC Pipe Cleaner	Lg. Siphon Pumps & Assort. Hoses	1 Liter Tedlar Bags
PVC Pipe Glue	**DRIVERS' SIDE COFIN BOX 4**	Biological Sampling Kit
PVC Pipe Cutter	6 - Buckets of Absorbit	6 - 20/20 BioCheck Kits
Great Stuff Foam Sealent		1 - Box GasID sample tubes
Silver Shield Gloves	**OFFICERS' SIDE COFFIN BOX 1**	2 - M-9 Paper
Goggles	Brush Handles & Heads	2 - M-8 Paper
Lid Ring Nuts & Bolts	Squeeges	Spilfyter Strips
Large Socket Set	Wooden Dowels	Assorted Test Tubes with lids
Funnels	Visqueen	Cocaine Test Kit
V-Vac Suction	**OFFICERS' SIDE COFFIN BOX 2**	Pesticide Detection Kit
Assorted Hand Pumps & Hoses	80' Water Boom	Sampling Pipets
3 - Tire Irons (Sm, Med, Lg)	**OFFICERS' SIDE COFFIN BOX 3**	Alcohol Swabs
Gas Key	80' Water Boom	Large pH Strips
Manhole Puller	**OFFICERS' SIDE COFFIN BOX 4**	Copan Swabs
Barrel Pump	Land Booms	**Bottom Shelf**
Sampling Cup	5 - Bags Absorbent Blankets	Assorted Hazmat Labels
On Top of Bottom Drawer		Drager Tubes(check Exp. Dates)
2 - High Pressure Air Bags	**COMMAND BOOTH**	2 - Drager Pumps
2 - Jack Stands	**Desk Top (Computer Center)**	Rubbing Alcohol
Floor Jack	Laptop Computer	Hand held Lighter
Hand Saw	Printer	Sm. Black Bag with Assort.
Container with Glass Tubes & Dowels	Weather Pak Base Station	Hand Tools & Rad. Sources
Mechanic's Creeper	**Desk Area (Work Station Area)**	
	Mobile Radio	
COMPARTMENT 15	Portable VHF Radio & Charger	
2 - Step Ladders	SCOTT TIC Battery Charger	
2 - Push Brooms	Portable Radio Charger	
2 - Corn Brooms	3 -Spare Radio Batteries	
1 - Squegee	3- Port. Radios(FP 1077,1078,)	
2 - Handles w Brush Heads	4 - HazMat ID Batteries & Charger	
3 - Plastic Scoop Shovels	**Meter Cradle**	
1 - Brass Shovel	3 - Gas Alert HCN (0ne on E-5)	
1- Metal Scoop Shovel	2 - ITX Multi-Gas Meters (chargers)	
2 - Round Shovels	Tiff 8800 Gas Meter (charger)	
1 - Square Head Shovel	1 - Gas Badge Pro (Ammonia)	
2 - Brush Heads	1 - Rad-57 CO-Oximeter	
1 - Dust Pan	1 - MSA Sirius Meter (charger)	
2 - Grounding Rods	**Work Area (Miscelleous)**	
1 - Grounding Rod Hammer	2 - White Boards	
1 - Canopy Hook	IMS Board (on door)	
1 - Sampling Cup with Handle	2 - Chairs	
	1 - Trash can	
DRIVERS' SIDE COFFIN BOX 1	1 - Port. AC Unit Controller	
Scoop Shovel		
Weather Pak Stand		
10' Extinghuisher Pipe		

HAZ MAT 5 (continued)		
Upper Compartment 2	**Compartment 4**	
Top Shelf	1) Hazmat NFPA pocket guide	
SEMS Station	2) Symbol Seeker	
2 - Canberra Ultra Radiac	3) Hazmat Field Guide	
2- Monitor 4	4) Jane's CHEM-BIO Handbook	
5 - Pager S's	5) 1st Responder Chem-Bio Hndbk	
Bottom Shelf (Meter Books)	6) 2000 TLV's & BEI's	
1) Drager Tubes	7) Guide Occup. Exposure Values	
2) Gas Badge (Ammonia)	8) FL. Incident Field Ops. Guide	
3) Pager S's	9) Emerg. Response to Terr. Job Aid	
4) Tiff 8800	10) Emerg. Response to Terr. Job Aid	
5) Gas Alert (HCN)	11) Chemical Incompatibilities	
6) Jerome Mercury Vaper	12) Webster's Dictionary	
7) Canberra	13) Chemical Protective Clothing	
8) ITX Multi-Gas	14)Haztox (EMS)	
9) APD 2000	15) Emerg. Care for Hazmat Exposure	
10) Ludlum Radiation	16) 2008 ERG	
11) MSA Sirius Multi-Gas	17) NIOSH Pocket Guide	
12) HazmatID User Guide	18) FF Hazmat Reference Book	
13) HazmatID Qual ID Appl. Software	19) Fire Protection Guide to Hazmat	
14) GasID	20) Emerg. Handling of Hazmat	
15) Responder RCI (RAMAN)	21) Farm Chemical Handbook	
16) TVA 1000B	22) Gardner's Ch. Syn. & Trade Names	
17) Guidebooks & Manuals	23) Condenced Ch. Dictionary	
18) Weather Pak	24) Handbook of Reactive Ch. Vol. #1	
19) SCOTT Air Packs	25) Handbook of Reactive Ch. Vol. #2	
Upper Compartment 3	26) City Phone List	
TIC	27) Gulfstream Natural Gas	
Spare Batteries	28) Biological Response Guidebook	
Port. Camera	29) Hazmat Checklist Forms	
	30) PPE Guidebook	
RECON BASKET	31) Pinellas County Hazmat SOP's	
Lg. pH Paper	32) SARA Title III facilities QRS book	
M-9 Paper	33) Hazmat Clean up Contractors	
M-8 Paper		
pH Paper	**Compartment 5**	
Water Detection Paper	empty	
Spilfyter Strips		
Assort. Collection tubes/containers	**Compartment 6**	
Flourine Test Strips	misc. office supplies	Updated September 2011
Sterile Water		
Raytek	**Compartment 7**	
	empty	
	Compartment 8	
	misc. office supplies	

HAZ MAT UTILITY 5		
CAB	**MIDDLE SHELVE FRONT WALL**	
1- Fire Extinguisher	1- Red box w/ fluid transfer pump	
1- Box Nitrile gloves		
1- Book M-8 Paper	**BOTTOM SHELVE FRONT WALL**	
1- Wisk broom	2-55 Gallon drum 3-6% AFFFF Foam	
1- Wool blanket	1- Drum dolly	
1- Emergency Response Atlas	1- Bung wrench	
1- City of St Petersburg hydrant map book	1- AFFF Foam wrench	
1- Streets & Courts book		
1- Daily (F-76) check off book	**DRIVERS SIDE TOP SHELF**	
2- Rain coats	1- Medium expansion foam nozzle	
1 Emergency Response Guide	1- 15 gallon cardboard container	
	1- Submers pump w/solution & hose	
PASSENGER SIDE REAR	1- GFI cord & box	
1- Versa Mist	1- Anchor kit DECON Shelter	
2- Yellow over pack drums	Tie down straps	
12-Water booms (inside over pack drum)	1- Box 40 watt lights for DECON tent	
	2- 9” Funnels	
TOP SHELVE PASSENGER SIDE		
	DRIVERS SIDE MIDDLE SHELF	
1- Box Medi-Pak Shroud Kits (38)	4- Black bags w/each containing 10	
1- Box of emerg blankets, 60” x 90” (39)	battery powered SCOTT V	
4- Boxes of Doff-it privacy kits (20 each)	Air Purifying Respirator Kits	
1- Boots & Coots nozzle	1- Electrical cord	
	Visqueen outer floor mass DECON tent	
MIDDLE SHELVE PASSENGER SIDE	1-each hot & cold water hoses w/ 2	
1- Box Level C suits XXXL	nozzlesfor mass DECON tent	
1- Box Level C suits XXL		
1- Box Doff-it privacy kits (20 each)	**DRIVERS SIDE BOTTOM SHELF**	
1- Box Medi Pak Shroud Kits (10)	18- 5 Gal containers 3-6% AFFF foam	
	1- Mass DECON tent with floor	
BOTTOM SHELVE PASSENGERSIDE	1- Flash heater sys/mass DECON tent	
4- 10’ Land booms in cardboard drum	2- Connector pipes for hoses & nozzles	
1- Cardboard drum	for mass DECON tent	
1- Roller for Mass DECON tent	1- Individual, folding stretcher	
with 1 patient board		
2- Aqua flex bladder tanks (2,000 gallons)		
1- Floor basin for DECON tent		
(model XBU-44-T)		
1- 5 gal of Spilfyter Decon solution #1		
1- 5 gal of Spilfyter Decon solution #2		
1- 5 gal of Spilfyter Decon solution #3		
1- 5 gal of Spilfyter Decon solution #4		
1- 5 gal of Spilfyter Decon solution #5		
TOP SHELVE FRONT WALL		
4- Boxes Doff-It Privacy Kits (20 each)		Updated September 2011

HAZ MAT 29		
CAB	**4B**	**COMPARTMENT 7**
Ignition Keys	2 RUBBER MATS ROLLED	**7A**
Bay door closers / openers	1 BOX GROUNDING KIT	1 FOG NOZZLE AND EDUCTOR
Accountability Board	1 BOX ICS VESTS/SNAP PACKS	1 PUMP
Radio	1 BOX RESEARCH BOOKS	1 DECON POOL
Freightliner Manual	**4C**	**7B**
Panasonic MDT	2 SO_2 GASKET BOXES	4 FUEL CONTAINERS
Binoculars with case	1 PATCH KIT	6 FLAT LEAK CONTAINERS
2 Cell phone chargers	1 PLUG KIT	5 SIPHEN PUMPS
Assorted maps	1 Cl A KIT	1 ROLL CLEAR ½" HOSE
ERG	1 Cl B KIT	**7C**
Emerg Resp to Terrorism Job Aid	1 BOX RAILROAD CHOCKS	1 ROLL VISQUEEN
Accident / Injury Response Kit package		1 BOX CONTAINING FLOTEC PUMP
Lap Top with case and accessories	**COMPARTMENT 5**	1 CO EXTINGUISHER
	5A	1 METEL POWDER EXTINGUISHER
COMPARTMENT 1	3 BROOMS AND HANDLES	1 ABC DRY CHEM
GENERATOR	2 FLAT SHOVELS	
1 GANGBOX	2 SQUEEGEE HEADS	**COMPARTMENT 8**
Canopy Handle	2 GROUNDING RODS	200 GAL FOAM TANK
Trailer Landing gear handle	1 LARGE SHOVEL	PUMP
	5B	2 ROLLS CLEAR HOSE
COMPARTMENT 2	1 STEP LADDER	2 ROLLS QUICK CONNECT HOSE
2 POWER CORD REELS	2 BROOM HANDLES	
1 HAZCAT	**5C**	**COMPARTMENT 9**
1 SKIMMER	4 SCBA BOTTLES AND PACKS	**9A**
1 YELLOW EXTENSION CORD	VARIOUS PVC PIPE	AWNING CURTAINS
1 BOX FILTER SUPPLIES (WET VAC)		**9B**
1 Cool Mist Fan	**COMPARTMENT 6**	COMPRESSOR
	6A	
COMPARTMENT 3	1 BOX BIO CHECK TEST KITS	**COMPARTMENT 10**
3A	1 BOX COLORMETRIC TUBES	**10A**
10 BAGS ABSORBENT	M9 paper	4 ALUMINIZED SUIT COVERS
1 Bag Liquick	2 PKGS VI-PAK	**10B**
2 BAGS BIO CELL TECHNOLOGIES	2 BOX VARIOUS WOOD PLUGS	2 PATIENT LITTERS
2 BAG ABORB-IT	**6B**	1 SKED
3B	1 WET VAC	**10C**
VETTER SYSTEM COMPLETE	1 BOX AMMONIA W/SPRAY BOTTLE	2 REHAB CHAIRS
7 TRAFFIC CONES	1 BOXES VARIOUS PLUGS	1 BLEACH
1 OVERPACK DRUM/BOOMS	**6C**	3 SOAP
1 CONTAINER LIQUICK	1 TOOL BOX STANDARD TOOLS	HYDRAULIC GAS CLAMP
2 - 5 GAL SODIUM BICARB	1 BOX SPECIALTY TOOLS	1 TUB ATROPEN
	1 TOOL BOX PLUMB TOOL/FITTINGS	
COMPARTMENT 4	1 TOOL BOX PVC VALVES/FITTINGS	
4A	1 BOX PIGTAILS	
2 ROLLS BOOMS		
1 BAG BURLAP ABSORBANT PADS		

HAZ MAT 29		
COMPARTMENT 11	**14D**	
11A	16 BOOTS	
MISTING COOLER W/ FAN	BOX BOOT COVERS	
WATER COOL	**14E**	
CRYO KIT	SCBA MASKS	
SCOTT SCBA SEMS & MAINTENANCE KITS		
11B	**COMPARTMENT 15**	
16 SCBA BOTTLES	**15A**	
RIT BAG	1 BOX RADIOLOGICAL SUPPLIES	
KWIK COOL A/C	1 BOX DRESSING SUPPLIES	
	15B	
COMPARTMENT 12	AMMONIA METER	
12B	TEST GAS	
4 SCBA PACKS	TEST REGULATOR	
12C	MERCURY SPILL KIT	
4 SCBA PACKS	SPILFYTER	
	2 BOXES PERSONAL RAD MONITORS	
COMPARTMENT 13	CALGAS	
13A	**15C**	
8 LEVEL B ENCAPSULATED SUITS	BOX LIGHT	
6 LEVEL B NON-ENCAPSULATED SUIT	RADIATION MONITORS	
13B	HAZCAD	
7 LEVEL A SUITS	TVA 1000	
13C	RADIOLOGICAL METER	
2 DRESS BOXES	**15D**	
	2 RADIO BANKS	
COMPARTMENT 14	3 MUTUAL AID RADIOS	
14A	1 BOX LIGHT	
6 NON-ENCAP CHEMICAL COVERALL	1 CAMERA	
2 BOXES OF TYVEK SUITS	1 CELL PHONE	
GREEN BIN (VEG. OIL / KY) CHARCOA	1 BOX SPARE "C" BATTERIES	
14B	1 BOX SIRRUS DETECTORS	
NAAK	**15E**	
BLUE BOX MARK I'S - 80	2 WHEEL CHOCKS	
BOX 72 0.5mg ATROPINE	7 FOLDIING CHAIRS	
BOX LR - 14		
EMS BAG	**COMPARTMENT 16**	
1 BOX NS 500 CC (14)	WATER TANK	
1 BOX NS 1000 CC (24)	WATER PUMP	
EMS SUPPLIES		
14C		
ASSORTD CHEM RESISTANT GLOVES		
8 PAIRS LEATHER GLOVES		
NITRILE GLOVES		
		Updated September 2011

HAZ MAT 33		
CAB	**COMPARTMENT 4**	**COMPARTMENT 7**
1 cell phone	Pool skimmer	150 ft of 5/8” hose on electric reel
1 portable radio with charger	4 MSA Safe Sites with chargers	Spare 5 gallon buckets
1 digital camera	1 MSA Safe Site receiver	1 leak kit
1 Panasonic computer	2 MSA Sirius meters with chargers	1 emergency stretcher
1 set of binoculars	1 Dell laptop with charger	1 saw horse
1 clipboard	1 Drager pump	Absorbit
Passport board	3 personal radiation meters	
NIOSH guide book	2 Canberra Radiac monitors	**COMPARTMENT 8**
911 Atlas	1 Ammonia Gas Pro Meter	WMD decon tent
Hackney and Volvo service manuals	3 Ludlum radiological meters	WMD floor for tent
Hazmat SOPs	Mercury spill kit	WMD floor grid system
DOT guide book	Decon shower	WMD stretcher rollers
FOG manual	Chlorine A kit	8 traffic cones
	Chlorine B kit	Tarps for tent
DRIVERS SIDE	1 Sulfur dioxide kit for tankers	35 gallon drum
COMPARTMENT 1	1 Sulfur dioxide kit for containers	4 25 ft sections hose for trans pump
150 ft electric cord reel	1 large diameter pipe clamp	1 saw horse
1 misting fan	2 lid loc kits	
1 - 15 gpm transfer pump	1 lid tight dome clamp	
1 – 150 gpm transfer pump		**OFFICER SIDE**
tool box with assorted air line and	**COMPARTMENT 5**	**COMPARTMENT 1**
pump fittings	3 life vests	7 KW generator
	1 body bag	assorted electric pig tails
COMPARTMENT 2	4 red marker flags	reflector kit
5 level A suits	50 disposable blankets	1 water extinguisher
7 level B suits	4 Safe sites with chargers	1 CO2 extinguisher
4 level C suits	6 spare batts/chargers for Safe site	1 dry chem.extinguisher
1 emergency stretcher	3 Icom portable radios	
boot covers	1 Scott SEMS system	**COMPARTMENT 2**
water manifold	1 tool box with calibration equip	Jumper cables for generator
	1 tool box w/Safe site accessories	Shore line
COMPARTMENT 3	Assorted calibration gases	2 large spray containers
4 Scott air bottles	4 Sirius belt bridges	Mark 1 kits
2 hand bilge pumps	3 - 1 gallon evidence cans	Cyano kit
3 level C suits	3 - 1 quart evidence cans	medical bag
4 level B suits		
1 scoop stretcher	**COMPARTMENT 6**	
latex gloves	180 gallons of ATFF/ATC foam	
chemical tape	1 folding chair	
3 hand fuel pumps	1 - 25 ft section of 1½ hose	
extra tubing for pumps	1 - 50 ft section of 1½ hose	
floor runner		

HAZ MAT 33 (continued)		
COMPARTMENT 3	**COMPARTMENT 5**	
3 brushes with hose adaptors	3 - 32 gallon trash cans	
flat head axe	2 flat shovels	
come-a-long	assorted boom and absorbent	
folding table	small over pack drum	
leaf skimmer	spare 5 gallon buckets	
3’ pipettes		
sledge hammer		
plastic needle nose pliers	**COMPARTMENT 8**	
20/20 test kits	cooler	
pesticide test kits	cups	
PCB screening kits	2 saw horses	
5 decon pools	Sked	
scrub brushes	dike and plug compound	
sponges	2 orange box lights	
plastic trash bags	suit tester	
1 roll plastic sheathing	3 – 5 gallon buckets of Bicarb	
small dolly	2 – 5 gallon buckets of soda ash	
1 Hazcat kit	4 Scott SCBAs	
Hazcat manuals	RIT kit	
1 medical box	4 APR filters	
test tube holder	4 PTT kits	
spill fighter		
NIOSH guide		
PH paper		
M8 paper		
M9 paper		
PPE for Hazcat kit		
Copan swabs		
Hazmat scene tape		
duct tape		
COMPARTMENT 4		
4 round point shovels		
2 brooms		
2 non sparking shovels		
2 pool skimmers		
1 squeegee		
leak kit		
lock out tag out kit		
grounding and bonding kit		Updated September 2011
disposable decon kit		
assorted decon supplies		
100 ft of ¼” nylon rope		
1 pump up sprayer		
1 folding chair		

HAZ MAT 38		
CAB	VHF Radio	**(Bottom Right)**
CO2 Extinguisher	GPS Hand held (Magellan)	(2) Mercury spill kit
ABC Dry Chem. Extinguisher	Portable Radio	(2) Digital Radiological Monitors
Whisk Broom	Flip Chart	(1) Ludlum monitors
Handle for lowering awning	Wall File (Manuals and Checklists)	(2) Civil Service rad monitors
Bottle Jack		**(Bottom Middle)**
Tool Bag for Bottle Jack	**H38 Walls**	5-Gallon gas can
Road Hazard Kit	Nextel	TVA 1000
(5) Safety Glasses	(2) Mobile Radios	APD 2000
(5) Safety Goggles	HAZMAT Contractors List	Siphon pump
Yellow Pig Tail	Directions for Fax Machine	NAAK Bin (Sealed)
Spot Light	Railroad Placards Chart	Folding Gurney
	Unidentified Material Flow Chart	Folding Luggage Cart
Refrigerator	Biological Weapons Agent Chart	Large Siphon Pump
Batteries (AAA, AA, C, D, 9-Volt)		Back Pack Frame (Hapsite)
Sharps Container (1 Quart)	**Rear Compartment**	Blue Tote (Boots)
	(Upper Left)	5 – gallon Gas can
Rest Room	HAZMAT Med Kit(Red Jump Bag)	(2) 5 – gallon Plastic buckets
HAZMAT Weather Log	Green Tote(Veg Oil, Insta Char,KY)	(2) Clean Paint cans
Decon Supply Tub (Bleach, Ammonia,	**(Middle Left)**	PCHMT “NAAK” Cooler
Vinegar, Dawn, Lysol, DCS200N, H2O)	Blue Tote(Priv Suits, Disp. Blankets)	H38 “Test Kit” (Plano Box)
Broom	Blue Tote (IV Fluids)	Lab Pack (Cleaning Supp/Cont)
	(Bottom Left)	
H38 Interior of Vehicle	(4) Orange Boots	**Upper Cabinet #1**
BTA Guardian	(2) Cyanokit	Sax's Dang Prop Ind Mats Vol.1,2,3
(2) SCBA (Scott) Tanks Only	Propane Regulator	Gardener's Chemical Synonyms
Emergency Action Data	Clear Tote	Common Sense Approach HAZMAT
Emergency Action Guides	Salvage Cover	HandBk React Chem Hazards Vol.1,2
CHRIS Manual A - C	Boot Covers	Condensed Chemical Dictionary
CHRIS Manual D - L	Nitrile Gloves	Guide Hazardous Props Chem Subs
CHRIS Manual M - P	Neoprene Gloves	Firefighters HAZMAT Ref Book
CHRIS Manual R - Z	Chem. Tape	2000 TLV's and BEI's
HAZCAT Kit	White Tyvek C Suits	Quick Sel Guide Chem Prot Clothing
HAZCAT Flow Sheets (Solids)	Blue Tote (Cleaning Supplies)	Guide to Occ Exposure Values 2000
HAZCAT Flow Sheets (Liquids)	N95 Masks (Large)	WMD Target Analysis,Vulnerability, and Risk Management
HAZCAT User's Manual	N95 Masks (Medium)	Handling Hazardous Materials
HAZCAT Abridged Manual	**(Upper Right)**	Fire Chemistry 1
HAZCAT Abridged Manual / Field Use	(1) Level A Entry Suits	Farm Chemical Handbook 2001
Radiation Monitors in Case	(7) Level B Entry Suits	Fire Prot Guide to Haz Mat
Dell Laptop Computer (Hapsite)	**(Second Shelf Right)**	Emerg Handling of Haz Materials
Battery Charger (Hapsite)	All personnel Scott Masks	
(2) NiMH Batteries (Hapsite)	**(Third Shelf Right)**	
Hapsite	(2) Scott Airpacks	
Head Space (Hapsite)	Scott Rig Bag	
Dell Printer		
Dell Laptop Computer		

HAZ MAT 38		
Upper Cabinet #2	**Upper Cabinet #3**	**Upper Cabinet #6**
Air Products Pre- Plan	Pinellas County HAZAT SOP's	Spilfyter Chemical Classifier Strips
Air Products MSDS Update	EPA Standard Operating Guidelines	(1 Bin) Sample collection supplies
Pinellas Mosquito Control MSDS's	HazCat MSDS Book	BTA Ricin test
Diversion Route Maps	Hapsite Manual	BTA Anthrax test
Circuit Concepts Inc. Emergency Plan	Alkanolamines Handbook	BTA Orthopox
Honeywell Emergency Plan	Hapsite User's Guide	BTA Brucella test
AMP Inc. Emergency Plan	Aloha Manual	BTA SEB test
(2) Tampa FD Mutual Aid Plan	Marplot Manual	BTA Plague test
Bic Graphic Emergency Plan	UAP Clean Crop Spec Label/MSDS	PH Paper
AMMOCO Emergency Procedures	Drug Lab Guidelines	Protein 20/20 Kit
CSX Emerg Resp to Railroad Incidents	SBCCOM Info Sheet	Chem256A Test Kit
E – Systems Inc. Emergency Plan	Recog/Mgmnt of Pestcde Poisoning	(3) Suture Removal Kits
Henefeld Emergency Plan	First Aid Manual / Chem Accidents	Duquenois – Levine reagent
Blue Dolphin Pools Emergency Plan	HAZ TOX	PCP/Methaqualone reagent
GATX Tank and Freight Car Manual	HAZMAT Injuries	Cocaine Salts and Base reagent
National Tank Truck Commodity Sheets	Terrorism Handbook	Aphetamine/Barbituate reagent
Largo Waste Water Treatmnt EmerPlan	Preparing for Biological Terrorism	Marijuana/THC/Hashish reagent
1995 PCounty Vulnerability Analysis	Preparing for Terrorism	(10) Bio Check test kits
DYCO Paints Emergency Plan	USAMRICD Medical Management of Chemical Casualties	M8 Paper
Mangrove Bay Office Centre Emergency Plan	USAMRICD Field Management of Chemical Casualties	**Upper Cabinet #7**
Monsanto Product Labels	First Responder Chem. Bio. Handbook	Heat gun
Monsanto Product Catalog	Jane's Facility Security Handbook	Environmental Yellow Pages
MSDS Pocket Dictionary	Jane's Chem. Bio. Handbook	Verizon White Pages
National Foam Quick Reference	(2) Emergency Response to Terrorism Job Aid	Verizon Yellow Pages
FEMA Rail yard Guidance Book	Environmental Law Handbook	Pinellas County Emerg Resp Atlas
CSX Common Causes of Leaking Tank Cars	Webster's Dictionary	Pasco County Street Finder
Radiological Emergency Handbook	Emergency Response to Terrorism Student Manual	Hillsborough County Street Finder
Rohm and Haas Tank Car Guide	Medical Guidelines for Acute Chemical Exposure	School Crisis Manual
Aircraft Rescue and Firefighting Guide Book		Grid Book
Alkanolamines Safety Guidelines	**Upper Cabinet #4**	(2) Apartment Guide
Caustic Soda Handbook	Digital Camera	Pinellas County Telephone Directory
Chlorine Handbook	(2) Sensidyne Hand Pumps	Emerg Response to Terrorism Job Aid
Crop Protection Products MSDS Book	Draeger Tubes (multiple)	Emergency Response Guide Book
Cythion Insecticide Guide Book	(4) Draeger WMD sample kit/case	Niosh Pocket Guide
Hydrochloric Acid Handbook		Accountability Board
Hydrogen Peroxide Guidebook	**Upper Cabinet #5**	(2) Safety Vests
1999 Tychem Permeation Guide	(2) Dosimeters (Canberra)	(2) HAZMAT Vests (Green)
GATX Tank Car Manual	(4 Boxes) Dosimeters (old style)	(1) Staging Vest
	(5) Radiation Pager	(1) Sector Vest
		Binoculars

HAZ MAT 38		
Lower Cabinet #1		
Dell Ink Cartridges (2-Black, 2-Color)		
Hapsite Tools		
Hapsite Manuals		
Lower Cabinet #2		
MSA Combination Cartridges		
Lower Cabinet #3		
Miscellaneous Office Supplies		
Lower Cabinet #4		
Internal Standard #1 Gas		
Carrier Gas		
Lower Cabinet #5		
CD/DVD Case with Discs		
HAZMAT Forms 001		
HAZMAT Forms 002		
HAZMAT Forms 003		
HAZMAT Forms 004		
HAZMAT Forms 005		
HAZMAT Forms 006		
HAZMAT Forms 007		
HAZMAT Forms 008		
HAZMAT Forms 009		
HAZMAT Forms 010		
HAZMAT Forms 011		
HAZMAT Forms 012		
HAZMAT Forms 013		
HAZMAT Forms 014		
Haz Materials Contractors Info Sheet		
Antrax Info		
Lower Cabinet #6		
(SEMS) Scott Evac System		
Lower Cabinet #7		
Tedlar Bags		
Toilet Paper		
Gilian Air Sample Pump		
Manual Air Sample Pump		
		Updated September 2011

HAZ MAT UTILITY 38		
CAB	**COMPARTMENT P1**	
1- Portable radio	Gas cans	
1- Grid book	Baking soda	
Foam trailer manual	Air fill stortz adapter	
	LP regulator	
COMPARTMENT D1	Manual siphon pump	
2- 5 gal. Gas cans	Clamp hitch	
Tyvex Booties	Stair chair	
Exam gloves	Small hand dolly	
N95 masks	Emergency road kit	
Red bio bags	Gray pan w/ assortment of tapes	
2- Rolls of Chem tape		
Nitrile gloves	**COMPARTMENT P2**	
Collection tongs	Decon/ Wash down bin	
Goggles	Small over pack drum	
Tyvex coveralls (box)	Broom	
Yellow booties	5gal. Drain pan	
2(pairs) Rubber boots		
Yellow hazardous material bags	**COMPARTMENT P3**	
Garbage bags	Plug kit	
3- Petroleum hand siphon pumps	Gas cans	
2- B suits	Sulfur dioxide gasket kit	
Air sump pump (reg,air hose,siph hose)	Chlorine kits (A & B)	
Inflatable pool		
COMPARTMENT D2		
Over pack drum		
Booms		
COMPARTMENT D3		
Paint cans		
Absorbents pads		
Test kit		
REAR		
Assortments of absorbents (3 types)		
Burlap absorbent bags		
		Updated September 2011

HAZ MAT 66		
CAB	**COMPARTMENT L5**	**COMPARTMENT R7**
Pinellas County Response Atlas	***TOP SHELF***	***TOP SHELF***
Master Map Book	Misting Fan	5 Gallon Bucket
Portable Radio (FP-1077) w/shoulder mic	Step Stool	***MIDDLE SHELF***
MDT	***MIDDLE SHELF***	Foam Midget
Door Opener	85 Gallon Overpack Drum	Foam Pickup Tube
	-filled with boom	Low Expansion Foam Nozzle
COMPARTMENT L1	Hand Truck	High Expansion Foam Nozzle
Decon Tent Flooring	SKED	***BOTTOM SHELF***
100' Power Cord	***BOTTOM SHELF***	Decon Unit Water Heater
SCBA Masks	Class D Fire Extinguisher	
COMPARTMENT L2	CO2 Fire Extinguisher	**COMPARTMENT R6**
TOP SHELF	Water Fire Extinguisher	***TOP SHELF***
Glove Box	Roll Visqeen	Cases of Decon Privacy Suits
Bunker Gear Storage		***MIDDLE SHELF***
Cyanokit(s)	**COMPARTMENT L6**	Decon Tent
BOTTOM SHELF	***TOP SHELF***	Decon Shower Plumbing
Bunker Gear Storage	Weather Station w/spare Batteries	***BOTTOM SHELF***
	MIDDLE SHELF	Decon Floor Bladders
COMPARTMENT L3	Soda Ash	
TOP SHELF	Sodium Bicarb	**COMPARTMENT R5**
HEPA Vaccum	Pig Absorbant	***TOP SHELF***
Vaccum Hoses and Assorted Tips	***BOTTOM SHELF***	Cases Decon Shrouds
BOTTOM SHELF	Cooler	***MIDDLE SHELF***
Level A - Gastight Entry Suit	***FLOOR***	Decon Conveyor
Pair Boots	Hand Pump Sprayer	85 Gallon Overpack Drum
Boot Covers	Weather Pack Tripod	- w/Decon Tent Materials
TOP DRAWER	Torpedo	***BOTTOM SHELF***
Suit Pressure Test Kit	EZ Up Tent	Decon Kit Stretcher
MIDDLE DRAWER		Folding Stretcher
Level B - Entry/Decon Suit	**COMPARTMENT L7**	
Level C - Entry/Decon Suit	Absorbant Materials	**COMPARTMENT R4**
BOTTOM DRAWER		***TOP SHELF***
Latex Gloves	**COMPARTMENT L8**	5 Gallon Empty Fuel Can
Entry Gloves	180 Gallon Foam Tank	Hand Pump
Chem Tape	Hose Reel - Water	Grounding/Bonding Kit
	Decon Tent Liner	***MIDDLE SHELF***
COMPARTMENT L4	Decon Pools	Bucket Gap Seal
Backboards	Extra Garden Hose	MSA Sirius CGI
Decon Belt Slide		APD 2000
TOP SHELF	**COMPARTMENT R8**	Wooden Plugs
Salvage Cover	180 Gallon Water Tank	
MIDDLE SHELF	Hose Reel - Water	
SCBA	Folding Chair	
SCBA RIT Pack		
BOTTOM SHELF		
SCBA		
Spare SCBA Bottle		
SEMM's Base Station		

HAZ MAT 66 (continued)		
BOTTOM SHELF	**COMPARTMENT R2**	
Chlorine 'A' Kit	***TOP SHELF***	
Chlorine 'A' Kit Ramp	Lock-Out/Tag-Out Kit	
PVC Clamp	Haz Mat EMS Gear/Equipment	
Standard Tools w/Box	***MIDDLE SHELF***	
Brass Tools w/Box	NAAKs	
Bolt Cutter	Haz Tox Drugbox	
55 Gallon Drum Tools	Trauma Box	
Come-A-Long	Haz Mat ID Unit	
Jack	Haz Mat ID Repeater	
FLOOR	Haz Mat ID Water Extractor	
A - E Kit	Thermal Imager	
PULL OUT BOARD	***BOTTOM SHELF***	
6' Grounding Rod	EMS Supplies	
Spade Shovel	Personal Flotation Device	
Flat Shovel		
Pitch Fork	**COMPARTMENT R1**	
	Generator	
COMPARTMENT R3		
TOP SHELF		
RAD Meters and Dosimeters		
Sensidyne Detector Tube Kit		
MIDDLE SHELF		
Haz Cat Testing Kit		
TOP DRAWER		
Scene Tape		
Sampling Equipment		
Accountability/Command Board		
MIDDLE DRAWER		
Research Books/Materials		
BOTTOM DRAWER		
Miscellaneous Supplies		
Laptop Computer		
Cell Phone and AirCard		
PULL OUT BOARD		
Rake		
Scoop Shovel		
Hot Stick		
Skimmer		
Sampling Cup/Pole		Updated September 2011
55 Gallon Drum Hand Pump		
Decon Brush		

TAB PAGE D

PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM STANDARD OPERATING PROCEDURES MANUAL

ATTACHMENT D

TEAM FORMS

Pinellas County Hazardous Materials Response Team

Product Data Sheet

- **Separate forms must be completed for each product involved!**
- **Document <u>AT LEAST TWO</u> sources where the information was located!**

Product Name: _____

Chemical Name: _____

Synonym(s): _____

Formula: _____

Reportable Quantity: _____

<u>Identification Numbers</u>

U.N. Class/Division (1 – 9 and Division #): _____

U.N. Identification #: _____

CAS #: _____

STCC #: _____

EPA Registration #: _____

<u>NFPA 704 System</u>	**<u>HMIS System</u>**
Health _____	Health _____
Flammability _____	Flammability_____
Reactivity_____	Reactivity_____
Spec Hazards_____	Spec Hazards _____

Reference Sources: (Name and Page)			
Physical:			
Odor			
Odor Detection Level			
Physical State (Solid, Liquid, Gas)			
Physical Form			
Compressed			
Liquefied Gas			
Molten Solid			
Cryogenic			
Boiling Point/Condensation Point			
Freezing Point/Melting Point			
Sublimation (Y/N)			
Specific Gravity			
Vapor Pressure			
Vapor Density			
Water Solubility			
Flammability			
LEL or LFL			
UEL or UFL			
Flashpoint			
Ignition Temperature			
Explosion Potential			
Reactivity			
Oxidizer (Y/N)			
Pyrophoric (Y/N)			
Corrosive (Y/N)			
Anticipated pH			
Polymerization (Y/N)			
Radioactive (Y/N)			
Alpha			
Beta			
Gamma			
Other			
Protective Distances	**Day**	**Night**	
Isolation Distance			
Small Quantity (55 gal or less)			
Large Quantity (> 55 gal)			

Evacuation Distance			
Small Quantity (55 gal or less)			
Large Quantity (> 55 gal)			
Personal Protective Equip			
Level of Protection (A,B,C,D)			
Compatible Suit Material(s)			
Type of Glove(s)			
Type of Boot(s)			
Type of Air Purifying Cartridge			
Plug/Patch/Diking Material(s)			
Compatible Material(s)			
Incompatible Material(s)			
Neutralizing Agent(s)			
Toxicity			
TLV-TWA			
PEL-REL			
IDLH			
STEL			
TLV Ceiling			
LD 50			
LC 50			
Primary Exposure Route(s) Inhalation, Ingestion, Injection			
Target Organ(s)			
Acute Symptom(s)			
Chronic Symptom(s)			
ALS Treatment			

Required Medical Facility Tests			

Research Team Leader: _____

Research Team members: _____

_____

Date: _____ Time: _____ Incident Number: _____

Incident Location: _____

Pinellas County Hazardous Materials Response Team

Chemical Exposure Report

- **This form must be completed for ALL INSTANCES of suspected, possible, or actual exposure to hazardous product(s).**

Incident #: _____ Date/Time of Exposure: _____

Name of Exposed: _____ Employee #: _____

Incident Location: _____

HM Officer in Charge: _____

Chemical(s) Exposed to: _____

_____

_____

_____

Chemical Concentration(s): _____

_____

Activity at Time of Exposure: _____

_____

_____

PPE Utilized at Time of Exposure: _____

_____

Route of Exposure: _____

_____

Treatment Provided: _____

_____

_____

Pinellas County Hazardous Materials Response Team

Haz Mat Group Leader Worksheet

- **This form must be completed for EVERY Hazardous Atmosphere operation.**

Haz Mat Group Leader _____ Date _____

Incident Location and/or Incident Number_____

Safety Officer _____ Decon Leader _____

Entry Leader _____ Medical Leader _____

Liaison _____ Research Leader _____

Has the chemical been identified?	Yes	No
Have references been consulted to determine chemical's properties?	Yes	No
Have Facility/Chemical Co. representatives been contacted for assistance?	Yes	No
Has CHEMTREC been contacted for assistance? (I -800-424-9300)	Yes	No
Has reaction potential been checked, are multiple chemicals are involved?	Yes	No
Have decon procedures been researched and implemented?	Yes	No
Has the proper level of protective clothing been selected?	Yes	No
Has a buffer zone been established around decon?	Yes	No
Have all control zones been clearly marked?	Yes	No
Has evacuation been considered and determined to be needed?	Yes	No
Has evacuation been started, if necessary?	Yes	No
Is adequate monitoring being performed for the product release?	Yes	No
Are adequate supplies on hand for the duration of the incident?	Yes	No
Have ignition sources been isolated?	Yes	No
Have personnel been advised of their assignments and emergency procedures?	Yes	No
Are EM$ personnel standing by on the scene?	Yes	No
Has need for haz mat relief personnel been considered?	Yes	No
Is the job being done **NECESSARY** and can it be done **SAFELY**?	Yes	No

Pinellas County Hazardous Materials Response Team

Entry Team Worksheet

- **This form must be completed for ALL Hazardous Material(s) Entry(s).**

Entry #: _____ Entry Team Leader: _____

Entry Team: _____

_____

_____

_____

Safety Team: _____

_____

Entry Plan: _____

_____

_____

Action Plan Review	YES	NO	Decon Review	YES	NO
Medical Check	YES	NO	Comptblty Check	YES	NO
Radio Check	YES	NO	Remove Jewlery	YES	NO
SCBA Seal Check	YES	NO	SCBA Air Check	YES	NO

Suit Check(s)

Belts Hooked	YES	NO	Zippers Sealed	YES	NO
Vapor Seal Check	YES	NO	Suit Inflated	YES	NO
Suit Damage	YES	NO	Triple Gloved	YES	NO
Inner/Outer Suit On	YES	NO	On Air Time: _____		
Comm Check	YES	NO	Off Air Time: _____		
Final Status Check	YES	NO			

Pinellas County Hazardous Materials Response Team

Entry Team Medical Worksheet

- **This form must be completed for ALL Hazardous Material(s) Entry(s).**

Entry Leader: _____ Employee #: _____ Date: _____ Incident #: _____

	Pre-Entry								Post-Decon							
NAME/UNIT	Time	B/P	Pulse	Resp	Temp	Skin	Weight	By	Time	B/P	Pulse	Resp	Temp	Skin	Weight	By

Pinellas County Hazardous Materials Response Team

Safety Officer Worksheet

- **This form must be completed for ALL Hazardous Material(s) Entry(s).**

Safety Officer: _____ Date/Time: _____

Incident #: _____

Does Safety Officer have best view of work area possible?	YES	NO
Has Chemical(s) been identified?	YES	NO
Has proper level of PPE been selected/utilized?	YES	NO
Prior to Entry, have decon procedures been implemented/reviewed?	YES	NO
Has SCBA Air Pressure and on air time been checked/documented?	YES	NO
Have Vital Signs on Entry/Backup Personnel been completed?	YES	NO
Have suits been checked for deficiencies?	YES	NO
Have radio and headset checks been completed?	YES	NO
Have team assignments been completed and reviewed?	YES	NO
Have Emergency Procedures been reviewed with all personnel?	YES	NO
Have appropriate tools/monitors/equipment been selected and ready?	YES	NO
Have Decon Procedures been reviewed with Entry/Backup Team(s)?	YES	NO
Are Decon Personnel in proper level of PPE?	YES	NO
Have signs/symptoms of exposure been reviewed with personnel?	YES	NO
Is Safety/Backup Team in position to reach Entry Team within 1 min?	YES	NO
Are all Zones clearly marked and controlled?	YES	NO
Is the job being performed with the correct amount of personnel?	YES	NO
Is the job **NECESSARY** and can it be done **SAFELY**?	YES	NO

Pinellas County Hazardous Materials Response Team

Decon Group Worksheet

- **This form must be completed for ALL Hazardous Material(s) Entry(s).**

Decon Officer: _____ Date/Time: _____

Incident #: _____

Decon Team: _____ _____

_____ _____

_____ _____

Has Chemical(s) been identified?	YES	NO
Have references been consulted to determine correct decon method?	YES	NO
Has proper level of PPE been selected/utilized?	YES	NO
Is the Decon Line in an area that minimizes any impact to environment?	YES	NO
Is the Decon Line away from ditches/sewers/water sources/etc…?	YES	NO
Is viscuine barrier being used as bottom of Decon Line?	YES	NO
Are there methods in place to retain decon run-off?	YES	NO
Is Decon Area **CLEARLY MARKED** and **RESTRICTED**?	YES	NO
Have team assignments been completed and reviewed?	YES	NO
Have Emergency Procedures been reviewed with all personnel?	YES	NO
Are equipment/tool/glove drops lined with bags?	YES	NO
Are there sufficient equipment/tool/glove drops provided?	YES	NO
Are all over-packed decon material clearly marked with drum labels?	YES	NO
Have all personnel/equipment been properly deconed prior to exit?	YES	NO
Is Decon being conducted **CORRECTLY** and **SAFELY**?	YES	NO

Pinellas County Hazardous Materials Response Team

Rehab Group Medical Worksheet

- **This form must be completed for ALL Rehab Group Activations.**

Rehab Leader: _____ Employee #: _____

NAME	TIME	SCBA TIME	B/P	PULSE	RESP	TEMP	SKIN	TAKEN BY	CHIEF COMPLAINT/CONDITION	TRANS PORT

Pinellas County Hazardous Materials Response Team

Rehab Group Worksheet
Company Check In/Check Out

- **This form must be completed for ALL Hazardous Material(s) Entry(s).**

Rehab Leader: _____ Employee #: _____

UNIT #	NAME	TIME IN	TIME OUT

TAB PAGE E

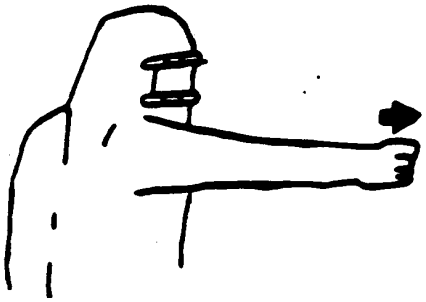
PINELLAS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM STANDARD OPERATING PROCEDURES MANUAL

ATTACHMENT E

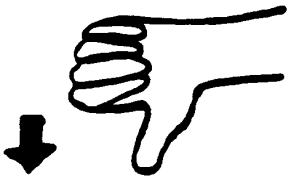
STANDARDIZED HAND SIGNALS

STOP, HOLD IT, STAY THERE

SOMETHING IS WRONG

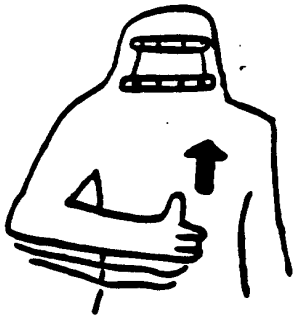


DANGER



GO DOWN, GETTING DOWN

WHICH



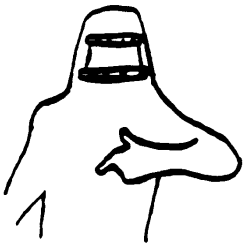
GO UP

COME HERE

OK

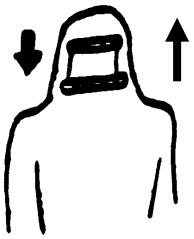
OUT OF AIR

**TAKE IT EASY,
SLOW DOWN**

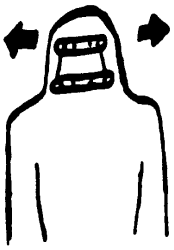


ME, OR WATCH ME

**HANDS RAISED OVER HEAD N
CIRCULAR MOTION**

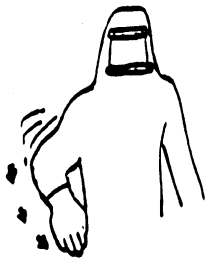


YES



NO

**YOU LEAD,
I'LL FOLLOW**



**UNDER, OVER,
AROUND**

**I NEED HELP,
I'M IN TROUBLE.
MAYDAY**