Motor Vehicle Accidents (MVA) involving petroleum and chemical spills, and spills of unknown nature, present challenging scenarios and environments in which Department employees must perform their duties. These accident scenes can be chaotic, stressful and potentially dangerous. Usually, there are multiple agencies involved and diverse emergency response activities occurring simultaneously. This document provides recommended safety measures for Department forces responding to an MVA involving such a spill, consistent with NYS Department of Labor, Public Employee Safety and Health (PESH) regulations, DOT safety and health standards, and NYSDOT / NYSDEC MOU (#AM06352). Operating within the scope of these responsibilities will help protect the safety of DOT employees, and contribute to a timelier, efficient resumption of highway operations.

Hazardous materials are substances with one or more of the following characteristics:

- Substances/materials determined by the U.S. Secretary of Transportation to pose potential health risk.
- Chemical substances (solid, gas, or liquid) toxic to humans; unprotected exposure to these chemicals may result in severe illness.
- Dangerous goods or restricted articles that represent a hazard unless properly identified, classified, packed, and labeled per valid Dangerous Goods Regulations.
- Particles/substances capable of posing significant risk to health, safety or property when transported.

GENERAL RULES

Scene Safety: DOT supervisors arriving at an MVA are first responsible for ensuring their own personal safety and the safety of subordinates and co-workers, and only after that for the safety of others at the scene. Supervisors shall not enter the immediate area of an accident scene or allow their subordinates to approach an MVA if uncertain that the area is safe due to spills of hazardous or unknown materials.
Communication: When approaching an MVA, employees in Department vehicles or equipment should pull onto the shoulder and use vehicle warning/hazard lights to alert approaching motorists. If it is not possible or safe to park on the shoulder, employees should drive past the accident scene (if possible), and as soon as it is safe to do so, stop to report the accident as described below.

Employees who discover any MVA (including those involving a spill) shall as appropriate:

- **Call 911:** For all life threatening and other immediate emergencies involving police, fire and rescue, if DOT forces are first on scene.
- **Identify and establish contact with the Incident Commander,** if DOT forces are not first on the scene. If Incident Commander has not yet arrived or been designated, identify and contact upon arrival/designation.
- **Notify immediate supervisor.** It is generally a supervisory/management function to notify the Transportation Management Center (TMC) and other necessary Regional resources and the Department of Environmental Conservation (DEC).
- **For MVA’s involving suspected hazardous materials spills,** employees shall, consistent with their training, use the most current USDOT “Emergency Response Guidebook” to accurately identify and report materials involved directly to Chemtrec 1-800-424-9300; or notify the TMC, which in turn will call Chemtrec.

Chain-of-Command: It is important for Department employees to work within the DOT Regional Chain-of-Command at all MVA scenes. Department employees shall always answer to DOT supervision/management. However, initially other responding agencies may have more immediate functions and exercise more or total control over an accident scene. In general, police agencies will act as Incident Commanders at scenes with possible criminal activities and/or fatalities; fire departments at scenes involving fire/extrication; emergency medical services at scenes with serious injuries; and DEC for hazardous or unknown material spills. In many cases, more than one of these scenarios may exist, and an on-scene decision regarding incident command will be required. In some cases, responsibility may be shared. It is imperative that DOT forces identify and establish communication with the Incident Commander on scene as soon as possible.

DEPARTMENT RESPONSIBILITIES

Under the law most spills are cleaned up by the responsible party (owner of the contents) under oversight of DEC. When the responsible party is unknown, unwilling, or unable to do so, DEC will call a standby contractor, pre-approved by DEC for such work. Often the location/nature of the spill will require DOT management to coordinate closely with DEC, and use resources to assist as follows:

**Traffic Control:** DOT will be responsible for providing traffic control, if on scene. It is not always the case that DOT forces are on scene, for example spills of lesser quantities, non-hazardous-materials, and those not affecting traffic movement (within ROW, but off pavement/shoulder). In some cases, DOT is not even notified at the time of the accident, and unaware until substantially
later. DOT forces who arrive after others have established traffic control procedures shall assume responsibility and/or assist as necessary existing resources. The Resident Engineer or designee shall coordinate with DEC and police regarding length of time needed to provide proper, effective clean-up and other response activities. DEC will provide guidance on safe distances for traffic at spills of hazardous or unknown substances.

**Spill Containment:** For spills of hazardous or unknown materials, or at spill locations with known petroleum products, upon request of DEC, DOT may provide passive containment measures at a distance deemed safe. Such measures typically include depositing materials to prevent contaminated runoff from entering catch basins, streams or wetlands. However, it is important to recognize that the extent of assistance is directly proportionate to the degree of hazard posed.

**Spill Clean-Up:** In the absence of the owner/operator, the proprietary responsibility for clean-up and removal of hazardous materials shall be by a DEC-approved standby contractor. Upon request of DEC, DOT will spread sand and/or absorbent on spills of known petroleum products (known to be harmless in small quantities, such as diesel fuel). Clean up by DOT forces shall be performed only as a last resort and in consultation with DEC (if on scene), but only at direction of Department management (typically, Resident Engineer or Assistant).

**Spill Clean-up by DOT forces may be permitted when:**

- The spill is of a product known to be non-hazardous.
- The spill is a petroleum product, typically diesel fuel or engine oil, released as the result of the MVA, or a known non-hazardous waste material.
- Removal is performed in consultation with DEC.
- Clean-up involves absorbents or absorbent pads and/or removal by dry broom or mechanical broom.
- Employees are properly trained and use appropriate personal protective equipment (PPE).

**Spill Clean-up is prohibited when:**

- The spill involves known hazardous material(s) or unknown substance(s).
- The spill is of a petroleum or hazardous waste product from the container(s), cargo tank(s) and/or from transport hoses and lines related to the cargo.
- Employees lack appropriate PPE and/or training.
- Chemicals are required to clean up the spill.

**Additional Work Practices:** It is impossible to anticipate the nature of each response requiring DOT involvement. However, as a general rule, Department employees should only clean up ROW spills that are of a similar nature/type to those that might occur at Department facilities, using the following work practices:

- All vehicle engines operating in the immediate spill area shall be turned off.
Response to Motor Vehicle Accidents Involving Hazardous or Unknown Materials Spills

- Smoking is prohibited.
- Hand-to-mouth transfer from eating, drinking, etc. shall be avoided; drinking water and food shall be kept away from the spill.
- The spill shall not be washed down drains or drop inlets.
- Only as permitted by DEC (if on scene), small quantities of material-contaminated sand or absorbent may be dry-broomed to the side of the road; and/or picked up by shovel and placed in a properly labeled waste container. If DEC is not on scene, DOT management will have to make those decisions unilaterally. At DEC direction, large quantities may be swept and collected by self-propelled sweepers.
- Avoid walking on the spill surface and sweep absorbent to the center of the spill area.
- If road is still wet after first application of absorbent, apply a second treatment.
- Employee debriefing may be appropriate after response.

Clean-Up Rationale

DOT managers shall “err on the side of safety” when deciding whether to clean up non-hazardous waste or petroleum products, and whether Department resources can be safely employed to quickly and decisively improve public safety. For example, spills requiring employees to broom clean 100 (5 lb.) bags of absorbent should be considered beyond DOT capacity; however, it may be reasonable to consider clean up with the same amount of absorbent using a self-propelled sweeper.

Diesel fuel, gasoline or petroleum product clean-up shall be limited to fuel tank(s) and engine spills. It may not be appropriate for DOT forces to clean up spills from fully loaded, larger fuel tanks (like buses and over-the-road trucks).

Storage: The first priority is to remove spill clean-up materials directly to a disposal facility using a DEC-approved standby contractor. If not feasible, the Resident Engineer or designee will assist DEC in determining an appropriate location.

PERSONAL PROTECTION

- Head: Department-approved hard hat.
- Eye: Safety glasses or goggles designed to prevent splashes, portable eyewash.
- Hand: Petroleum-resistant gloves (disposable nitrile rubber preferred - - - not latex).
- Body: Department-approved high-vis apparel; if available, disposable coveralls should be worn under high-vis apparel.
- Feet: Department-approved safety footwear, covered with disposable booties or oil resistant over-boots.

If non-hazardous materials contact skin, thoroughly wash using soap and water. Change clothing if necessary to avoid further contact.
TRAINING

Department employees shall receive Hazard Communication/Right-to-Know training as required by OSHA/PESH. Training shall include a discussion on Material Safety Data Sheets for diesel fuel and motor oil, and appropriate clean up techniques for cleaning spills considered small and limited (incidental).

Department employees shall also receive Emergency Response training at the first responder level, including how to use the USDOT “Emergency Response Guidebook”, how to report MVA’s with spills, and the contents of this Safety Bulletin.

HEALTH EFFECTS FOR DIESEL FUEL (most commonly spilled material)

Inhalation (Breathing) - Excessive exposure may cause irritation to nose, throat, and respiratory system. Other effects may include headache, dizziness, loss of balance and coordination. Clean up of small petroleum spills generally will not result in excessive exposure; however unusual circumstances such as high pavement temperatures may result in higher airborne concentrations. Department employees experiencing any symptoms or noticing symptoms in others should notify supervision immediately.

Ingestion - The major health threat of ingestion occurs from aspiration - breathing liquid drops into the lungs. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, and respiratory failure. Ingestion may cause nausea, vomiting and diarrhea, and nervous system effects.

Eyes - Contact with liquid or vapors may cause mild irritation. Flush eyes with water for 15 minutes.

Skin - Repeated and prolonged contact may cause irritation. Fuel may be absorbed through skin if large body areas are repeatedly exposed.

REFERENCES

DOT / ENCON MOU (#AM06352)
USDOT “Emergency Response Guidebook”
OSHA 29 CFR 1910.120 and 1200
Petroleum Bulk Storage Regulations, 6NYCRR Parts 612-614
Environmental Handbook of Transportation Operation
Transportation Maintenance Safety Manual
Spill Prevention, Control and Countermeasures (SPCC) Plans