

Frequent Mishaps and Solutions with Regulated Underground Storage Tanks in Pennsylvania

NISTM

4th Annual Pennsylvania

Storage Tank Conference

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Presented by:

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Topics:

- Release Reporting Requirements for Storage Tank Owners and Operators
- Release Reporting Requirements for Department Certified Individuals
- Dispensers Removals and Replacements
- Pressurized / Pumped Delivery Issues
- Kerosene Fills
- Product Changes in Underground Storage Tanks
- Satellite Dispenser Issues Large Piping Release Detection
- Satellite Dispenser Issues Small Piping Release Detection



Release Reporting Requirements for Storage Tank Owners and Operators



Release – "Spilling, leaking, emitting, discharging, escaping, leaching or disposing from a storage tank into surface waters and groundwaters of this Commonwealth or soils or subsurface soils in an amount equal to or greater than the reportable released quantity determined under section 102 of CERCLA, and regulations promulgated thereunder, or an amount equal to or greater than a discharge as defined in section 311 of the Federal Water Pollution Control Act and regulations promulgated thereunder.

The term also includes spilling, leaking, emitting, discharging, escaping, leaching or disposing from a storage tank into a containment structure or facility that poses an immediate threat of contamination of the soils, subsurface soils, surface water or groundwater."





An **indication of a release** includes one or more of the following conditions:

(1) The presence of a regulated substance or an unusual level of vapors from a regulated substance of unknown origin at a storage tank facility.

(2) Evidence of a regulated substance or vapors in soils, basements, sewer lines, utility lines, surface water or groundwater in the surrounding area.

(3) Unusual operating conditions, indicative of a release, such as the erratic behavior of product dispensing equipment.

(4) The sudden or unexpected loss of a regulated substance from a storage tank or the unexplained presence of water in a storage tank.



(5) Test, sampling, or monitoring results from a release detection method which indicate a release.

(6) The discovery of holes in a storage tank during activities such as inspection, repair or removal from service.

(7) Other events, conditions or results which may indicate a release.





If an owner/operator suspects a release of regulated substance at his facility, he should complete an investigation of the suspected release within <u>7 days</u> and determine if the suspected release is confirmed as a reportable release.





The owner or operator shall *investigate* the indication of a release by one or more of the following procedures:

- (1) A check of product dispensing or other similar equipment.
- (2) A check of release detection monitoring devices.
- (3) A check of inventory records to detect discrepancies.
- (4) A visual inspection of the storage tank or the area immediately surrounding the storage tank.
- (5) Testing of the storage tank for tightness or structural soundness.
- (6) Sampling and analysis of soil or groundwater.
- (7) Other investigation procedures which may be necessary to determine whether a release of a regulated substance has occurred.



No notification to the Department is required unless the suspected release is confirmed as a reportable release.





Please note that, under §245.435(b)(3)(ii), owners and operators shall retain current temporary records for a minimum of <u>1</u> year after the tank system has been removed.

Temporary records include tank and pipe release detection records for the past 12 months, including written certifications or performance claims for the release detections methods in use and **documentation of investigations of suspected releases**.



Reportable Release:

"A quantity or an unknown quantity of regulated substance released to or posing an immediate threat to surface water, groundwater, bedrock, soil or sediment."





"A Reportable Release <u>DOES NOT INCLUDE</u> (if the owner or operator has control over the release, the release is completely contained and, within 24 hours of the release, the total volume of the release is recovered or removed) the following:

- 1. A release to an interstitial space of a double-walled aboveground or underground tank.
- 2. A release of petroleum to an aboveground surface that is less than 25 gallons.
- 3. A release of a hazardous substance to aboveground surface that is less than its reportable quantity under CERCLA."



When a release is confirmed as a reportable release, an owner/operator is required to notify, by telephone, the appropriate regional office of the Department within <u>24 hours</u> of the reportable release.



Within <u>**15 days</u>** of the telephone notification, the owner/operator must submit a "Notification of Reportable Release" form to the appropriate regional office of the Department.</u>



COMMONWEALTH OF PENNSYLVANIA 2550-FM-BWM0082 Rev. 12/2008 DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT 🗌 Initial NOTIFICATION OF REPORTABLE RELEASE (Owners and Operators) T Follow-Up NOTIFICATION OF CONTAMINATION (Certified Installers and Inspectors) NOTIFICATION OF REPORTABLE RELEASE (Owners and Operators) NOTIFICATION OF CONTAMINATION The Storage Tank Program's Corrective Action Process (CAP) regulations (Certified Installers and Inspectors) establish release reporting requirements for owners and operators of storage Storage Tank Program's Certification The tanks and storage tank facilities. regulations establish standards of performance for Subsection 245.305(a) of the regulations requires owners or operators to certified installers and inspectors of storage tanks and notify the appropriate regional office of the Department as soon as practicable, storage tank facilities Subsection 245.132(a)(4) of the regulations requires but no later than 24 hours, after the confirmation of a reportable release. Subsection 245,305(d) requires owners or operators to provide an initial certified installers and inspectors to report to the written notification to the Department, each municipality in which the reportable Department a release of a regulated substance or release occurred, and each municipality where that release has impacted confirmed or suspected contamination of soil, surface or environmental media or water supplies, buildings, or sewer or other utility lines, groundwater from regulated substances observed while within 15 days of the notice required by Subsection 245.305(a). performing services as a certified installer or inspector. Subsection 245.305(e) requires owners or operators to provide follow-up This form may be used to comply with Subsection written notification to the Department and to each impacted municipality of new 245.132(a)(4). Subsection 245.132(a)(4) requires impacts to environmental media or water supplies, buildings, or sewer or other submission of the form within 48 hours of observing utility lines discovered after the initial written notification required by subsection suspected or confirmed contamination. Where there is a 245.305(d). Written notification is to be made within 15 days of the discovery of reportable release, the form may be submitted jointly by the new impact. the owner, operator, certified installer and certified This form may be used to comply with Subsection 245.305(d) and (e) inspector. In this instance, the form must be received by OWNERS AND OPERATORS (O/O) the appropriate regional office within 15 days of the notice required by Subsection 245.305(a). INDICATE IF THIS IS AN INITIAL OR FOLLOW-UP NOTIFICATION **CERTIFIED INSTALLERS AND INSPECTORS (I/I)** BY MARKING THE APPROPRIATE BOX FOUND IN THE TOP RIGHT-HAND CORNER OF THIS FORM. PLEASE COMPLETE ALL INFORMATION IN PLEASE COMPLETE ALL INFORMATION IN SECTIONS I. II. IIIA, IIIC, VI. VII and VIII. SECTIONS I. II. IIIA. IIIB. IV. V. VII and VIII. INSTRUCTIONS FACILITY INFORMATION - Record the name, I.D. number and physical location (not P.O. Box) of the facility at which a reportable release has been confirmed or at which suspected or confirmed contamination has been observed. Include the name and phone number of a person to contact at the facility. OWNER/OPERATOR INFORMATION - Record the name, business address and phone number of the owner of the facility identified 11. in Section I. Also, record the name and phone number of the operator of the facility. 111 REGULATED SUBSTANCE INFORMATION - Indicate to the best of your knowledge: A) the type of product or products involved; B) the quantity of product or products released; and C) whether the contamination is suspected or confirmed. IV REPORTABLE RELEASE INFORMATION - Record the date of confirmation of the reportable release, e.g., "9/18/01"; the date and regional office notified; and the date the local municipality(ies) [provide name of municipality(ies)] was/were sent a copy of this form. Indicate to the best of your knowledge the source/cause of the release, how the release was discovered and the environmental media affected and impacts. INTERIM REMEDIALACTIONS - Indicate the interim remedial actions planned, initiated or completed. VL SUSPECTED/CONFIRMED CONTAMINATION INFORMATION - Record the date of observation of the suspected or confirmed contamination, e.g., "11/24/01". Indicate to the best of your knowledge the indications of a suspected release or extent of confirmed contamination resulting from the release of the regulated substance. VII. ADDITIONAL INFORMATION - Provide any additional, relevant, available information concerning the reportable release o suspected or confirmed contamination. Include in this section specific details or problems about the release. For example, if the piping was the source of the release and the cause was corrosion of a metal connector or flexible connector, it is important to include that information here. Use additional 81/2" x 11" sheets of paper, if necessary. CERTIFICATION - Please print your name, and provide your signature and date of signature. If a certified installer/inspector, provide VIII certification number and company certification number. IX. ATTACHMENT - If a certified installer/inspector, provide a copy of failed valid tightness test(s), if applicable. PLEASE SEND COMPLETED ORIGINAL FORM TO: PA Department of Environmental Protection Environmental Cleanup Program Storage Tank Section (and the appropriate address below, depending on where the FACILITY is located) Northwest Region Southeast Region Northeast Region Southcentral Region Northcentral Region Southwest Region 208 W. Third Street, Suite 101 2 Public Square Wilkes-Barre, PA 18711-0790 PHONE: 570-826-2511 FAX: 570-820-4907 2 Fast Main Street 909 Elmerton Avenue 400 Waterfront Drive 230 Chestnut Street Meadville, PA 16335-3481 Williamsport, PA 17701 PHONE: 570-321-6525/327-3696 Iorristown, PA 19401 HONE: 484-250-5900 Harrisburg, PA 17110 PHONE: 877-333-1904 Pittsburgh, PA 15222 PHONE: 412-442-4091/4000 PHONE: 814-332-6945 AX: 484-250-5961 FAX: 717-705-4830 FAX: 570-327-3420 FAX: 412-442-4328 800-373-3398 FAX: 814-332-6121 Counties Bradford, Cameron, Centre, Clinton, Clearfield, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union Counties Allegheny, Amstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Counties Bucks, Chester, Delaware, Montgomery, Philadelphia Counties Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton Counties Adams, Bedford, Berks, Blair, Cum-berland, Dauphin, Franklin, Fulton, Counties Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer,

Washington, Westmoreland

/enango, Warren

Pike, Schuylkill, Susquehanna,

Wayne, Wyoming

Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York

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Release Reporting Requirements for Department Certified Individuals



If a Department certified individual <u>suspects a</u> <u>release</u> of regulated substance, while performing services as a certified individual, he must submit a "Notification of Contamination" form, within <u>48 hours</u>, to the appropriate regional office of the Department.

On the form, he should indicate a <u>suspected</u> <u>release</u> along with completing all of the certified individual's sections of the form.



If a Department certified individual confirms that a reportable release has occurred while performing services as a certified individual, he has two options:

 Submit a "Notification of Contamination" form to the appropriate regional office of the Department within <u>48</u> <u>hours</u>. On the form, he should indicate a <u>confirmed release</u> along with completing all of the certified individual's sections of the form; or



2. Submit the "Notification of Contamination" form jointly with the owner/operator of the facility within <u>15 days</u> of the owner/operator's telephone notification to the appropriate regional office of the Department.

On the form, he should indicate a <u>confirmed release</u> along with completing all of the certified individual's sections of the form.



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2540-FM-BWM0082 Rev. 12/2008 FACILITY I.D. NUMBER FACILITY INFORMATION (Both O/O and I/I) II. OWNER/OPERATOR INFORMATION (Both O/O and I/I) Facility Name Facility I.D. Number **Owner Name** Street Address (P.O. Box not acceptable) Address City State Zip Code City Zip Code State PA County Municipality Phone Number Contact Person Phone Number **Operator Name** Phone Number) **III. REGULATED SUBSTANCE INFORMATION** A. Type of Product(s) Involved C. Contamination Suspected [S] or B. Quantity (Gallons) of Product(s) Released: (Mark All That Apply 🖾): Confirmed [C] (Mark All That Apply I): O/O Only Both O/O and I/I I/I Only Leaded Gasoline ... [S] [C] Unleaded Gasoline [S] .□. [C] Aviation Gasoline ... [S] [C] Kerosene [S] []] [C] Jet Fuel ... [S] [C] Diesel Fuel [S] IC1 New Motor Oil ... [S] [C] Used Motor Oil [S] IC1 Fuel Oil No. 1 [S] [C] Fuel Oil No. 2 [S] [C] Fuel Oil No. 4 [S] .□. [C] Fuel Oil No. 5 ISI [C] Fuel Oil No. 6 ... [S] [C] Other (Specify) [S] [C] Unknown [S] [C] IV. REPORTABLE RELEASE INFORMATION (O/O Only) Date Reportable Release was Confirmed: Date Owner/Operator Sent Copy of this Written Notification to Local m d Municipality(ies) and Name of Municipality(ies) Notified: Date Owner/Operator Verbally Notified Appropriate Regional Office of Date: Municipality Reportable Release and Office Notified: Date: Office Date: Municipality _ Environmental Media Affected and Impacts Source (Mark All That Apply 🖾): How Discovered (Mark All That Apply 🖾): (Mark All That Apply 🖾): Tank (DEP Assigned Nos.)...□ During Closure. . 🗆 Soil Piping System (Aboveground Regulated) Lining Installation . Sediment Piping System (Underground Regulated) Routine Leak Detection ... Surface Water Piping System (Non-Regulated) Third Party Inspection ... Ground Water Dispenser/Dispensing Equipment . Spill Catchment Basin. П. Tightness Testing Activities.. П. Bedrock Accident/Natural Disaster. . Visible Product or Odor Reports. Water Supplies Submersible Turbine Pump Head/Fittings .. . Water in Tank Vapors/Product in Buildings Containment/Sump Failure п. Vapors/Product in Sewer/Utility Lines ... Construction ... Other (Specify) _ Upgrade/Repair.... Ecological Receptors Unknown Supply Well Sample Results ... Cause (Mark All That Apply X): Monitoring Well Sample Results... Faulty Installation. . . Property Transfer ... Corrosion Physical/Mechanical Failure. . Other (Specify) Spill During Delivery . Unknown Overfill at Delivery. Vehicle Gas Tank Overfill. Product Delivery Hose Rupture Other (Specify) . Unknown ...



	EMEDIAL ACTIO	NS (O/O Only)	• • • • • • • • • • • • • • • • • • • •	
(Mark All That Apply 🖾):		to (oro only)		
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Regulated Substance Removed from Storage Tanks	🖸			
Fire, Explosion and Safety Hazards Mitigated	🗆	🗆	🗆	
Contaminated Soil Excavated	🗆			
Free Product Recovered	🗆	🗆	🗆	
Water Supplies Identified and Sampled			🗆	
Temporary Water Supplies Provided		🗆	🗖	
Other (Specify)	🗆	🗆	🗆	
VI. SUSPECTED / CONFIRME	ED CONTAMINAT	ION INFORMAT	ION (I/I Only)	
Date of Observation of Suspected/Confirmed Contamina	ntion: /	/		
ndication of Suspected Contamination (Mark All That A	pply 🗵): Extent	of Confirmed Co	ntamination (Ma	rk All That Apply 図):
Unusual Level of Vapors	Produc	Stained or Produ	ct Saturated Soil	or Backfill
Erratic Behavior of Product Dispensing Equipment	Pondec	Product		
Release Detection Results Indicate a Release	Free Pr	oduct or Sheen or	Ponded Water .	
Discovery of Holes in the Storage Tank	Free Pr	oduct or Sheen or	the Ground Wat	er Surface
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pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION

VIII. CERTIFICATION (Both O/O and I/I)					
	, hereby certify, under penalty of law as provided in 18 Pa				
(Print Name)					
C.S.A. §4904 (relating to unsworn falsification to authorities) and that the information provided by me in this notification is tr	that I am the owner or operator of the above referenced storage tank facili rue, accurate and complete to the best of my knowledge and belief.				
Signature of Owner or Operator	Date				
	, hereby certify, under penalty of law as provided in 18 P				
(Print Name)	,,,,,,				
of my knowledge and beliefSignature of Certified Installer	/_/_/				
Installer Certification Number	Company Certification Number				
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(Print Name)					
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If the "Notice of Contamination" form is being submitted to the **Department because of** a failed tightness test, a copy of the failed test results must be submitted with the form.



Dispensers – Removals and Replacements



Dispenser removals and replacements generally fall into 4 different categories:

- Removal of a dispenser with no intent of replacing
- Removal and replacement of a dispenser involving excavation
- Removal and replacement of a dispenser not involving excavation
- Removal of a dispenser without its replacement nor excavation when placing a tank system in Temporarily Outof-Service (TOS) status.



If a facility owner wants to remove a dispenser, <u>with no intention</u> <u>of ever replacing it</u>, the Department considers this a "Partial System Closure" and would require:

- 1. A <u>30-Day Closure Notice</u> submitted to the appropriate DEP regional office.
- 2. The use of a Department certified individual with "UMR" certification to remove the old dispenser. Following the work, the "UMR" certified individual must submit two modification reports to the Department. One copy of the modification report goes to the DEP central office and a second copy of the modification report goes to the appropriate DEP regional office.
- 3. A site assessment with the appropriate sampling must be done.



If a facility owner wants to remove a dispenser, replace it, and <u>excavation is required during the work</u>, the Department considers this major modification and also a "Partial System Closure." The Department would require:

- 1. A <u>30-Day Closure Notice</u> submitted to the appropriate DEP regional office.
- 2. The use of a Department certified individual with "UMR" certification to remove the old dispenser. The "UMR" certified individual must submit the appropriate modification reports to the Department.
- 3. The use of a Department certified individual with "UMX" certification to install the new dispenser. The "UMX" certified individual must submit the appropriate modification reports to the Department.
- 4. A site assessment with the appropriate sampling must be done.
- 5. The new dispenser must have a dispenser pan or dispenser sump.



If a facility owner wants to remove a dispenser, replace it, and <u>excavation is not required</u>, the Department considers this a minor modification and would require:

The use of a Department certified individual with "UMX" certification to remove the old dispenser and install the new dispenser. The "UMX" certified individual must submit the appropriate modification reports to the Department. One copy of the modification report goes to the DEP central office and a second copy of the modification report goes to the appropriate DEP regional office.



If a facility wants to remove their dispensers to go into "Temporarily Out of Use" status and <u>excavation is not required</u>, the Department considers this a minor modification and would require:

The use of a Department certified individual with "UMX" certification to remove the dispensers. The "UMX" certified individual must submit the appropriate modification reports to the Department. One copy of the modification report goes to the DEP central office and a second copy of the modification report goes to the appropriate DEP regional office.



Pressurized / Pumped Delivery Issues



37 PA CODE, CHAPTER 13. STORAGE AND USE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS

§ 13.24a. Tank openings and vents for underground tanks.

(a) Connections for all tank openings shall be liquid tight.

(f) Tank openings provided for purposes of vapor recovery shall be protected against possible vapor release by means of a spring-loaded check valve or dry break connection or other approved device unless the opening is pipe-connected to a vapor processing system. Openings designed for combined fill and vapor recovery shall also be protected against vapor release unless connection of the liquid delivery line to the fill pipe simultaneously connects the vapor recovery line. <u>All connections shall be vapor-tight</u>.



In order to comply with 37 PA Code, Chapter 13, all deliveries of flammable or combustible liquids must be done through liquid tight and vapor tight fills.



If the delivery is metered at the truck and the owner/operators gets a delivery ticket with the exact number of gallons delivered on it, the owner/operator is getting a pressurized or pumped delivery.

Examples: "Pedal Trucks," "Wagon Trucks," or home heating oil delivery trucks.



Ball floats cannot be installed in storage tanks that receive pressurized or pumped product deliveries.



Drop tube shut-off devices - Most models are not designed to provide overfill prevention for tanks that receive pressurized or pumped deliveries.

OPW 61SO OVERFILL PREVENTION VALVES

OPW 6780 OVER

The OPW 61SO Overfill Prevention Valve is designed to prevent the overfill of underground storage tanks by providing a positive shut-off of product delivery. The shut-off valve is an integral part of the drop tube used for gravity filling. The OPW 61SO allows easy installation (without breaking concrete) and requires no special manholes.

The OPW 61SO is a two-stage shut-off valve. When the liquid level rises to about 95% of tank capacity, the valve mechanism is released closing automatically with the flow. This reduces the flow rate to approximately 5 gpm through a bypass valve. The operator may then stop the filling process and disconnect and drain the delivery hose. As long as the liquid exceeds the 95% level, the valve will close automatically each time delivery is attempted.

If the delivery is not stopped and the liquid rises to about 98% of tank capacity, the bypass valve closes completely. No additional liquid can flow into the tank until the level drops below a reset point.

Models of the 61SO are available to meet virtually any UST application including two point, coaxial, poppeted coaxial and remote fill. The 61SO-3000 provides two point overfill protection for 3" riser pipes, and the 61SO-1000 and 61SO-100C (CARB) feature a grooved tube design for use with tank gauging systems. Methanol and CARB (vapor tight) approved models are also available. The OPW 61SO is approved by the New York City Fire Department. (Approval #4902).

IMPORTANT

In order to prevent product spillage from the Underground Storage Tank (UST), properly maintained delivery equipment and a proper connection at the tight fill adaptor are essential. Delivery personnel should be managed and trained to inspect delivery elbows and hoses for damaged and missing parts. They should always make certain there is a positive connection between the adaptor and elbow. If delivery equipment is not properly maintained, or the elbow is not securely coupled to the adaptor, a serious spill may result when the OPW 61TNG closes, causing a hazard, and environmental contamination.

NOTE: The OPW 61SO is designed for use on tight fill gravity drop applications only. Do not use for pressure fill applications.



"NOTE: The OPW 61SO is designed for tight fill gravity drop applications only. Do not use for pressure fill applications."



A few exceptions are:

- 1. OPW 61 f Stop
- 2. Franklin Fueling Systems EBW "The Warden Model 709"
- 3. Clay and Bailey "1228".

These were all originally designed for ASTs.



OPW 61 f Stop







61fSTOP-2000

61fSTOP-1000

61fSTOP-3050



The Warden Model 709





2" X 4" 3" X 4" 1228-03-2024ALL 1228-03-3524ALL Most small USTs receive pressurized or pumped product deliveries (tank capacity less than 2,500 gallons).

Regardless of tank capacity, tanks that receive pressurized/pumped deliveries are noncompliant for overfill prevention if the only installed equipment is not compatible with that delivery method.



Solutions -

- 1. Have an overfill alarm installed.
- 2. Have a drop tube shut-off device this designed for use with pressurized deliveries installed.
- 3. Have an "official contract" signed by both the tank owner and delivery company that states the storage tank will only be filled via gravity drop. (...if the delivery company changes a new contract must be signed...).



Real World Example:

August/September 2012 in Bucks County, PA

An underground storage tank was getting a pressurized delivery with a loose fill connection. Because it was raining, the delivery driver decided to sit in his truck during the delivery to the tank. The tank was overfilling for well over a minute before he realized what was occurring. The fuel went off the property, down a storm drain, went into a retention basin on another property and threatened the Neshaminy Creek. The underground storage tank had a standard flapper and no overfill alarm was present.



Kerosene Fills



Combustible and Flammable Liquids Act Act 1998-15

Section 7(a): Retail Service stations.

"At a retail service station, the intake or receiving pipe opening for a kerosene storage tank shall be smaller than the nozzle on the hose used to deliver gasoline or diesel fuel into the storage tank."



Labor & Industry requirement

Fire hazard safety measure that is intended to prevent the delivery of other fuels into kerosene tanks.

Applies to kerosene tanks at retail facilities.

Most retail gasoline and diesel fills are 4 inches; therefore, the kerosene fill must be smaller than 4 inches and also must be a tight fill.

Be mindful of the delivery method and the overfill prevention device!



Product Changes in Storage Tanks



We frequently receive "Storage Tank Registration Amendment Forms" that report product changes in storage tanks. (Kerosene -> Diesel, Gasoline -> Diesel, Diesel -> Gasoline, etc.)



When product changes are going to occur, there are some very important things to consider:

- Piping Leak Detection Is the MLLD 3rd-party certified for the new substance? (e.g. The Red Jacket FX1DV is not third-party certified for gasoline.)
- 2. Tank Release Detection Is the ATG probe 3rd-party certified for the new substance?
- 3. Overfill Prevention Is the overfill prevention device capable with the delivery method of the new substance? (e.g. A gasoline tank has a coaxial stage I vapor recovery drop tube and a drop tube shutoff valve. This tank is changed to store diesel fuel. To ensure the overfill device is not bypassed, the coax stage I vapor recovery drop tube must be replaced with a straight drop tube and drop tube shutoff valve.)



- 4. Venting Are the vent lines manifolded together? 37 Pa Code, §13.25(f) states, "Vent piping for tanks storing class I liquids shall not be manifolded with vent piping for tanks storing class II or class III liquids, unless positive means are provided to prevent the vapors from class I liquids from entering tanks storing class II or class III liquids, to prevent contamination and possible change in classification of the less volatile liquid."
- 5. Is the vent line height and vent cap appropriate for the substance stored? (e.g. Per PA Department of L&I, Class I liquids (gasoline) must vent at a minimum of 12 feet above grade and must have a pressure/vacuum vent cap.)
- 6. Compatibility Is the tank, piping, overfill prevention device, ancillary equipment and appurtenances all compatible with the new substance? (e.g. E85 in older fiberglass tanks)
- 7. USTIF fees USTIF bills differently for gasoline and diesel. Gasoline is billed by throughput and diesel is billed via an annual capacity fee.



Satellite Dispenser Issue – Large Piping Release Detection









A shiny new MLLD was recently installed





At the master dispenser, a release of 3.0 gph at 10 psig within 1 hour was quickly detected.





At the satellite dispenser, a release of 3.0 gph at 10 psig within 1 hour was **NOT DETECTED**!



Problem:

In older satellite dispensing systems, the piping that branches off to the satellite dispenser is typically downstream of the solenoid valve. Because of this configuration, leaks in the underground piping that goes to the satellite dispenser are not detected by a mechanical line leak detector and are essentially invisible.



Solutions:

- 1. Newer model master/satellite dispensers incorporate two or more solenoid valves – at least one solenoid valve in the master dispenser and at least one solenoid valve in the satellite dispenser. This multiple solenoid valve system does allow the satellite piping to be tested by the mechanical line leak detector.
- 2. If the piping system is double-walled, with containment sumps under the master dispenser and under the satellite dispenser, then sensors can be used for continuous leak detection.
- 3. Add a dispenser mounted electronic line leak detector to monitor only the satellite piping.











Satellite Dispenser Issue – Small Piping Release Detection



Problem:

A satellite dispenser is typically connected to a master dispenser via a short length of underground piping. Inventory-based methods of leak detection (e.g. Statistical Inventory Reconciliation – "SIR") do not see any leakage that may occur after the fuel has passed through the metering mechanism (totalizer) in the master dispenser.



Solutions:

- 1. If the piping system is double-walled, with containment sumps under the master dispenser and under the satellite dispenser, then sensors or visual interstitial monitoring can be used for small leak detection.
- 2. Use annual line tightness testing on the satellite line.
- 3. Install a satellite dispenser with a metering mechanism (totalizer).













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