



TANKS IN UNDERGROUND AREAS (TIUGA)

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26th California Unified Program
 Annual Training Conference
 February 26-29, 2024

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Poll Survey Question 1

- Which of these TIUGAS are exempt or excluded from APSA
 - Portable containers/tanks
 - Hydraulic fluid tank systems if tank facility's storage capacity is less than 1,320 gallons of petroleum
 - Heating oil tank if tank facility's storage capacity is less than 1,320 gallons of petroleum
 - All of the above



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Objectives

- Definition
- Piping Requirements
- Scenarios and Common Questions



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Poll Survey Question 2

- Do I include the capacity of a tiny TIUGA (less than 55-gallon capacity) in my tank facility's total storage capacity?
 - YES
 - NO



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What is a TIUGA?

- A TIUGA is a stationary storage tank
- located in a structure at least 10% below the ground surface
 - Basement, cellar, shaft, pit or vault
- is situated on or above the surface of the floor

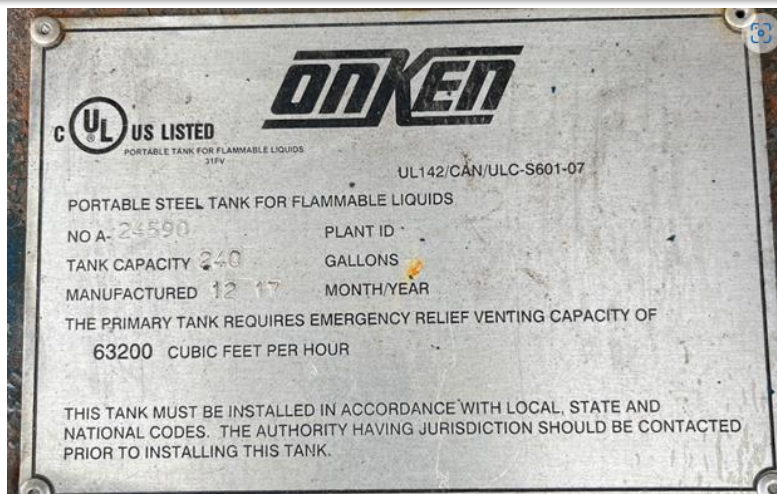
HSC 25270.2(o)

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Is this stationary or portable?



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What is a TIUGA?

- Stores one of the following:
 - (i) Petroleum to be used or previously used as a lubricant or coolant in motor engines, transmissions, or oil-filled operational/manufacturing equipment
 - (ii) Petroleum hazardous waste and complies with hazardous waste tank standards per 22 CCR
 - (iii) Petroleum to be used in an emergency system, **SOLELY** in connection with a fire pump **OR** an emergency system (legally required or standby systems)
 - (iv) Petroleum for **'OTHER'** use

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What is a TIUGA?

- The structure in which the tank is located must provide secondary containment for the contents of the following until cleanup occurs
 - Tank
 - A shop-fabricated double-walled storage tank satisfies the secondary containment requirement for the contents of the tank
 - Piping and
 - Ancillary equipment

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What is a TIUGA

- The tank must meet one of the following monitoring requirements
 - The structure in which the storage tank is located must allow for direct viewing of the exterior of the tank except for the part of the tank in contact with the surface of the floor
- OR
- The interstitial space or containment structure must be inspected or equipped with a mechanical or electronic device that will detect leaks and alert the tank operator

HSC 25270.2(o)

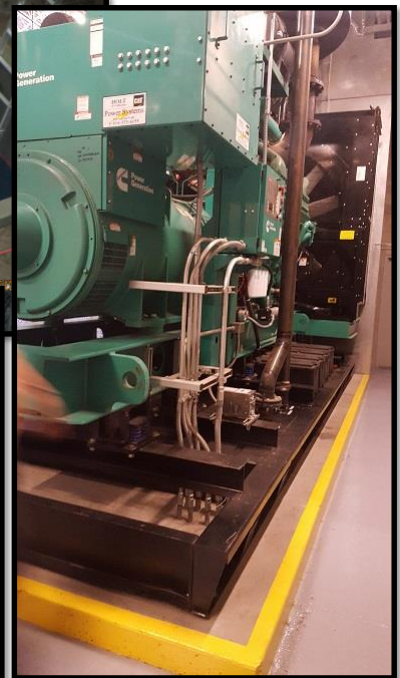
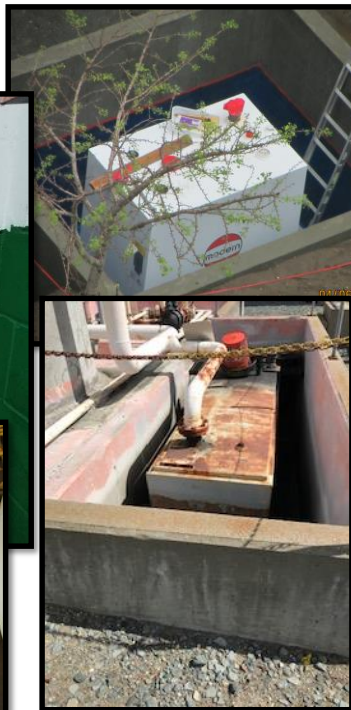
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EXAMPLES



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EXAMPLES



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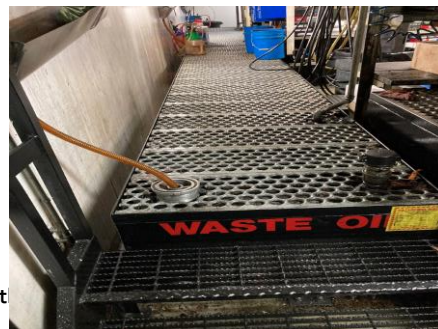
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Poll Survey Question 3

- Direct viewing means a direct visual inspection of the exterior of the...
 - Tank (except for the part in contact with the surface of the floor)
 - Entire length of all piping and ancillary equipment, *where applicable*
 - And inspection must be performed by a person or through the use of visual aids (mirror, camera, or video equipment)
 - All of the above



Is this direct viewing?



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SPCC Rule Piping Requirements [40 CFR 112.8(d)]

- Provide buried piping (installed or replaced on or after August 16, 2002) with protective wrapping and coating; *cathodically protect buried piping* installations or otherwise satisfy the *corrosion protection* standards for piping in 40 CFR Part 280 or 281
- If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration
- If you find corrosion damage, you must undertake additional examination and corrective action as indicated by the magnitude of the damage
- *Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time*



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SPCC Rule Piping Requirements [40 CFR 112.8(d)]

- *Properly design pipe supports* to minimize abrasion and corrosion and allow for expansion and contraction
- Regularly inspect all aboveground valves, piping and appurtenances
 - During the inspection you must assess the general conditions of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces
 - You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement
- Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or all other oil transfer operations



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Piping Requirements

- SPCC rule piping requirements apply to all TIUGA types
- TIUGA-specific piping requirements exist **only for TYPE IV "Other" TIUGAs**



2022 CFC Section 5703.6.2.2
 HSC 25270.2(0)(1)(C)(iv)(IV)
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"Other" TIUGA Piping Requirements

- All portions of **below-grade** or **underground** piping systems (except emergency vent solely to relieve pressure) shall have secondary containment **AND** be monitored for leaks by one of the following methods
 - A listed or approved leak detection system that either activates an audible and visual alarm or stops the flow of product when a leak is detected
 - Direct visual inspection conducted monthly by designated personnel
 - Indirect visual inspection conducted monthly through the use of, but not limited to mirrors, cameras or video equipment
 - If the above methods cannot be met, an alternative means shall be provided in accordance with CFC Section 1.11.2.4



2022 CFC Section 5703.6.2.2
 HSC 25270.2(0)(1)(C)(iv)(IV)
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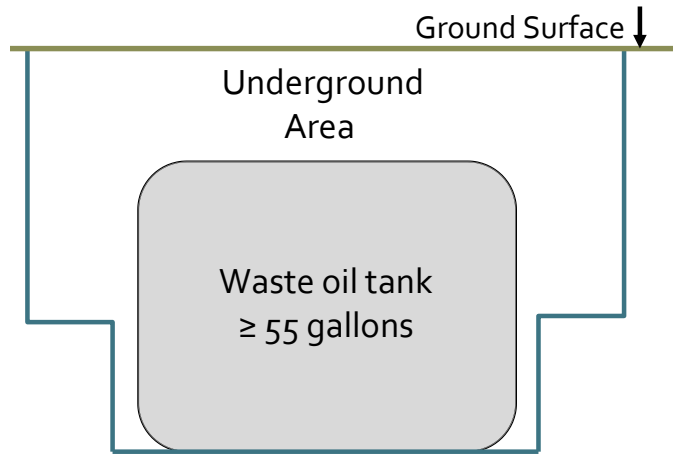
SCENARIOS &

COMMON QUESTIONS



Scenario 1

- Does the tank meet the definition of a TIUGA?
- Does underground or below grade piping need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?

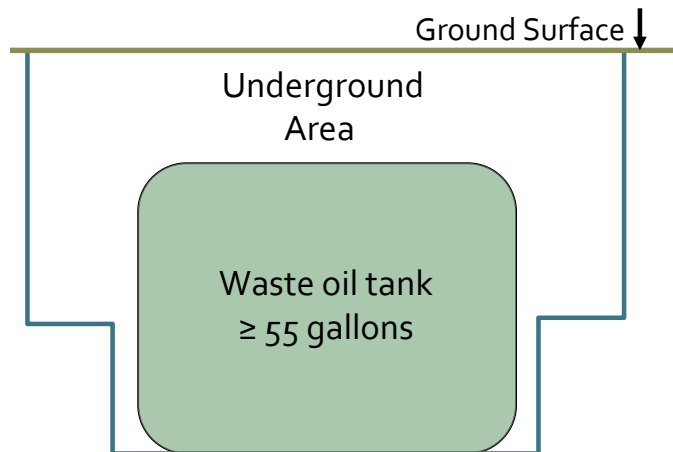


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Scenario 1

- Does the tank meet the definition of a TIUGA?
 - Answer: YES
- Does underground or below grade piping need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?
 - Answer: NO

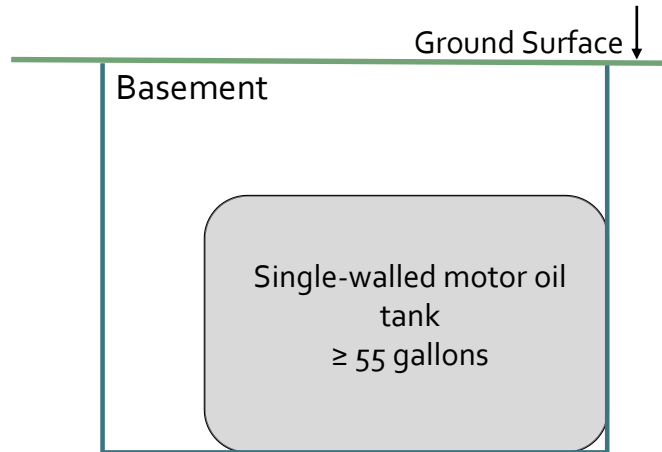


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Scenario 2

- Does the tank meet the definition of a TIUGA?
- Does underground or below grade piping need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?

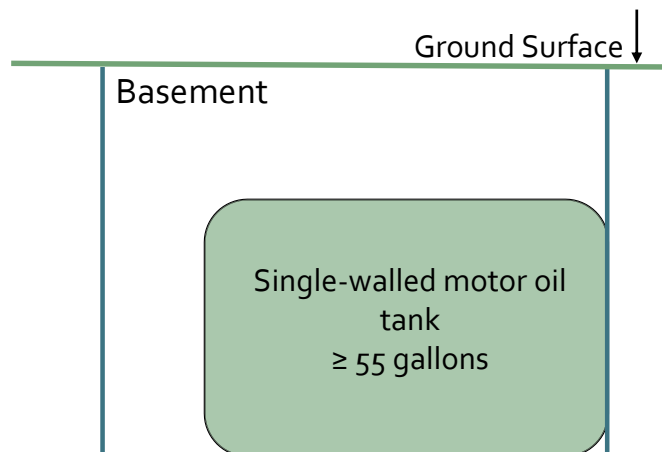


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Scenario 2

- Does the tank meet the definition of a TIUGA?
 - Answer: YES, but secondary containment must be monitored
- Does underground or below grade piping need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?
 - Answer: NO

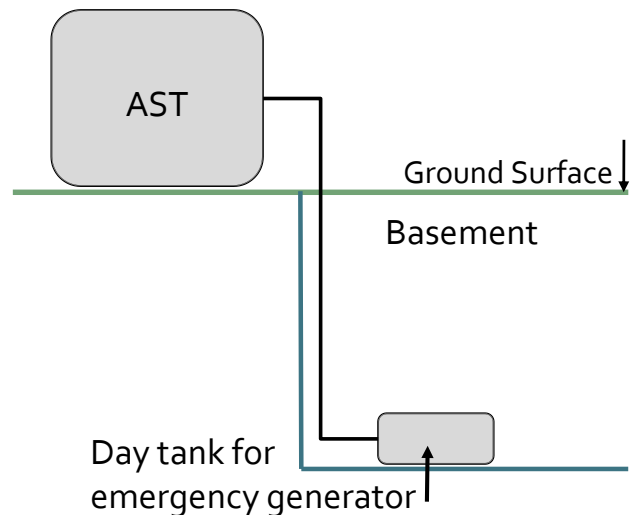


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Scenario 3

- Does day tank meet the definition of a TIUGA?
- Does underground or below grade piping need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?

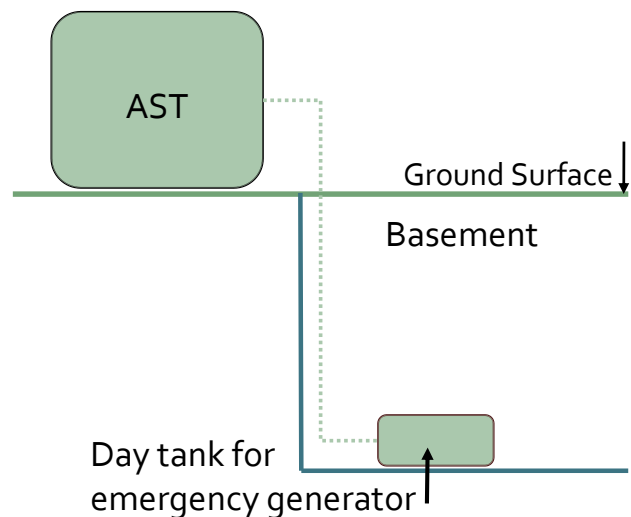


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Scenario 3

- Does day tank meet the definition of a TIUGA?
 - Answer: YES
- Does underground or below grade piping need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?
 - Answer: NO

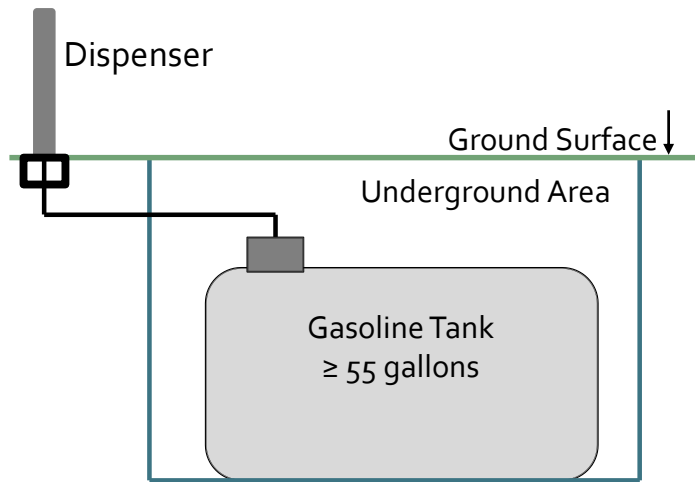


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Scenario 4

- Does gasoline tank meet the definition of a TIUGA?
- Does underground or below grade piping* need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?

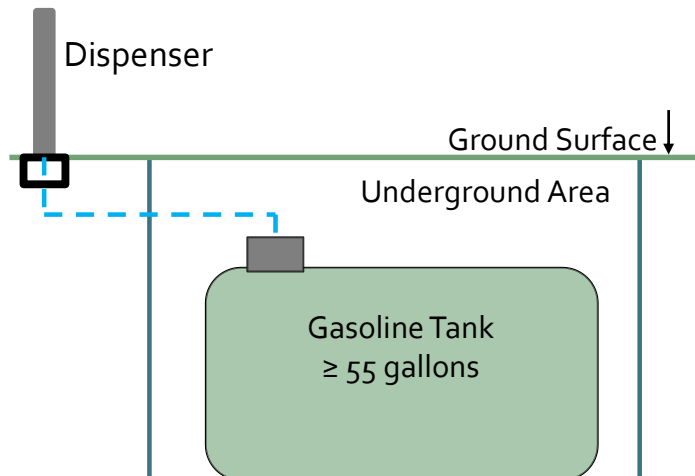


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Scenario 4

- Does gasoline tank meet the definition of a TIUGA?
 - Answer: YES
- Does underground or below grade piping* need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?
 - Answer: YES



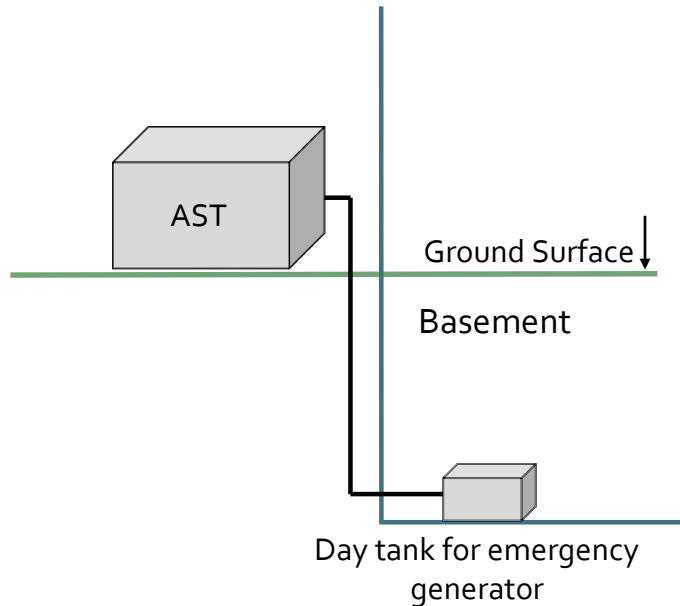
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*Excludes emergency vent solely to relieve pressure

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Scenario 5

- Does day tank meet the definition of a TIUGA?
- Does underground or below grade piping need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?

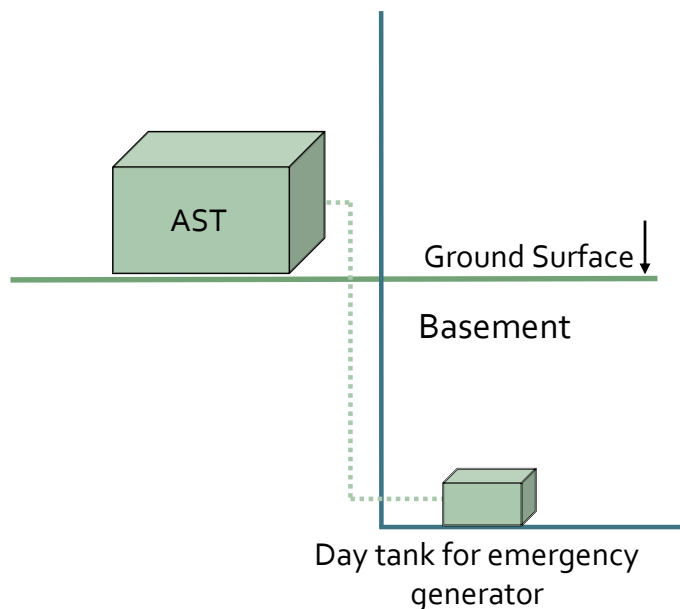


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Scenario 5

- Does day tank meet the definition of a TIUGA?
 - Answer: YES
- Does underground or below grade piping need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?
 - Answer: NO

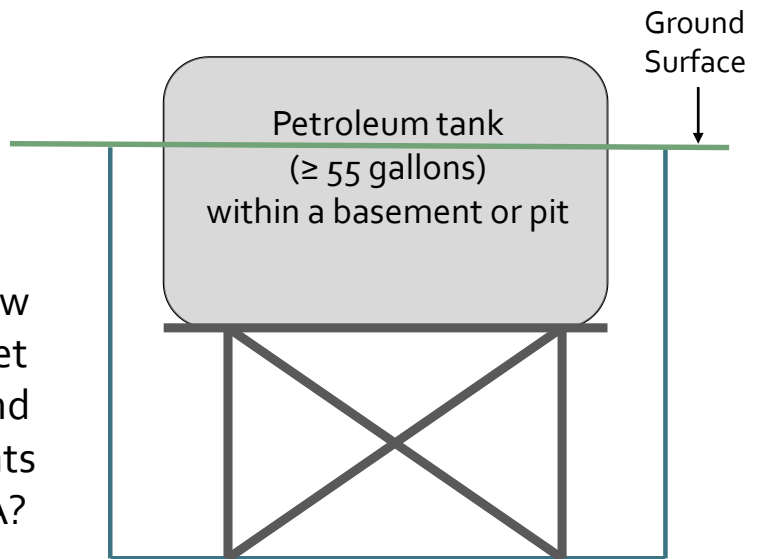


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Scenario 6

- Does the tank meet the definition of a TIUGA?
- Does underground or below grade piping* need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?

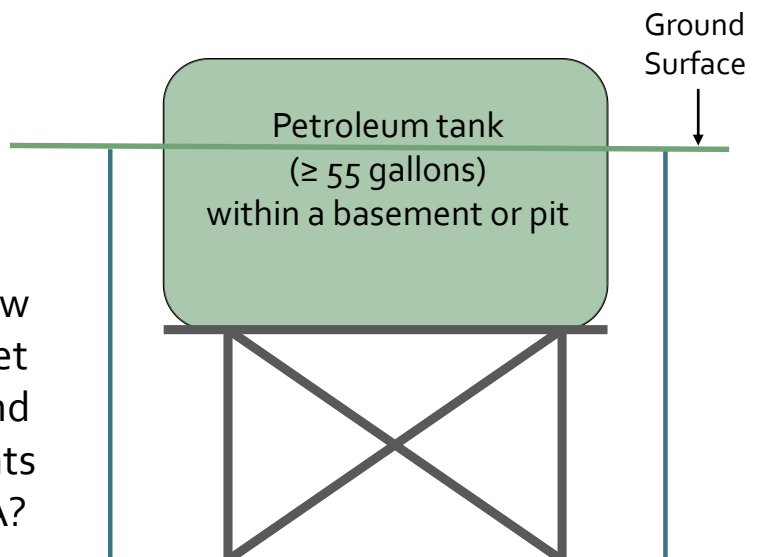


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Scenario 6

- Does the tank meet the definition of a TIUGA?
 - Answer: YES
- Does underground or below grade piping* need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?
 - Answer: It depends



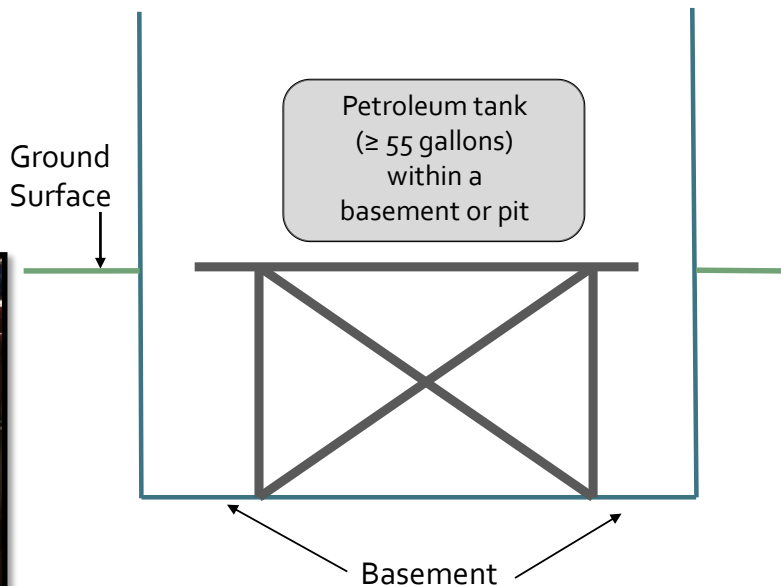
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*Excludes emergency vent solely to relieve pressure

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Scenario 7

- Does the tank meet the definition of a TIUGA?

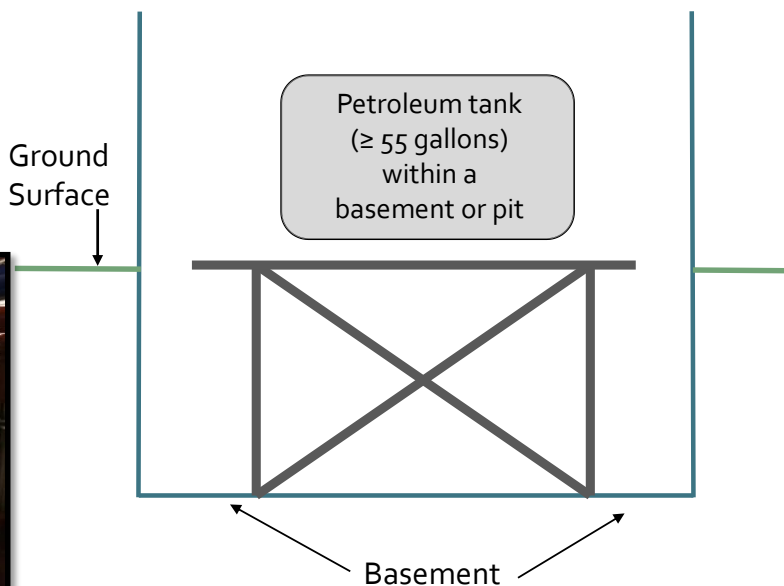


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Scenario 7

- Does the tank meet the definition of a TIUGA?
 - Answer: NO.

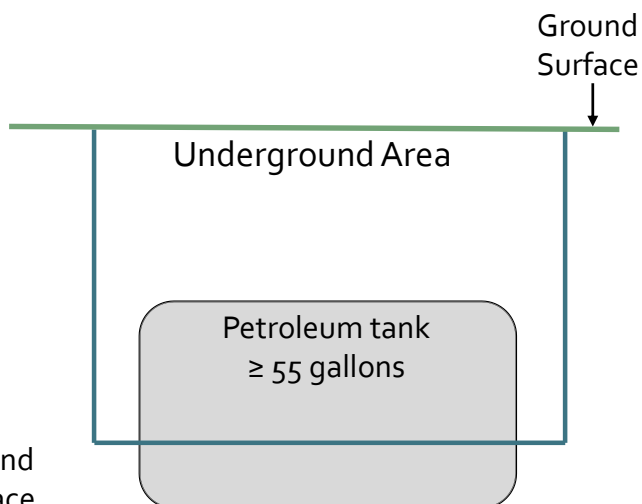
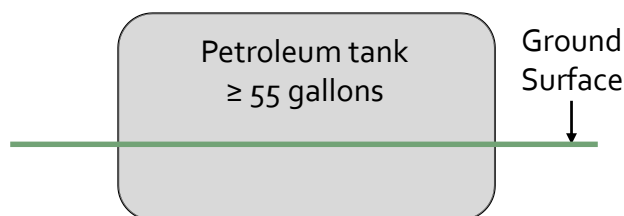


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Scenario 8

- Do these tanks meet the definition of a TIUGA?

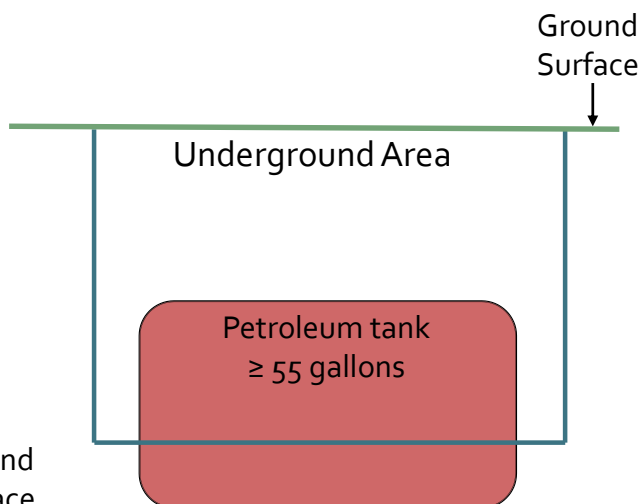
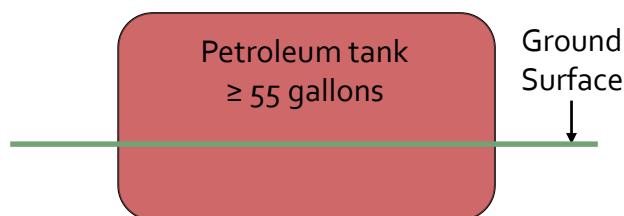


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Scenario 8

- Do these tanks meet the definition of a TIUGA?
 - Answer: NO, these are USTs.

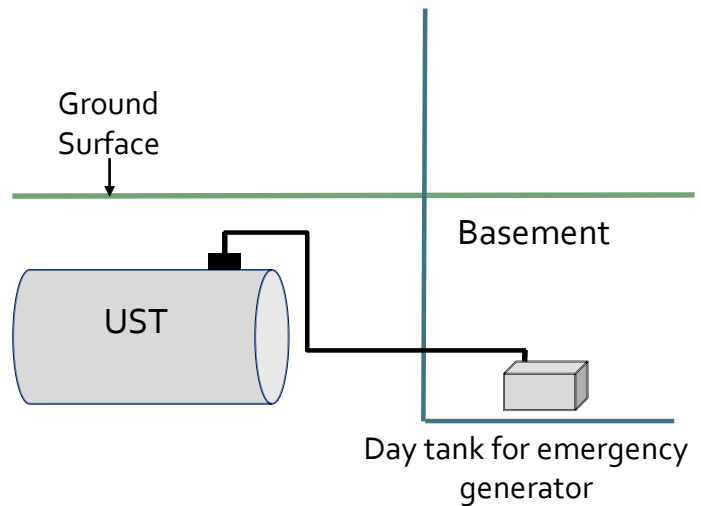


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Scenario 9

- Does day tank meet the definition of a TIUGA?
- Does underground or below grade piping need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?

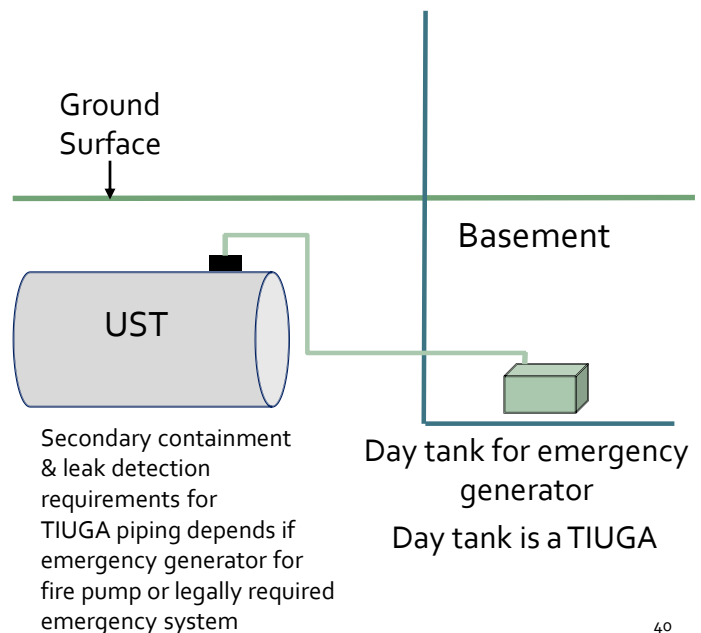


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Scenario 9

- Where does APSA come in?
 - Piping associated with a TIUGA includes liquid product and return piping shared between the TIUGA and the UST **up to** the tank top fitting.
- What about UST requirements?
 - UST sumps containing liquid product and return piping connections, additional components within the sump, and any other shared TIUGA and UST components, **other than the TIUGA supply and return pipe and associated pump or turbine**, are part of the UST system and must meet all UST requirements.

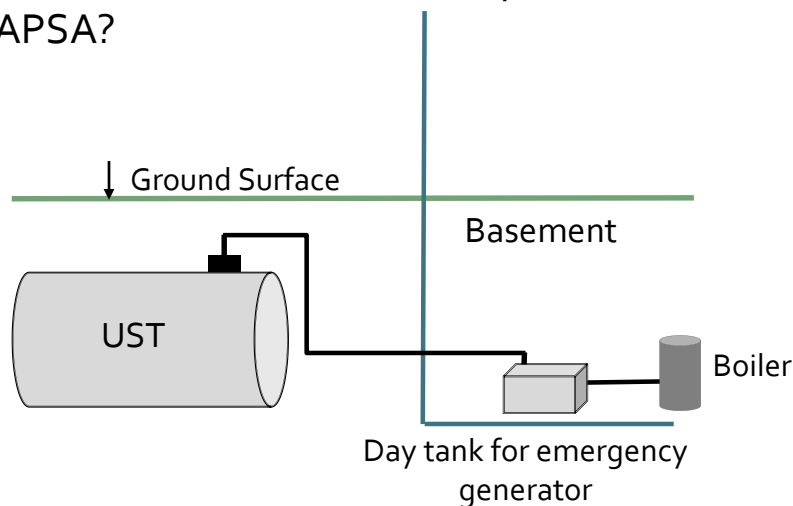


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Scenario 10

- Does underground or below grade piping* need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?



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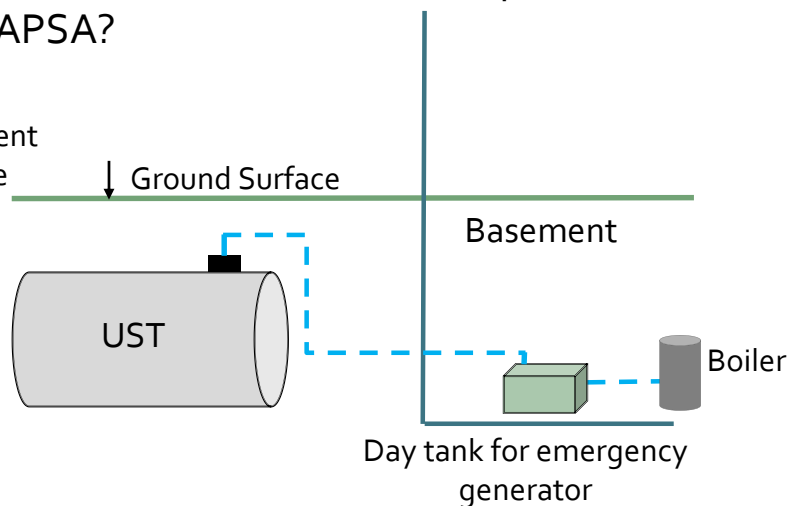
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Scenario 10

- Does underground or below grade piping* need to meet secondary containment and leak detection requirements for TIUGA piping per APSA?

- Answer: YES

*Excludes emergency vent solely to relieve pressure



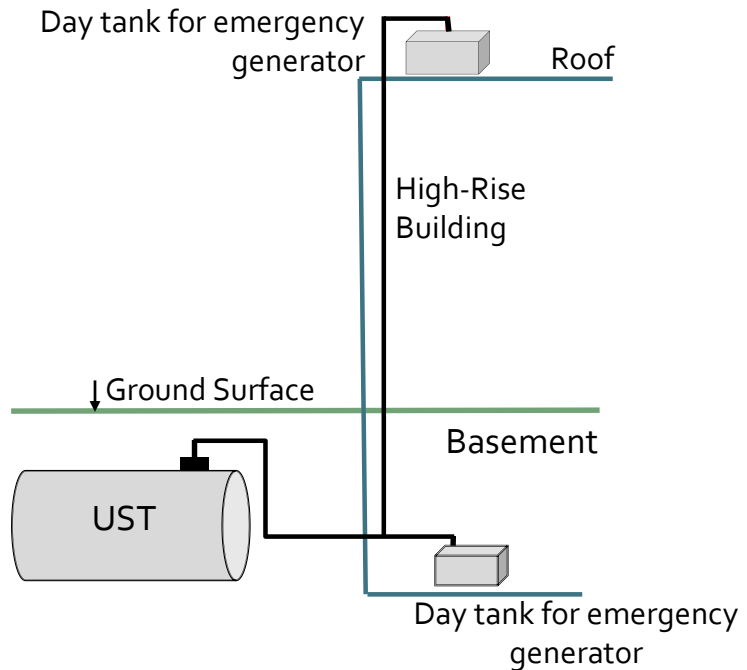
Boiler is not included as emergency system and therefore is "Other" use.

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Scenario 11

- Where does APSA come in?
- What about UST requirements?

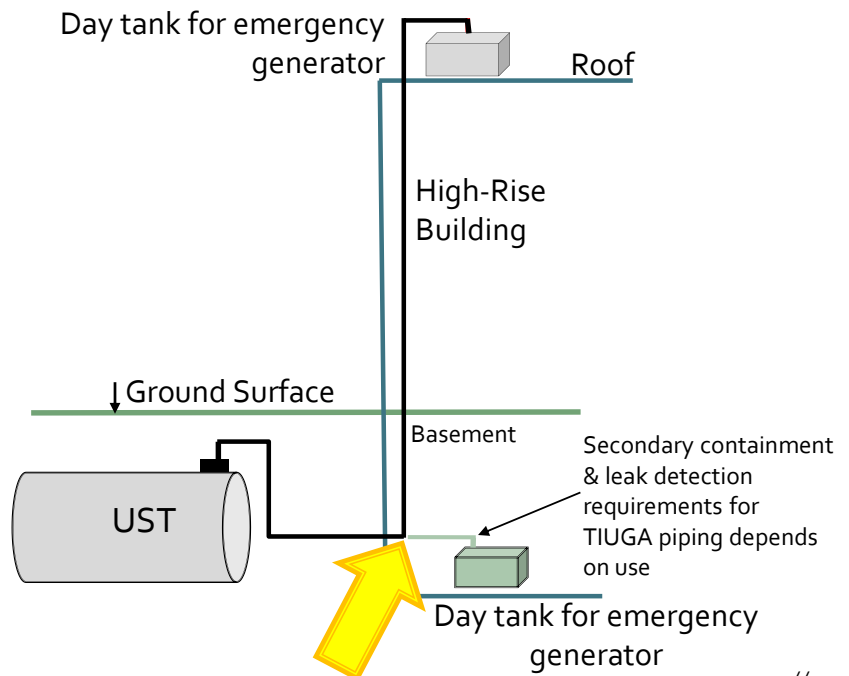


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Scenario 11

- Where does APSA come in?
 - Day tank in basement
- What about UST requirements?
 - UST and day tank on roof

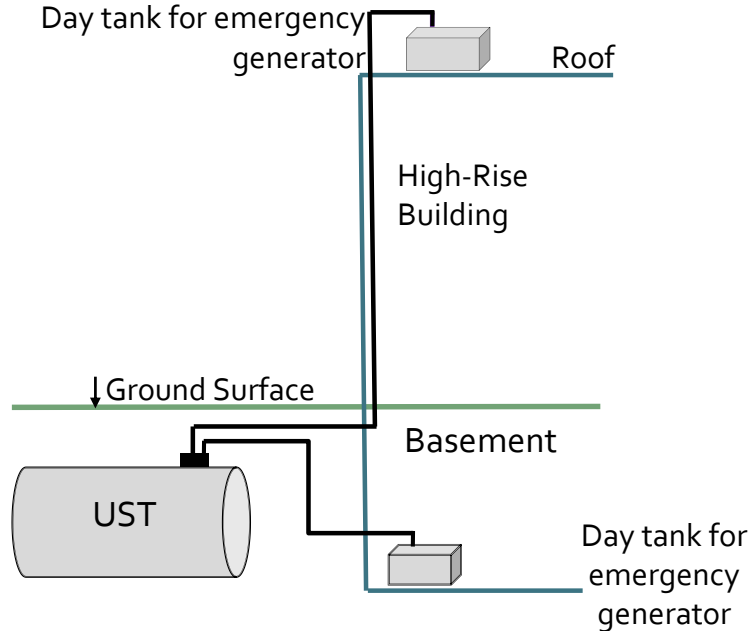


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Scenario 12

- Where does APSA come in?
- What about UST requirements?

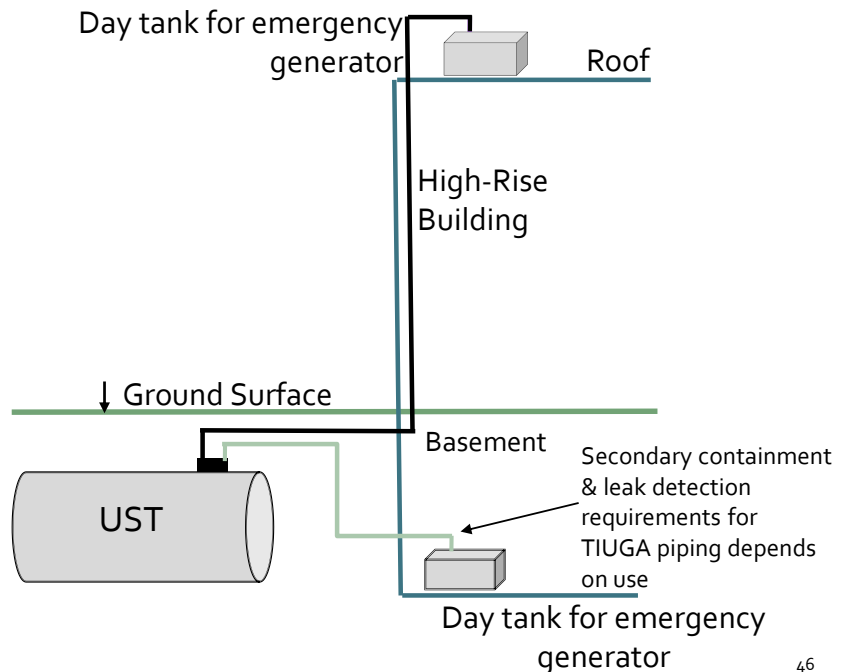


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Scenario 12

- Where does APSA come in?
 - Day tank in basement, piping between basement tank and UST
- What about UST requirements?
 - UST, day tank on roof, and piping between roof tank and UST



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What to do if you have a TIUGA?

- Owner/operator does the following
 - Prepare and implement an SPCC Plan **OR** amend existing SPCC Plan and comply with current Federal SPCC rule
 - Conduct periodic inspections of each TIUGA
 - Mark the APSA question on the Business Activities section as “Yes” and complete an APSA submittal in CERS
 - Submit the APSA element, which includes annual tank facility statement or HMBP
 - Pay applicable fees to the CUPA, including state surcharge



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CERS

- Mark ‘Yes’ to APSA question in the Business Activities section

Aboveground Petroleum Storage

Does your facility own or operate aboveground petroleum storage tanks or containers AND:

- have a total aboveground petroleum storage capacity of 1,320 gallons or more, OR
- have one or more petroleum tanks in an underground area?

Yes No

- APSA Submittal

Aboveground Petroleum Storage Act DRAFT Nov. 13, 2020

[APSA Facility Information](#) Form Needed

[Aboveground Petroleum Storage Act Documentation](#) Review Needed

Discard Draft Submittal Miscellaneous State-Required Documents Add Comment To Regulator



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CERS – APSA Facility Information

- Total number of TIUGAs
 - **NOTE:** DO NOT include USTs or tiny TIUGAs, and DO NOT enter storage capacity

The screenshot shows the 'Facility Information' form with the following fields:

- Conditionally Exempt
- Total Aboveground Storage Capacity of Petroleum
- Number of Tanks in Underground Area(s)** (highlighted with a red arrow)
- Date of SPCC Plan Certification or Date of 5-Year Review

Buttons: Save, Cancel

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CERS – APSA Documentation

- Annually submit a completed Tank Facility Statement or Hazardous Materials Business Plan [*HSC 25270.6(a)*]

The screenshot shows the 'Document Upload(s)' form with the following sections:

- Document Options:**
 - Upload Document(s)
 - Public Internet URL
 - Provided Elsewhere in CERS
 - Provided to Regulator
 - Stored at Facility
 - Exempt
- Document Upload(s) Form:**
 - Date Authored (Required): 12/31/2020
 - Document Title (Required): Aboveground Petroleum Storage Act Documentation
 - Description/Comments (Optional):
 - Buttons: Save & Upload Again, Save & Finish, Cancel
- Provided Elsewhere in CERS:**
 - Supplied in Submittal Element...
 - Facility Information
 - Hazardous Materials Inventory
 - Emergency Response and Training Plans
 - Underground Storage Tanks
 - Recyclable Materials Report
 - Remote Waste Consolidation Site Annual Notification
 - Aboveground Petroleum Storage Act
 - Indicate submittal date or other explanation...
 - Buttons: Save, Cancel

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Resources

- Visit the OSFM TIUGA FAQ web page at <https://osfm.fire.ca.gov/what-we-do/pipeline-safety-and-cupa/certified-unified-program-agency/aboveground-petroleum-storage-act/tank-in-an-underground-area-tiuga>



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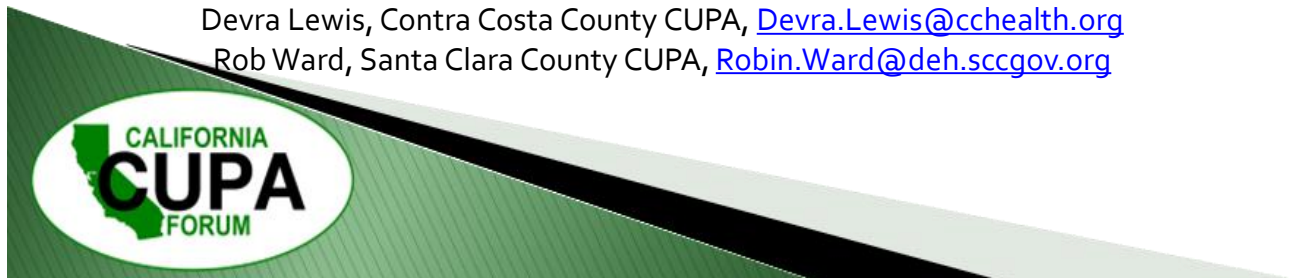
Questions?

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