

	Nokomis Fire Department		
	Date	Directive	Number
	May 2, 2019	#4	#401
		Category R.O.G	
	Engine Company Haz-Mat Response		

Purpose:

This guideline is to provide for the safety of engine company personnel when responding to hazardous materials (Haz-Mat) incidents. This will be accomplished through identification of the responsibilities of and engine company when they are the first arriving unit on scene of a Haz-Mat incident.

APPROACH

The first arriving unit shall approach the scene from *upwind* and *uphill*, if possible. They shall also maintain a distance of NOT less than 300 feet.

ARRIVAL

NO unit shall be placed closer than 300 feet from an incident site until the hazard(s) of the material(s) have been fully identified and closer placement is deemed to be safe.

The first arriving unit shall give a verbal size-up and assume command of the incident. They shall attempt to identify the product(s) involved. The ***D.O.T. Emergency Response Guidebook*** shall be used for this purpose. The information found on the guide page shall be used as the initial site safety plan. The following shall be considered a standard format for the initial radio report describing arrival conditions and actions.

- - Size-up: Refer to incident Levels-Attachment A
- - Product identify or U.N. number if known
- - ***D.O.T. 2016 Emergency Response Guidebook 111***, on pages 160-161
- - Request additional assistance as needed. Special Ops 8 will approach scene only when requested or directly by Command.

If not already known, attempt to identify the material(s) involved by visual means (from a safe distance) or by questioning bystanders.

ENGINE COMPANY OPERATIONS

Command

The senior ranking Fire Officer on-scene shall assume command of all incidents involving hazardous materials and shall function as the Incident Commander (IC) until relieved by a *Senior Fire Officer*, or until that Fire Officer feels he cannot continue with the assessment because he does not have the required knowledge to continue as the Incident Commander.

Control Zones

Control Zones shall be established in accordance with the ***2000 North American Emergency Response Guidebook*** for the material involved or as a minimum, 150' in all directions. In those instances where the material cannot be identified, all personnel will be instructed to follow Guide 111 on pages 160-161 of the ***Guidebook***.

Initial Safety Plan

The Incident Commander (IC) shall advise all emergency response personnel of the appropriate D.O.T. Guide page number to utilize. This Guide page shall constitute the "Initial Site Safety Plan" for the incipient stages of the incident and shall be reviewed by all personnel prior to operating at the incident.

Safety Officer

During the beginning stages of a hazardous materials emergency and prior to the arrival of additional resources, the incident Commander shall further serve as the Site Safety Officer. In this respect, the Incident Commander shall ensure implementation of the initial Site Safety Plan.

Should the Incident Commander or Safety Officer observe conditions which place response personnel in immediate danger, the Incident Commander or Safety Officer shall immediately suspend or terminate the operations until the safety hazards are corrected.

Obtain Additional Assistance

The Incident Commander shall, upon knowledge that a hazardous material is involved, request the immediate dispatch of an appropriately staffed hazardous materials response unit and other resources deemed necessary for the safe and effective management of the incident. This may include a Special Operations Group Call-Out.

Personnel Training

Only those personnel who have been trained to the level of First Responder Operational, as defined by NFPA consensus Standard 472-2-3 ***Professional Competence of Responders to***

Hazardous Materials Incident, shall be permitted to operate in a capacity which would subject the person to a potential exposure to a hazardous material and then such operations shall be defensive in nature while avoiding direct contact with the product (exception, LP leak).

Hazard/Risk Assessment

The Incident Commander shall, by all reasonable means available, attempt to identify the material(s) involved and reference the material(s) in the U.S. D.O.T. ***Emergency Response Guidebook***.

Material Identification Actions

If the product has not been identified the company shall attempt to identify the material(s) involved by visual means (from a safe distance) or by questioning bystanders, drivers or operators.

If the material is unknown or not referenced by the guidebook, then the company shall establish the *Hot Zone* of 150 feet in all directions or four (4) times the distance of any visible vapor cloud. Attempts shall continue to be made to identify the product without making entry into the *Hot Zone*. Consult Guide 111, pages 160-161 of the 2016 D.O.T. Guidebook.

If the material is identified, use the recommendations of the D.O.T. Guidebook.

Special Note: At no time shall personnel be committed to a hazardous atmosphere (of any nature) without appropriate personal protective equipment and training.

Special Note: Establish Initial Isolation Area (Hot-Zone), Evacuated Endangered Persons and Deny Entry.

The minimum acceptable personal protection for initial actions at a hazardous materials incident is that which is recommended by the ***D.O.T. Emergency Response Guidebook***. Personnel meeting the training requirements of the First Responder Operational Level, as described in **OSHA 29 CFR 1910.120**, may engage in the following defensive control activities:

- - Monitoring for oxygen, CO, flammables, H₂S. Air monitoring is a continuous operation
- - Isolation of the hazard area. Mark with RED tape.
- - Rescue and evacuation of injured and endangered person: Rescuers & their charges will be considered to be contaminated and will shelter within the Hot-Zone until they can be decontaminated. Maintenance of control and calmness in dealing with victims are imperative.
- - Defense product control measures such as damming, diking and retention of products.

- - Fire control operations without chemical exposure.
- - Support operations.
- - Limited leak control measures involving gasoline, propane and natural gas as is allowable by **OSHA 29 CFR 1910.120**.

Persons meeting the First Responder Operational training requirements are **NOT** permitted to engage in the following:

- - Direct contact with hazardous materials
- - Entries requiring specialized protective clothing
- - Offensive leak control measures with the exception of minor gasoline or propane leaks as determined by the Incident Commander.

For incidents involving hazardous materials certain guidelines must be followed that may not be considered ordinary or normal to everyday fire situations. These rules are essential to insure the well being of our own personnel, as well as supporting agencies and the general public.

- - A(n) BLS/ALS unit shall be on scene at **all** times while personnel are involved in any level of hazardous materials mitigation. Responsibility for assuring this shall rest with the safety officer or if one is not appointed the OIC (Officer in Command).
- - There shall not be eating, drinking or smoking within 500' of any hazardous material incident unless this is countermanded by the OIC.
- - Full protective clothing shall be worn through clean-up, in accordance with Command Post direction.
- - SCBA shall be worn by any personnel involved at an incident in the hot or warm zones or as determined by the OIC.
- - Water shall not be used until it is so determined by the OIC to be the proper extinguishment/flushing agent.
- - Venice Hospital, as well as Sarasota Hospital shall be alerted to the possibility of contaminated victims.
- - Supporting agencies shall be notified by Dispatch as requested by the OIC.
- - All clothing and equipment shall be thoroughly decontaminated before leaving the scene in accordance with established De-Con.
- - Upon returning to the station all personnel shall shower at least 15 minutes, including hair washing and the cleaning of fingernails.
- - All leaks, spills, fires, etc. shall require appropriate agency notifications.
- - The OIC is responsible for all decisions involving the material and disposition of personnel.

- The Engine Company shall then await arrival of Haz-Mat Team Members and Command the information gathered shall be passed along. The Engine Company shall then assist as needed to control and mitigate the incident as assigned by command.

Consider the dispatch of a Haz-Mat team to the following

- - All calls known to involve hazardous materials.

- - All reports of downed airplanes
- - All incidents at any facility known to store or use **EXTREMELY HAZARDOUS SUBSTANCES (EHS)** as defined by SARA title III.
- - Any facility identified through Department procedures (i.e. pre-plans) as posing significant risk to residents or responders.
- - All reports of unidentified orders (except smoke).

SPILL PROCEDURES

More and more often, Departmental Resources are responding to incidents involving materials that have been discharged in to the environment. Increases in these responses have necessitated changes in our operating procedures. To ensure that all members of the Department are aware of the proper procedures to follow during these incidents, this Guideline has been developed. Much of this procedure is guided by specific regulatory agencies and practices. If you have any doubt as to the appropriate actions that should these personnel be unavailable, the Special Operations Coordinator can be contacted.

Incidents involving petroleum products, (i.e. gasoline, diesel fuel, hydraulic fluid etc.) **Cannot** be washed to the side of the road. Current Florida Department of Environmental Protection and Coast Guard guidelines prohibits washing these products into the soil, wetlands, or navigable waterways. Agencies who elect to disregard these guidelines open themselves up to significant fines.

Notification and Reportable Quantities (RQ)

The D.E.P./BER can be contacted on a 24-hour emergency basis, via the State Warning Point at the following number: 800-320-0519 or 950-413-9911

D.E.P. has adopted the U.S. Environmental Protection Agency's Reportable Quantities (RQ) for hazardous substances and has a D.E.P. RQ of 25 gallons for petroleum products spilled on land or any amount which causes sheen on navigable waters. If in doubt about the amount spilled, we recommend calling in the incident.

BER requests immediate reporting of any incident that

- - Exceeds an RQ
- - Poses special problems or difficulties
- - Affects waterways or drinking water wells
- - Or if D.E.P. on scene assistance is requested

Most small releases (less than 25 gallons for most materials) or non-emergency releases can be reported either immediately or the next business day. If reported the next day, please be sure to report all available information, since many details can be harder to obtain the next day (due to shift changes, etc.).

When reporting an incident, please provide as much of the following information as possible:

- - Materials, if known
- - Approximate amount
- - Identity of the responsible party
- - Location of the incident
- - Actions taken by Fire Department or responsible party
- - Call-back number of additional information
- - Nature of affected environment (soil, water, air, storm drain, none ect.)
- - Specific request for D.E.P. assistance if needed.

When asking for D.E.P. *on-scene* assistance, please make the call as soon as possible. This will enable a quicker response and will help avoid the difficulties that occasionally arise when a BER responder is traveling in another direction on less urgent matters. Or the coordinator may already be in the vicinity, but in the process of leaving. We have had many incidents in which a Fire Department has been on-scene for a long time and then calls for D.E.P. assistance, when an earlier call would have made the response quicker and more efficient. If D.E.P. assistance might be needed, but is yet uncertain, we recommend you call with the available information.

Engine Company Guidelines

Do not use foam or dispersants on un-ignited petroleum spills unless there is an immediate life hazard, a severe fire hazard, vehicle entrapment requiring extrication or explosive hazard.

The term “dispersants” includes detergents, emulsifiers and surfactants. **D.E.P. approval must be obtained** before using dispersants, unless immediate use is necessary to save a life.

Dispersants make pollutants more soluble and easier to penetrate a surface water or ground water, potentially spreading the contamination and increasing clean-up costs and time. The use of “mechanical” means of clean-up is preferred (e.g. brooms, absorbents, vacuum trucks, soil removal, etc).

Identify the responsible party. This would be the individual or individuals who are responsible for the product that has been spilled. This may be the business owner, transporter or the owner of the vehicle from which the product came.

For discharges under five gallons, absorb the product with absorbent. DO NOT attempt to plug or otherwise correct breaches in the container. Containers include vehicle fuel tanks, barrels, drums or other fluid carrying devices.

In situations involving spillage of vehicle fluids on a roadway from a vehicle crash, the preferred clean-up method is to absorb as much material as possible using absorbent materials. Any thin film that remains after using absorbent can then usually be removed with water only, from a high pressure hose, with minimal environmental impact and without prior D.E.P. approval. An alternative method for thin films is to apply a light dusting with Portland cement, which will

absorb the vehicle fluid, cohere to the road and provide traction. However, if the use of dispersant or emulsifier is desired, then D.E.P. approval must be obtained first, as the use of such agents will make residue more soluble and could have a greater environmental impact.

The material that has been discharged and which has been absorbed belongs to the responsible party. Often the towing company will remove any debris or absorbed materials from the scene of motor vehicle accident. If the responsible party cannot be identified and the material will be left on the roadway, it is the responsibility of the Officer In Charge to ensure that the product is removed. Removal **DOES NOT** include moving the product to the side of the road and leaving it there. To accomplish this removal, request the response of the Special Ops unit. Haz-Mat personnel have been trained in the removal and proper disposal techniques for these types of materials.

Notification Guidelines

Effective immediately, the following notification guidelines shall be followed for any hazardous material which has leaked, spilled or is involved in fire, regardless of the amount.

Petroleum/Hydrocarbon Products

- - Notify the *State Warning Point*. This shall be done once through Dispatch.
- - Once in contact with S.C.D.O.E.M. request notification to the appropriate agency and relay responsible party if known.
- - US Coast Guard-if product is in Gulf of Mexico, an inland waterway or any tributary leading to a waterway west of US 41.
- - D.E.P. (Department of Environmental Protection) -If product is on land.
- - Sarasota Co. Pollution Control-Any incident.
- - D.N.R. (Department of Nat. Resources) and Fresh water and Game-If product is in a body of fresh water.

Any Other Hazardous Materials

- - Notify the *State Warning Point*. This shall be done once through dispatch.
- - Once in contact with S.C.D.O.E.M. Request notification to the appropriate agency and relay responsible party if known.
- - US Coast Guard-If product is in Gulf of Mexico, an inland waterway or any tributary leading to a waterway west of US 41.
- - D.E.P. (Department of Environmental Protection) -If product is on land.
- - Sarasota Co. Pollution Control-Any incident.
- - D.N.R. (Department of Nat. Resources) and Fresh water and Game-If product is in a body of fresh water.
- - FPL if any of their equipment is involved.
- - If PCB (Poly-Chlorinated Bi-Phenyls) is involved then also notify EPA Region IV Atlanta at 404-347-4062 (24 hours).

Clean Up Guidelines Petroleum/Hydrocarbon Products (Gasoline, Diesel, Kerosene, etc.) Non-Permeable Surfaces (paved roads, parking lots, etc.)

- Small, manageable spills (except gasoline) ***Non-Gasoline***

- - Pick up product with absorbent.
- - Place absorbent in dedicated recovery drum or bag.
- - Advise D.E.P./BER of action.
- - When an area is deemed safe by OIC, return to service.

Small gasoline spills and low flash points liquids

- - Depending upon conditions and product, may be allowed to evaporate.
- - If absorbents are used, apply dusting of Portland cement which will absorb the fluid, cohere to the road and provide traction.
- - Advise D.E.P. of action.
- - When an area is deemed safe by OIC, return to service.

Major spills, all petroleum products

- - Contain
- - Advise DER
- - Await further assistance

Permeable Surfaces (dirt, sand, roadsides, grassy areas)

- - ***Small manageable spills***
- - Let spill be absorbed into earth or use dirt.
- - Advise D.E.P. of location and responsible party (if known)
- - If no hazard exists, return to service unless advised otherwise by D.E.P.

Major Spills, all petroleum products

- - Contain
- - Advise D.E.P. of situation
- - Advise U.S. Coastguard if applicable
- - Await further assistance

Bodies

- - ***Small manageable spills***
- - Contain
- - Advise U.S. Coastguard of action
- - Pick up spill with absorbent pads, gasoline will evaporate

- - Put in dedicated recovery drum

Major Spills, all Petroleum Products

- - Contain if possible
- - Advise U.S. Coastguard
- - Await further assistance

Dispersants Use

The use of dispersants on petroleum spills shall NOT be authorized.

Foam may be used for extinguishment or emergency control of dangerous vapors only

Clean Up Guidelines for Other Hazardous Material Incidents:

- - Contain and Control
- - Determine responsible party (if known)
- - Advise proper Authority(ies)
- - Await further assistance and/or instructions
- - DO NOT load or transport hazardous materials (drums, boxes, carboy's etc.)
- - Remain at the scene until properly relieved
- - If Fire Department OIC feels stand by times may be excessive at any type of Haz-Mat incident, notify Fire Department Administrative Personnel ASAP.

Incident Reporting

- - Document all times, actions and phone calls. Include them in the reports
- - Prepare Site Safety Plan (See attachments).

INSTRUCTIONS FOR USE Incident Commander or Designee:

Fill out site safety plan as soon as possible while on scene. Have Dispatch transmit relayed information to *State Warning Point*. Also a hot line phone call will be placed to *State Warning Point* advising them of the report on the fax machine. The fax machine will put a verification of receipt stamp on each page. State Bureau of Emergency Management (State Warning Point) will notify State or Federal Agencies you have requested.

Special Note: State and Federal Funding and support is based on need. If you did not report it to the State of Florida, it did not happen.

Special Note: If the material is a flammable product, absorbing it with sand or dirt DOES NOT reduce its flammable characteristics. Stay alert for ignition sources and eliminate them if possible.

During incidents where more than five gallons of product has spilled into the environment, on-scene personnel should attempt to control the discharge's runoff by constructing a dike or dam. These defensive operations must be performed far enough ahead of the spill to ensure Departmental personnel are not contaminated by the product.

If the materials have been discharged into a wetland area, it will be necessary to request the assistance of the Special Ops unit and personnel.

If a spill occurs on a body of water, request assistance from Special Operations Personnel. Determine, if possible the type of material involved. Gasoline will usually evaporate from the water surface, however, diesel fuel or other heavier oils can cause significant damage to mangroves and other sensitive vegetative areas and aquatic life. If there is a safety factor or danger of ignition, deploy foam lines as necessary.

Propane Tanks Leaks

- Have dispatch contact the company that services the tank

Additional Requirements

- - All gas company personnel shall wear proper protective equipment while operating in a hazardous atmosphere.
- - Any gas service valve which has been closed shall be secured according to Department Lockout/Tag out Procedures.
- - Any gas service valve which has been shut off shall be re-opened by **gas company personnel only**.
- - No electrical system shall be used in a flammable atmosphere unless they have been properly tested and approved for such usage.