



Jackson Hole Fire/EMS

Operations Manual

Approved by:

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Title: HazMat Response –
Flammable Liquid Incident
Division: 19
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SECTION 1 - PURPOSE

The purpose of the Hazardous Materials Response to Flammable/Combustible Liquid Incidents is to set a guideline for response to incidents involving flammable and combustible liquids including gasoline and diesel fuel. The 4 primary areas of concern are extinguishment of flammable liquid fires, spills without fire, disposal/clean-up and liquid transfer.

SECTION II – GENERAL PROVISIONS

- Along with LE, ask questions to find out the following:
 1. Are there any victims?
 2. Is there a fire?
 3. Is leak threatening a waterway or sewer drain?
 4. Is this a small or large spill?
 - a. Large spill designations:
 - i. Over 25 Gallons
 - ii. Contaminated people
 - iii. Threatening or spill in water
- Large spill notifications made – RERT activated, Emergency Management can assist with additional DEQ notification
- PPE should be determined – Bunker gear for incidents involving fire. Tyvek suit and HazMat boots for spills.

SECTION III – EXTINGUISHMENT

- Preferred agent for flammable liquid firefighting is AFFF/Class B Foam.
 - JH Fire/EMS Engines carry Class A foam
 - AFFF/Class B foam can be requested from JH Airport ARFF
- Class A foam can be utilized for extinguishing small flammable liquid fires, i.e. a vehicle with leaking fuel tank.
 - Limitation of Class A foam is its ability to suppress vapors and reignition is an extreme possibility.
- Run-off should be contained and impacts to waterways should be minimized

SECTION IV – SPILLS

- Flammable liquid spills include spills without fire and any remaining fuel after a fire has been extinguished. In both cases, the liquid must be protected to prevent ignition.
- Control ignition sources in the area of the spill. Extinguish pilot lights, flares, open flames, etc. Prohibit smoking. Position vehicles to prevent contact of vapor with running engines or exhaust.
- Confine the flammable liquid to the immediate area by utilizing absorbent materials or sand/earth.
- Place a liquid containment pool under the leaking container.
- Leak control should be attempted by Hazardous Materials Operations and above personnel.
 - Toilet wax ring, plug-n-dike can be utilized.
 - Specialized leak control available on Rescue 74
- Consider vapor control with tarps or dispense vapors with a battery powered fan.
- Spills into water should be contained using floating booms downstream from the spill.
 - Flammable liquids float on top of water.
 - Multiple booms can be linked together.
 - PFD and No Bunker Gear within 10 feet of water

SECTION V – DISPOSAL & CLEAN-UP

- In most vehicle accidents, used absorbent material with flammable liquids will be placed with the towed vehicle.
- For Large Spills, the Spiller is responsible for clean-up.
- For highway incidents, Wyoming Highway Patrol should be consulted regarding the clean-up and notification to DEQ.
- Regarding reporting to DEQ – If in doubt, report.

SECTION VI – LIQUID TRANSFER

Liquid transfer can produce a spark and should only be performed if proper grounding and bonding procedures are in place.

Liquid Transfer applies to all personnel trained to the Hazmat Tech and Hazmat Emergency Response Specialist Highway Levels

References:

- NFPA 472: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents

- NFPA 704: Standard System for the Identification of the Hazards of Materials for Emergency Response
- NFPA 77: Recommended Practice on Static Electricity

Equipment:

- JH Fire/EMS has a pneumatic pump for transfer of saddle tanks or 55-gallon drum.
- For larger containers, i.e. MC 306/406 tanker truck, Incident Command should identify the shipper and request a compatible (size and contents) tank, referred to as “Good Tank”. Good Tanks should have a pump that will be utilized to move liquid from the “Bad Tank” to the “Good Tank”.
- Do not attempt to upright MC 306/406 tanks due to probability of catastrophic tank failure.
- Stinger located in Radio Room at Station 7 – Hard suction pipe to connect to the pump on the Good Tank.
- Grounding and Bonding Equipment located on Rescue 74
- Fire standby with charged hose line or unmanned master stream should be in place during the liquid transfer.

Procedure:

1. Building a Grounding Field
 - a. Items Needed
 - i. Shovels, sledge hammer, tools etc,
 - ii. Grounding Rods
 - iii. Rod connecting wires
 - iv. Dirt
 - b. Drive or burry rods into soil
 - i. Drive into or create a small depression in the ground and burry needed number of rods to create grounding field
 - ii. This will depend on ground conditions
 - iii. Place rods uphill, upwind, out of the hot zone
 - c. If possible place rods 3-6' apart
 - d. Connect rods with cables
 - e. Dirt can be used to cover horizontally laid rods during winter conditions
 - i. Dirt is preferred over sand due to sands possible conductive properties
 - f. Soil temperature and moisture/salt content can affect grounding field
2. Conduct Grounding Resistance with Megger meter

- a. Items Needed
 - i. Megger Meter
 - ii. Red Lead
 - iii. Yellow Lead
 - iv. Green Lead
- b. Run Red Lead out away from Megger meter, and connect end to meter
- c. Run Yellow Lead out away from Megger meter, and connect end to meter
- d. Connect Green Lead to Buried grounding field (rods) and connect to meter
- e. Turn knob on meter to 3p
- f. Always test with 50 volts
- g. Push test button
- h. Per the 2014 update to NFPA 77 we are looking for a reading of less than 1000 ohms
- i. Make sure to disconnect Megger after testing and before bonding

3. Bonding
 - a. Make sure Megger has been disconnected from grounding field
 - b. Connect recovery tank to grounding field
 - c. Connect damaged tank to grounding field
 - d. Connect transfer pump to grounding field
 - e. Connect bonding cable between damaged tank and recovery tank
 - f. "Good to field, Bad to field, Pump to field, Good to bad"
4. Gain Access to the liquid in the tank
 - a. Easiest way is through the Bad Tank valves – If accessible and not damaged.
 - b. Manhole cover
 - c. Hot Tap the side of the Bad Tank
 - i. Pneumatic drill with bi-metallic drill bit
 - ii. Water or oil will be needed to cool the bit
 - d. Access may have to be repeated for each separate compartment
5. Start the Liquid Transfer