

October 22, 2024

55 Walkers Brook Drive, Suite 100, Reading, MA 01867
Tel: 978.532.1900

Dover Planning Board and Conservation Commission

Via email

Jasmin Farinacci, Town Planner (planning@doverma.org)

Janet Bowser, Conservation Agent (mjb Bowser@verizon.net)

Re: **Proposed Site Improvements: Town Garage Property**
2 Dedham Street
Additional Site Improvements: Fuel Island Addition

Dear Ms. Farinacci and Ms. Bowser,

In response to recent questions from the Planning Board and Conservation Commission regarding the proposed removal, replacement, and relocation of the above-ground fuel storage tank (AST) system on the Town Garage Property at 2 Dedham Street, Weston & Sampson, on behalf of the Town of Dover's (Town) Department of Public Works (the Applicant), has prepared the following guidance relating to the prevention of and response to potential fuel spills.

Spill Prevention Features

As stated in our recent response letter to the Planning Board, dated September 13, 2024, *"The proposed system design incorporates a multitude of spill prevention features to meet industry standards and best design practices, which include:*

- *Electronic leak monitoring system to notify owner when leaks are detected.*
- *Tanks equipped with overfill prevention valves and high-level alarms that trigger at 90% capacity.*
- *Submersible pumps capable of in-line leak detection; pumps shut off upon detection of leak(s).*
- *A fill port housed in a 10-gallon remote fill box to contain minor spills, typically with a small pump to return fuel to the tank.*
- *Dispenser hoses with shear valves to prevent fuel spills if a vehicle operator happens to drive away while the dispenser nozzle is still attached to the vehicle. Dispensers are to be equipped with emergency shear valves to cut off fuel in the event of an accident.*
- *Expansion relief valves to reduce pressure in fuel lines exposed to high temperatures.*
- *Check valves to prevent accidental siphoning from fuel tanks.*
- *Recommended regular tank inspections to check for corrosion or weak areas.*
- *A fuel management system which restricts access to authorized personnel [specifically Town employees who are trained to prevent and contain potential spills].*

Additional spill prevention measures include:

- **Secondary Containment:** The proposed ASTs are double-walled tanks with adequate secondary containment provided by the outer shell. In the event of a leak, the interstitial space between the inner and outer walls captures and contains any fuel, preventing environmental spills. The continuous electronic tank monitoring system will detect leaks and trigger an alarm to promptly notify DPW personnel.
- **Positive Limiting Barriers:** The fuel pad is designed with grooves along the perimeter. These grooves are positive limiting barriers that capture and contain small volumes of spilled fuel to prevent the fuel from spreading beyond the immediate tank pad area.
- **Bollard protection:** Bollards (both standard and "U" types) are proposed along the front and sides of the fuel tank to protect the tank, dispensers, and canopy footings from errant vehicle operation.

- Automatic Shutoff Nozzles: The fuel dispensers will be equipped with standard automatic shutoff nozzles, commonly used for diesel and gasoline. These nozzles automatically stop the flow of fuel when the vehicle tank reaches capacity or if the nozzle is left unattended, helping to prevent overfills and spills.

Spill Response Features and Procedures

Response procedures in the event of a fuel spill are discussed below. Additionally, flow charts containing customary spill response procedures have been attached to this document for general reference.

- In the event of a fuel spill, the response will follow the guidance provided in the Spill Prevention, Control, and Countermeasure (SPCC) Plan prepared specifically for the site. A SPCC Plan in accordance with Title 40, Code of Federal Regulations, Part 112 (40 CFR, Part 112) is required to be prepared and stored on-site before the new fuel system's operations commence. The SPCC will include facility layout information, a facility diagram charting drainage pathways, oil storage and handling information, spill prevention measures, step-by-step spill response procedures, relevant equipment, inspection forms, and emergency contacts.
- As part of the SPCC, training for personnel on spill prevention, response, and proper containment actions will be required annually.
- A spill kit will be required on-site for immediate containment of minor spills.
- To aid in preventing hydrocarbons from entering the closed drainage system which outlets into the wetland located north of the site, the project includes several design features:
 - A deep-sump, hooded catch basin will be installed downstream of the fuel system; the sump is designed to capture sediment and other solids, while the hood is designed to trap and contain floatables such as gasoline and diesel.
 - The fuel system will be equipped with catch basin covers, such as the PIG DrainBlocker Drain Cover, or an equivalent alternative product. These catch basin covers are applied at-grade to the grate to seal the grate. These covers can be used both as an immediate spill response measure and as a precautionary step during tank fueling activities.
 - A hydrodynamic separator will be installed downstream of the deep-sump, hooded catch basin. This manhole structure introduces a vortex or swirl pattern to the inflow to capture sediment and floatables. In the event runoff is contaminated with spilled fuel, hydrocarbons and other floatable materials will rise to the surface where they are captured on the inlet side of the internal bypass weir of the structure.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.



Jesse O'Donnell, P.E.
Senior Project Engineer



Tyler Cofelice
Project Manager

PIG® DrainBlocker® Drain Cover

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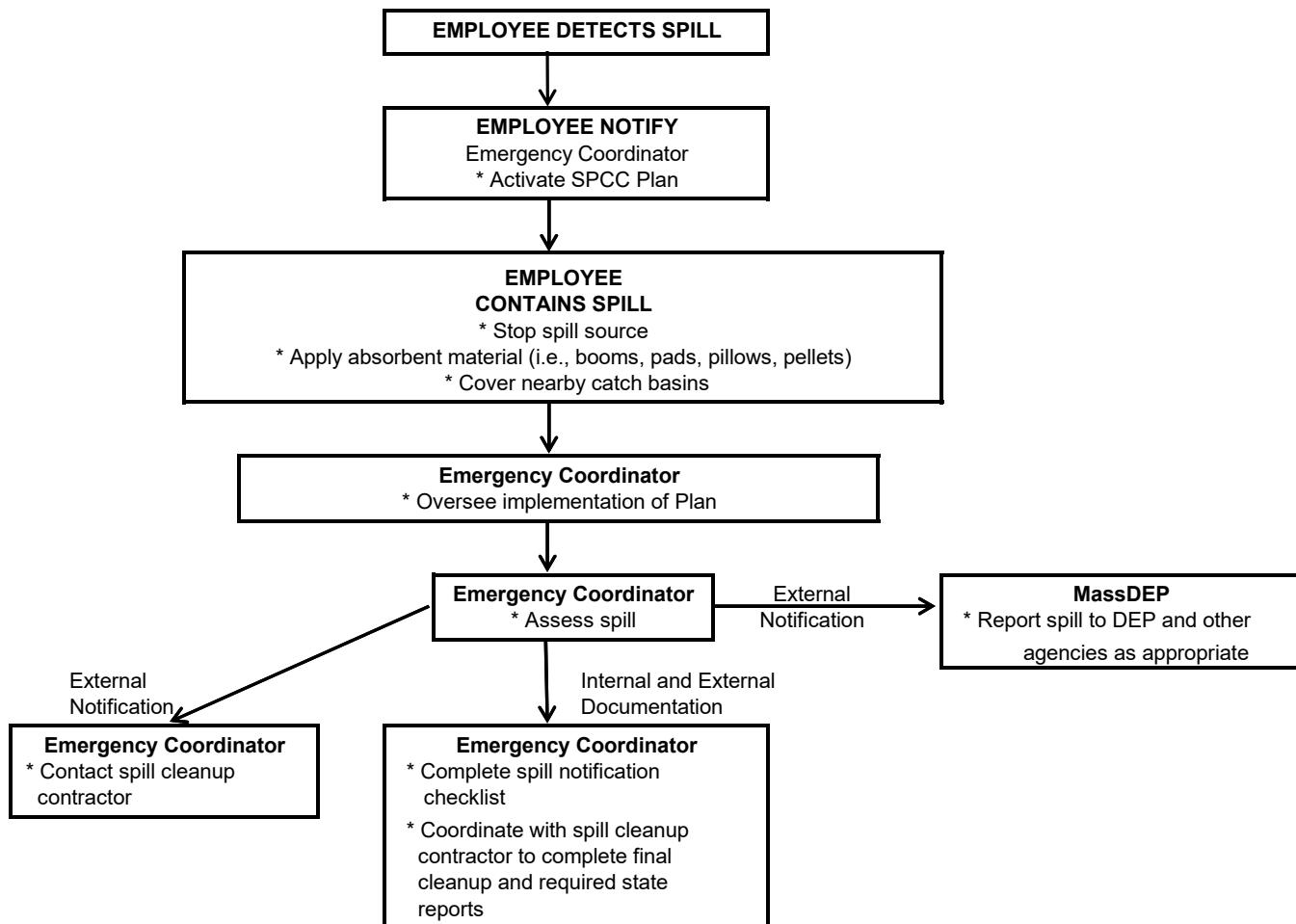
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- Withstands prolonged exposure to diesel fuel and gasoline
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- Note: Elvaloy top can become slippery when wet. Please use caution.

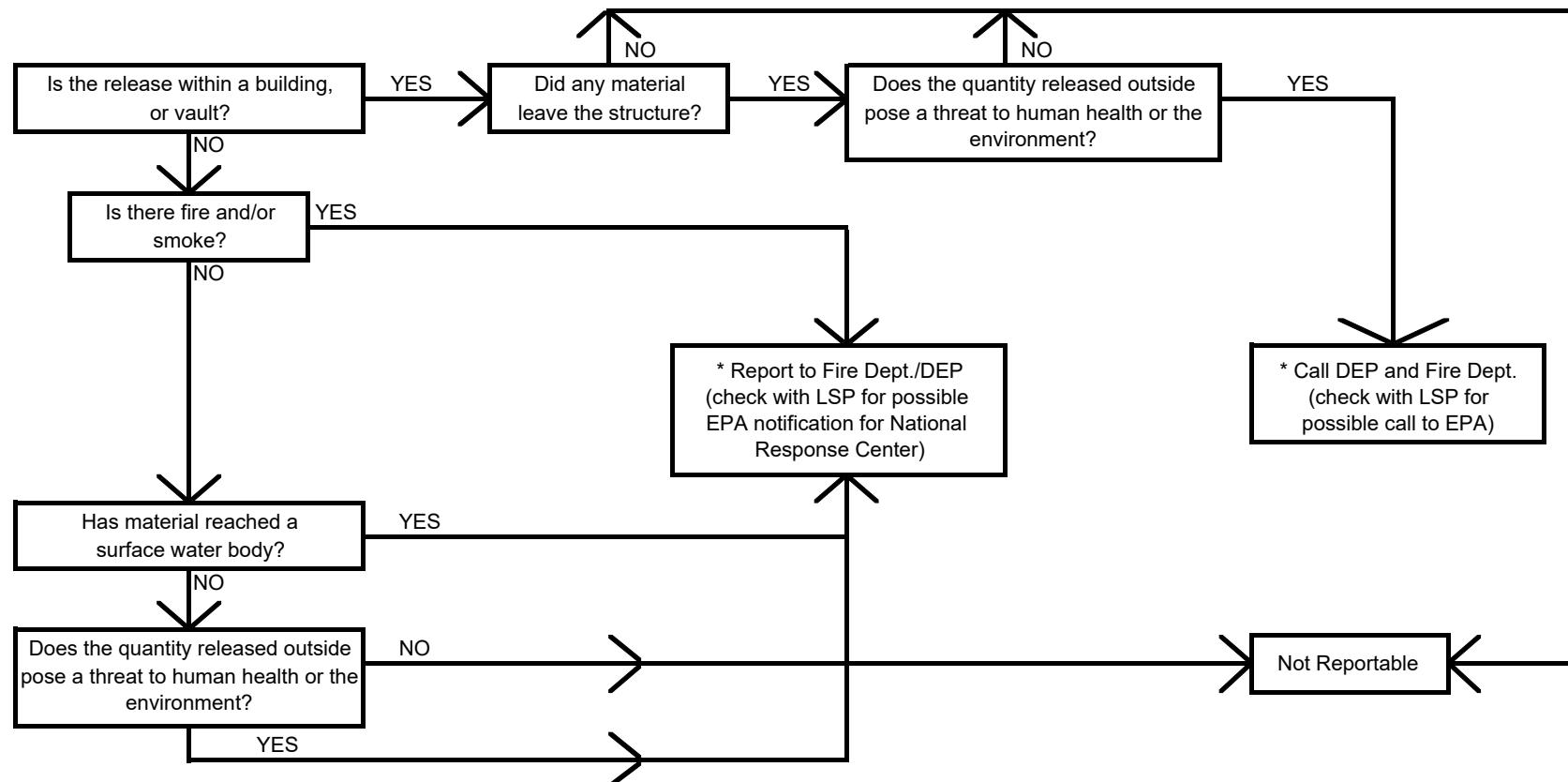
Specifications

Max Liquid Temp Exposure	Max Exposure Limit 225°F for up to 30 Minutes
Use With	Square Drains Up to 30"
Dimensions	36" W x 36" L x .335" H
Brand	PIG
Drain Shape	Square
Drain Size	Up to 30"
Color	Yellow
Ideal For	Repeated Use or Frequent Washdowns

General Spill Response Communication Procedure



General Spill Reporting Procedure



NOTES:

1. Call DEP immediately after spill is observed, but no later than 2 hours after spill is observed.
2. LSP = Licensed Site Professional