DPNR Guidance and Recommendations for Restarting Fuel Tank Operations after Flooding

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Who is affected by this initiative?

In the aftermath of a tropical storm/ hurricane, a significant amount of **Underground Storage Tank Facilities** (primarily Gasoline Service Stations) that store and distribute fuel could have been disabled. Flood water, loss of power and wind damage may have compromised the facilities ability to store and dispense fuel safely.

What should you do?

If an underground motor fuel storage tank system has been involved in a flood, there are certain measures that tank owners/operators should take to safely return the system to operation. Note that this list is not intended to be a complete checklist. All suggestions may not necessarily be applicable to every station or situation.

Actions to Be Taken Before System Startup

If you are unfamiliar with any of the system components or procedures listed, DEP recommends that you contact a tank contractor for assistance.

- Make sure that the power has been turned off to any tank system equipment (such as dispensers, pumps, leak detection equipment, etc.).
- Determine whether product has leaked from the tank system by inspecting areas around the tank, including any secondary containment, sumps, and under-dispenser containment.
- Determine whether water or debris has entered the tank system by using a gauging stick and water-finding paste.
- If water is detected in the bottom of a tank storing gasoline, test the fuel in the tank to ensure that it meets fuel quality standards.
- After inspecting the electrical system for damage, return power to the tank system. (If there is cause for concern, contact an electrician).

- Check critical safety devices (such as shear valves, stop switches, isolation relays on dispensers, etc) for the proper operation.

- Check the leak detection system for proper operation. Restart leak detection as soon as possible after the flood.

- Check all other equipment (including pumps, fill pipes, and vent lines) to ensure that it is undamaged. Inspect vent lines for movement and cracking.

- Empty and clean spill buckets and sumps (including those underneath dispensers, as well as on top of tanks). Inspect piping and fittings for damage and possible leaks.

Actions to Be Taken At System Startup

The tank system may be returned to service even if the leak detection system is inoperable, as long as there is no indication that the tank system is leaking.

- Perform daily inventory control and reconciliation (including measuring for the presence of water on the tank bottom) as an interim leak detection method while waiting for the leak detection system to be repaired.

- If there is an inventory loss or recurring accumulation of water, the tank system must be taken out-of-service until it has been tested to ensure that it is tight.

Actions to Be Taken As Soon As Practicable

- Test spill buckets and sumps to ensure that they are tight.

- Test cathodic protection (if present) to ensure that it is working properly.

- If there is no leak detection system installed, perform a tank system tightness test to ensure integrity (if it was not performed in earlier steps).

- Test all components of leak detection systems (such as electronic monitoring consoles, line leak detectors, sensors, etc) for functionality and operability.

Reference:
USEPA Underground Storage Tank Flood Guide
(Available online at: http://www.epa.gov/oust/pubs/ustfloodguide.pdf)

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