Investigating And Reporting Uncommon Petroleum Storage Tank Releases

Discuss the appropriate actions for nonroutine spills and releases subject to 30 TAC Chapter 334

Presented by:

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Petroleum Storage Tank and Dry Cleaner Remediation Program

Our mission is to protect human health and the environment by remediating soil, groundwater, sediment, or surface water contaminated by leaking underground storage tanks and dry cleaning facilities.

- **Public Health and Environmental Protection:** This includes preventing contamination of soil, groundwater, and surface water resources.
- **Cleanup and Remediation Oversight:** This involves evaluating the extent of contamination, approving corrective action plans, and ensuring that cleanups meet regulatory standards.

Petroleum Storage Tank and Dry Cleaner Remediation Program

Emergency Response Coordination: Coordinating the mobilization of the Emergency Response team(s) for releases that fall under the purview of TAC 334;

- After the TCEQ Regional Office has determined that there is a health and safety risk;
- And there is no known responsible party, or the known responsible party is unable or unwilling, to take the necessary steps for abatement and emergency response actions in a timely manner.

Regulatory Framework

References - part 1

Managed by the TCEQ PST/DCRP Section in the Central Office

Governing Rules -

- Texas Administrative Code Title 30, Part 1, Chapter 334 (TAC 334) - ***Underground and Aboveground Storage Tanks***

Guidance Documents -

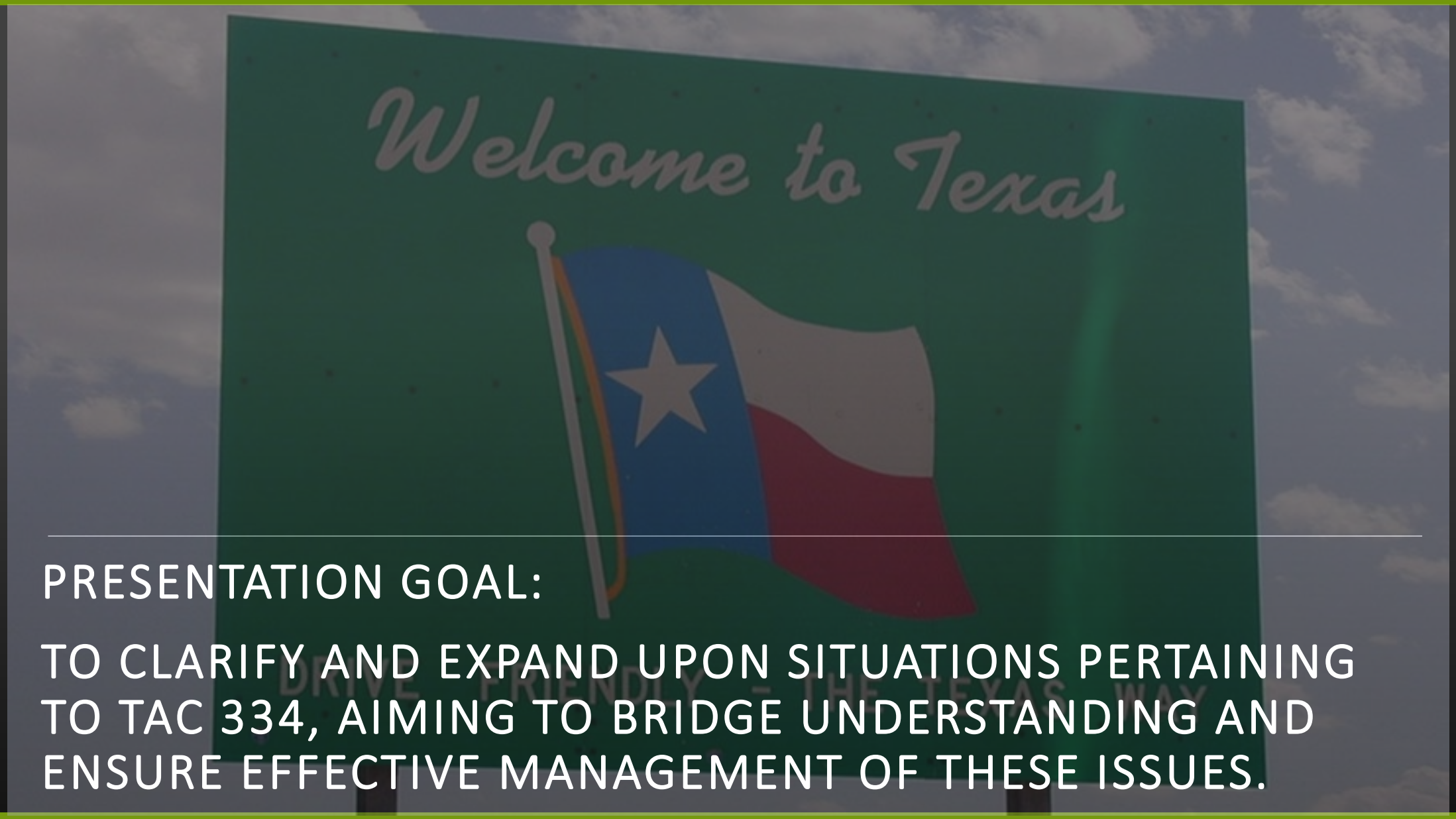
- TCEQ's RG-411, ***Investigating and Reporting Releases from Petroleum Storage Tanks***
- TCEQ's RG-523/PST-03, ***Risk-Based Corrective Action for LPST Sites"***

References - part 2

Managed by the corresponding TCEQ Region Offices

Governing Rule -

- Texas Administrative Code Title 30, Part 1, Chapter 327 (TAC 327) - ***Spill Prevention and Control***



PRESENTATION GOAL:

TO CLARIFY AND EXPAND UPON SITUATIONS PERTAINING TO TAC 334, AIMING TO BRIDGE UNDERSTANDING AND ENSURE EFFECTIVE MANAGEMENT OF THESE ISSUES.

Types of Petroleum Storage Tank Releases

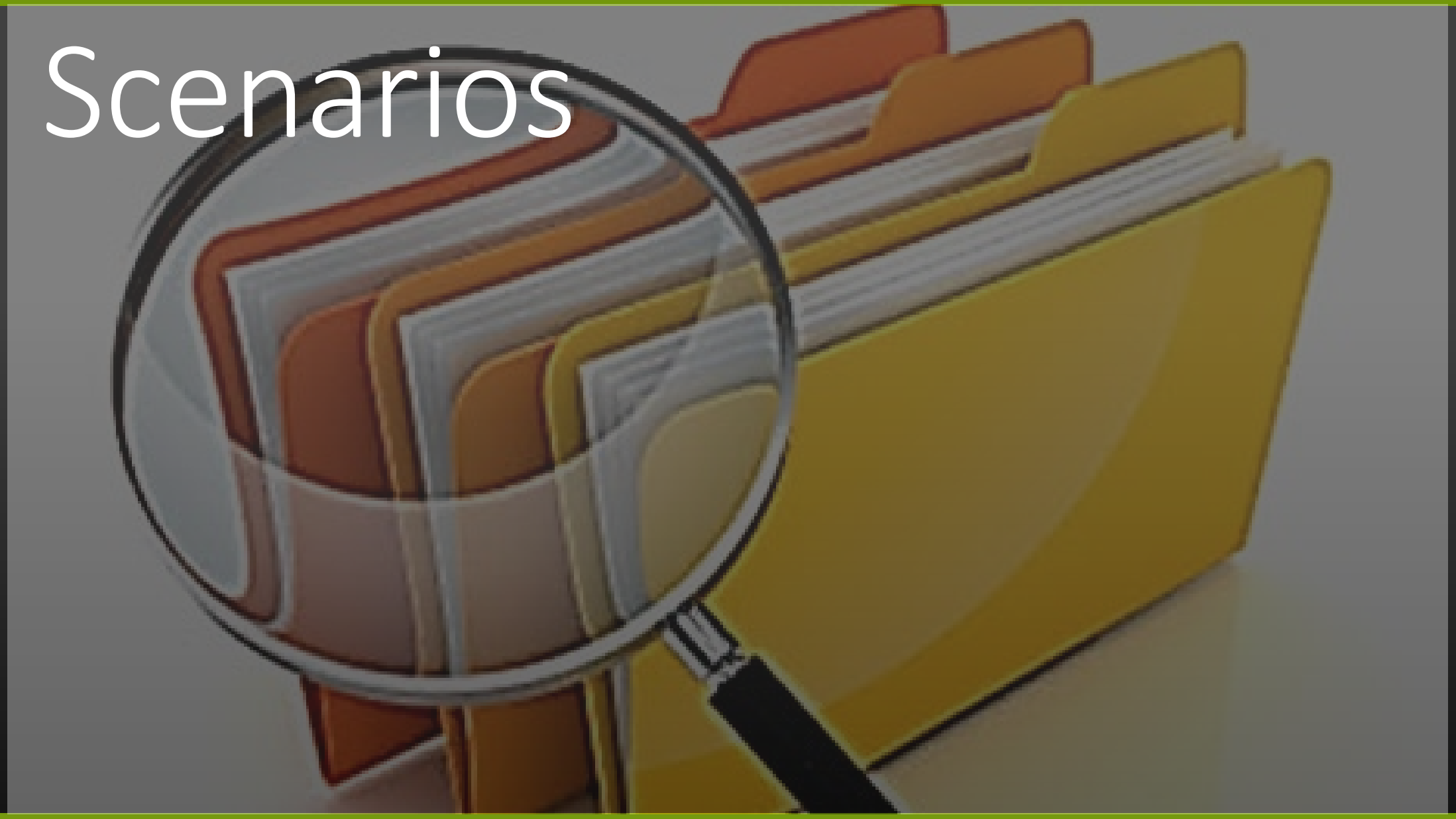
Common release scenarios involving ASTs/USTs can result from a variety of operational, structural, or accidental issues. Here are some more frequent release scenarios:

1. **Spills/Overfilling of Tanks** - This can result from operator error, malfunctioning gauges, failure of automatic shut-off devices, or miscommunication between the delivery personnel and the facility operator.
2. **Equipment Failure** - Failure of components such as hoses, pumps, seals, or gaskets can lead to leaks or spills during the transfer of petroleum products or during normal operation. The most common causes can be corrosion, piping issues, structural failures, accidental damage or vandalism.

Key points of clarification

1. Red dye diesel, in simple terms, can be used as fuel to power motor vehicles which makes it a regulated/reportable substance under TAC 334.
2. Aboveground Storage Tank (AST)/Underground Storage Tank (UST) system is the storage tank along with all ancillary components whether located above or below ground.
3. Minimum reportable quantity for a release under Chapter 327 and Chapter 334 is 25 gallons or a sheen on surface water regardless of quantity.

Scenarios



Example 1

Maintenance yard AST release

Details:

Location: A school district maintenance yard

Product: Gasoline

Cause: Equipment failure

Amount released: Approximately 300 gallons

Tank size: Estimated 750 gallons

Impermeable surface: Yes, release ran off of the asphalt into the soil.

Surface water impacted: No

Surface Soil impacted: Yes

Is this a reportable incident?

When is an AST not covered under TAC 334

1. **Specific Exemptions:** Tank usage may be regulated by other jurisdictions or for example, capacities below 1,100 gallons and used on farms or residential tanks used for storing motor fuel for noncommercial purposes may be exempt.
2. **Specific Exclusions:** These refer to specific situations which do not meet exemption criteria, but still are not subject to regulation under TAC 334 such as diluted concentrations of petroleum substances or emergency spill protection or overflow containment tanks.

Comparing TAC 327 and TAC 334

Purpose: Both sets of regulations aim to protect the environment by managing the storage and release of petroleum products (or hazardous substances).

Release Reporting: Both require prompt reporting of spills or releases within 24 hours of discovery.

Regulated Substances: Oil and petroleum products are covered under both TAC 327 and TAC 334.

Agency Involvement: The TCEQ oversees compliance with both regulations.

Distinctions between TAC 327 and TAC 334

Scope of Regulations:

- TAC 327 addresses the discharge of pollutants adjacent or into water sources, with an emphasis on the quality of water in the state while TAC 334 governs the management of storage tank systems and the release/remediation of regulated products into any part of the environment.

Response Measures:

- TAC 327 may require specific treatment actions to address a wide array of contamination while TAC 334 focuses on containment, abatement, investigation, and confirmation steps following a release from an AST or UST system.

Agency Involvement:

- TAC 327 is reported to and managed by the TCEQ Regional Office where the release occurred while TAC 334 can be initially reported to the region but will be need to be reported to and managed by the TCEQ PST/DCRP Section.

Conclusion:

Although the substance and quantity of the release warrant reporting and management under TAC 334, this was a tank that did not require registration due to the tank capacity meeting exemption criteria. This incident is currently undergoing remediation under TAC 327.

Example 2

Coastal dock AST release

Details:

Location: Fleet refuel AST adjacent to a coastal dock

Product: Gasoline

Cause: Damage to the dispenser line

Amount released: Approximately 5-10 gallons

Tank size: 10,000 gallons

Impermeable surface: No

Surface water impacted: Yes

Surface Soil impacted: Yes

Is this a reportable incident?

TAC 327 – Notification Requirements

- A reportable discharge of substances such as oil, petroleum products, used oil, hazardous substances, industrial solid waste, or other pollutants into the environment.
- The volume of the release must meet or exceed certain reportable quantities (RQs) within a 24-hour period as specified in §327.4.
  - Specifically, the RQ for spills on land is typically 25 gallons, except for facilities exempt from PST regulations, where the RQ is 210 gallons or five barrels.
  - Any spill amount that causes a sheen on state waters is reportable, regardless of volume.

TAC 334 – Notification Requirements

- Any spill or overfill of a petroleum substance from a UST or petroleum product from an AST that results in a release to the environment that:
  - exceeds 25 gallons; or
  - any spill amount that causes a sheen on surface waters regardless of volume.
- Any spill or overfill of a hazardous substance from a UST to the environment that equals or exceeds its reportable quantity under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (40 Code of Federal Regulations (CFR) Part 302)

Reporting Timelines

TAC 327 – Spills must be reported within 24-hours of discovery to either the State Emergency Response Center (1-800-832-8224) or the TCEQ Regional Office where the incident occurred. Follow-up reports are mandatory.

TAC 334 – Suspected/confirmed PST releases must be reported within 24-hours of discovery to the TCEQ PST/DCRP Section. Form TCEQ-20097 may be emailed to pstrpr@tceq.texas.gov or phoned in to 512-239-2201.

Conclusion:

In this scenario, this was a registered AST with a release that caused a sheen on the surface water and impact to surface soil. Although the quantity is below the minimum reportable quantity, the sheen on the surface water requires the incident to be managed under TAC 334.

Example 3

AST Release at a “Bulk” storage facility

Details:

Location: A full-service mobile refueling and equipment services company

Product: Diesel (Red dye)

Cause: Equipment failure (act of nature)

Amount released: Approximately 800 gallons

Tank size: 7,000 gallons

Impermeable surface: No

Surface water impacted: No

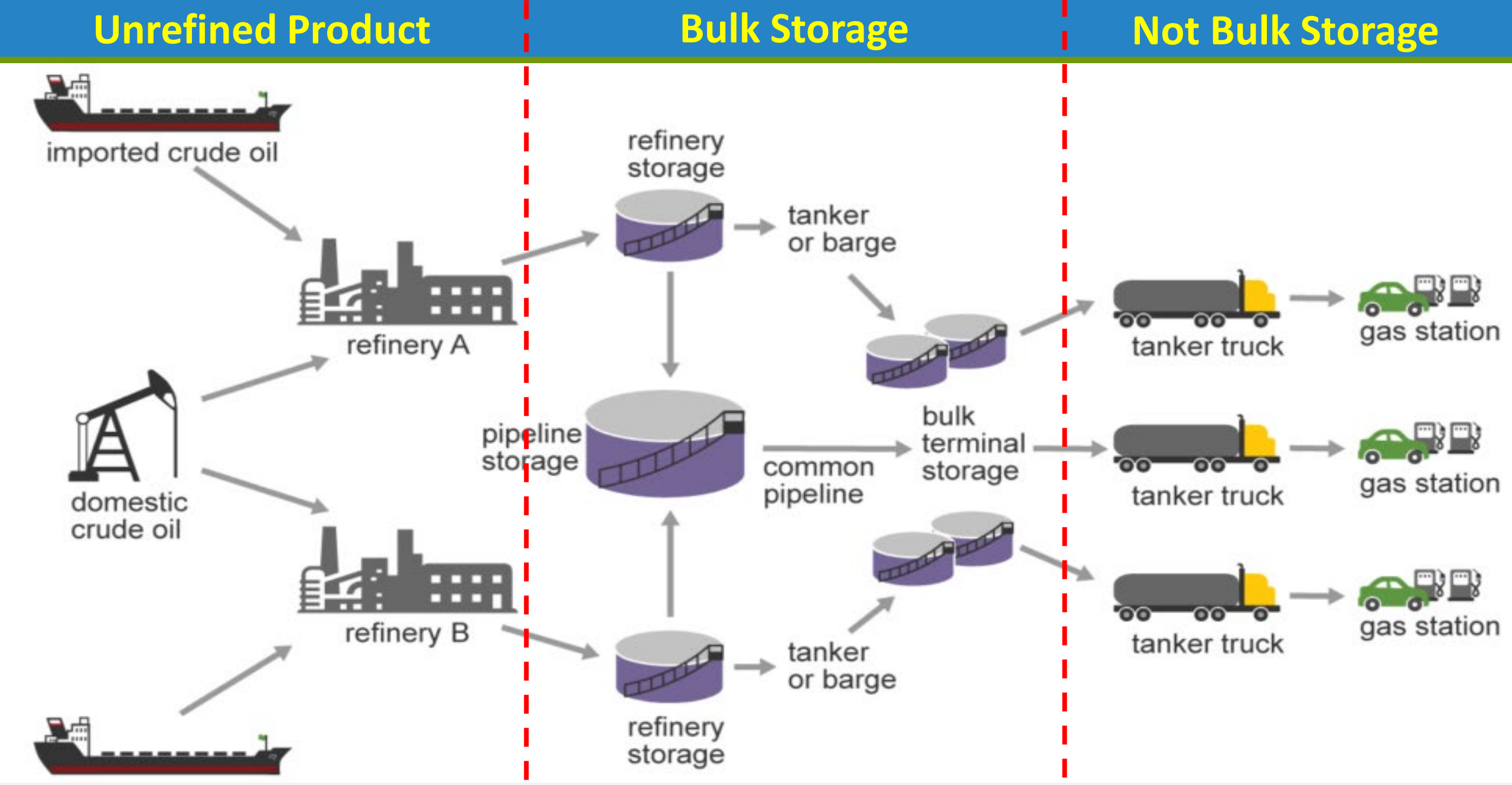
Surface Soil impacted: Yes

Is this a reportable incident?

Bulk Storage

Bulk facility according to TAC 334:

- It includes **pipeline terminals**, **refinery terminals**, **rail and barge terminals**.
- These facilities may have both **underground** and **aboveground storage tanks (ASTs)**.
- The primary purpose of a bulk facility is to **withdraw petroleum products in large quantities**.
- These withdrawn products are then **delivered into cargo tanks or barges** for transportation.


Unrefined Product
Bulk Storage
Not Bulk Storage
imported crude oil
refinery A
domestic crude oil
refinery B
refinery storage
tanker or barge
pipeline storage
common pipeline
bulk terminal storage
refinery storage
tanker or barge
tanker truck
gas station
tanker truck
gas station
tanker truck
gas station

Conclusion:

Based on the specific context for what qualifies as a bulk facility and although the site manages large quantities of product, this facility does not qualify for that exemption. The volume of the release along with the substance released requires action and management under TAC 334.

Example 4

Construction site AST overfill

Details:

Location: Construction site

Product: Diesel (Red dye)

Cause: Overfill during fuel drop

Amount released: Approx. 250 gallons

Tank size: 10,000 gallons

Impermeable surface: No

Surface water impacted: No

Surface Soil impacted: Yes

Is this a reportable incident?

Moveable ASTs – TAC 327 vs TAC 334

TAC 327 – When the AST is in transit (i.e., towable or on a trailer) or used to facilitate mobile refueling and is not setup as a static point.

TAC 334 – When the AST is not attached or fixed to any kind of vehicle that can move on its own, be towed, or pushed. Is used as a static refueling point.

Conclusion:

Since it is an overfill in conjunction with an AST with a regulated substance (red dye diesel) and above reportable quantities (250 gallons), this incident should be reported and managed under TAC 334.

Example 5

UST overfill during fuel delivery

Details:

Location: Retail fuel station

Product: Gasoline

Cause: Operator error

Amount released: Approx. 70-100 gallons

Tank size: 10,000 gallons

Impermeable surface: Yes

Surface water impacted: No

Surface Soil impacted: No

Is this a reportable incident?

UST/AST spill/overfill - TAC 334 or TAC 327

A release that occurs while a tanker truck is connected to an Underground Storage Tank (UST) or Aboveground Storage Tank (AST) fill port;

a. The situation will fall under TAC 334 if the UST system is involved (transfer or fuel between the two entities), especially if the release impacts the surrounding environment typically managed under UST regulations.

b. However, if the release is from the tanker truck itself and not directly related to the stationary AST or UST system's integrity or management and was not conjunction with a refuel, then it will fall within TAC 327.

Conclusion:

The spill occurred during the transfer of fuel to a UST. Due to it being in conjunction with the refueling of the UST system, this case should be reported and managed under TAC 334.

Conclusion

- Stay current on regulatory guidance and changes. Focus on understanding the key distinctions and similarities between TAC 327 and TAC 334.

- If a situation arises where there is doubt on what rule is appropriate, reach out to the TCEQ region office for interpretation and guidance. If that situation involves an underground or aboveground petroleum storage tank, contact the PST/DCRP Section for reporting or guidance.

Questions?

Contact Information

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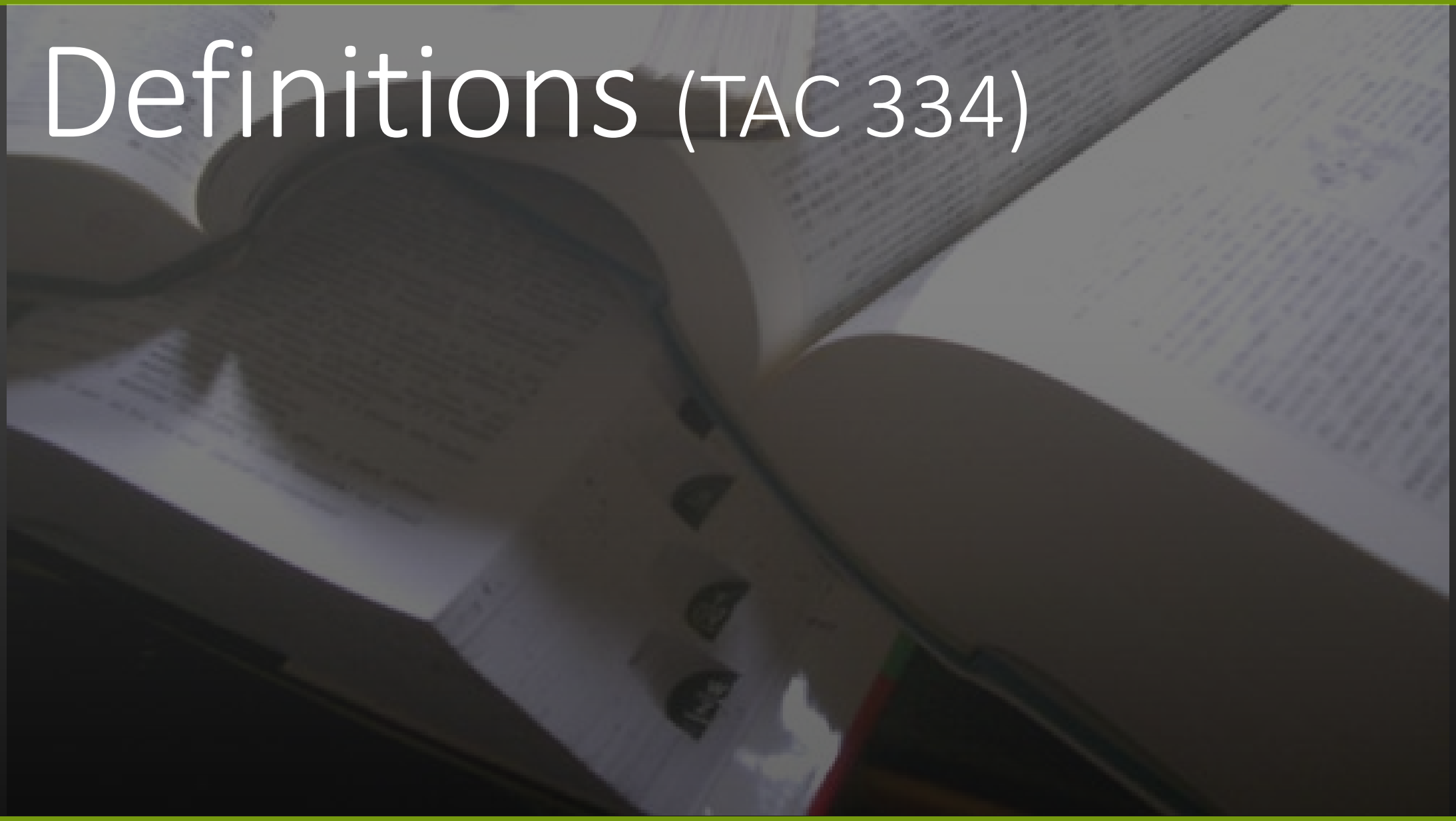
Definitions (TAC 334)



Definitions – 1 of 4

Release--Any spilling including overfills, leaking, emitting, discharging, escaping, leaching, or disposing from an underground storage tank or aboveground storage tank into groundwater, surface water, or subsurface soils. In this definition, the term "subsurface soils" does not include backfill or native material in the tank hole that is placed immediately adjacent to or surrounding an underground storage tank system when the system is installed or the system's individual components are replaced unless petroleum free product is present in the backfill or native material.

Overfill--A release that occurs when an underground storage tank system is filled beyond its capacity, thereby resulting in a discharge of a regulated substance to the surface or subsurface environment.

Spill--A release of a regulated substance which results during the filling, placement, or transfer of regulated substances into an underground storage tank (UST) or an aboveground storage tank (AST), or during the transfer or removal of regulated substances from a UST/AST system.

*All definitions are verbatim as stated in Title 30 TAC 334 Subchapter A §334.2

Definitions – 2 of 4

Petroleum product-- A petroleum substance obtained from distilling and processing crude oil **that is liquid at standard conditions of temperature and pressure, and that is capable of being used as a fuel for the propulsion of a motor vehicle or aircraft**, including, but not limited to, motor gasoline, gasohol, other alcohol blended fuels, aviation gasoline, kerosene, distillate fuel oil, Number 1 and Number 2 diesel, and biodiesel blended with Number 1 or Number 2 diesel. The term does not include naphtha-type jet fuel, kerosene-type jet fuel, or a petroleum product destined for use in chemical manufacturing or feedstock of that manufacturing**.**

Bulk facility--A facility, including pipeline terminals, refinery terminals, rail and barge terminals, and associated USTs and ASTs, connected or separate, from which petroleum products are withdrawn from bulk and delivered into a cargo tank or barge used to transport those products. (These are regulated by TRRC)

*All definitions are verbatim as stated in Title 30 TAC 334 Subchapter A §334.2

Definitions – 3 of 4

Underground storage tank (UST)--Any one or combination of underground tanks and any connecting underground pipes used to contain an accumulation of regulated substances, the volume of which, including the volume of the connecting underground pipes, is 10% or more beneath the surface of the ground.

Underground storage tank (UST) system--An underground storage tank, all associated underground piping and underground ancillary equipment, spill and overfill prevention equipment, release detection equipment, corrosion protection system, secondary containment equipment (as applicable), and all other related systems and equipment.

*All definitions are verbatim as stated in Title 30 TAC 334 Subchapter A §334.2

Definitions – 4 of 4

Aboveground storage tank--A nonvehicular device (including any associated piping) that is made of nonearthen materials; located on or above the surface of the ground, or on or above the surface of the floor of a structure below ground, such as a mineworking, basement, or vault; and designed to contain an accumulation of petroleum products.

Associated piping--All underground pipes or aboveground pipes (including related valves, elbows, joints, flanges, connectors, and other fittings) which are directly associated with an AST storing petroleum products, which are located at the AST facility, and through which petroleum products flow or in which petroleum products are contained or stored.

Nonvehicular device--A fixed, stationary, or moveable storage vessel which is not affixed or mounted to any self-propelled, towable, or pushable vehicle (e.g., wagon, truck, trailer, railcar, aircraft, boat, or barge).