



California Aboveground Petroleum Storage Act: Tank in an Underground Area

This fact sheet summarizes the requirements for tank facilities with one or more tanks in an underground area (TIUGA) under the California Aboveground Petroleum Storage Act (APSA) as described in the [Health and Safety Code \(HSC\) Division 20, Chapter 6.67](#). This fact sheet is intended to assist Unified Program Agencies (UPA), the regulated community, and applicable authorities having jurisdiction (AHJ) in understanding the provisions for TIUGAs.

This fact sheet as a whole or any specific element of this fact sheet does not replace or substitute for any statutory or regulatory provision, nor is the fact sheet a regulation itself. In the event of a conflict between this fact sheet or any element of this fact sheet and any statute or regulation, this fact sheet would not be controlling. Furthermore, nothing in this fact sheet should be considered legal advice nor be considered a substitute for seeking legal guidance in regard to the compliance for any statutory or regulatory provision. Thus, it does not impose legally binding requirements on the State, UPAs, or the regulated community, and might not apply to a particular situation based upon certain circumstances.

References or links to information cited throughout this fact sheet are subject to change. This fact sheet is a living document and will be revised, as necessary, to reflect any relevant future statutory or regulatory amendments.

What is a tank in an underground area or TIUGA?

Under APSA, a TIUGA must meet all of the following:

- The storage tank is *stationary*.
- The storage tank is located on or above the surface of the floor in a structure at least 10 percent below the ground surface, including, but not limited to, a basement, cellar, shaft, pit, or vault.
- The structure in which the storage tank is located must provide for secondary containment of the contents of the tank¹, piping, and ancillary equipment, until cleanup occurs.
- 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.^{2, 3}
- The storage tank meets one or more of the following categories:

Examples of Tanks in Underground Areas



Top left – day tank for an emergency generator

Top right – used oil tank



Bottom left – tank connected to fire pump

¹ A shop-fabricated double-walled storage tank meets the requirement for secondary containment of the contents of the tank (HSC Section 25270.2(o)(1)(B)).

² Direct viewing, as defined in APSA, is not referenced in HSC Section 25270.2(o)(1)(C)(ii), because similar requirements apply to hazardous waste tanks under Title 22 of the California Code of Regulations (CCR).

³ Direct viewing of the exterior of the tank is not required if inspections of the interstitial space are performed or if the storage tank has a mechanical or electronic device that will detect leaks in the interstitial space or containment structure and alert the tank operator (HSC Section 25270.2(o)(2)).

- **Lubricant/coolant tank** – Contains petroleum (new or used oil) as lubricant or coolant in motor engines, transmissions, or oil-filled operational or manufacturing equipment.
- **Hazardous waste tank** – Contains petroleum that is considered a hazardous waste and complies with the hazardous waste tank standards in the [California Code of Regulations \(CCR\), Title 22, Division 4.5, Chapter 15, Article 10](#).
- **Emergency system tank** – Contains petroleum to be used for emergency systems, solely in connection with a fire pump or an emergency system, legally required standby system, or optional standby system as defined in the California Electrical Code.
- **Other tank** – Does not fit into any of the above three categories and contains petroleum.

What is direct viewing?

Under APSA, direct viewing in regard to a storage tank means direct visual inspection of all exterior surfaces of the tank (except for the part of the tank in contact with the surface of the floor) and the entire length of all piping and ancillary equipment (where applicable) by a person or through the use of visual aids, including, but not limited to, mirrors, cameras, or video equipment.

Note: The *amount* of space between the exterior of a tank and the wall or other surface is not specified in APSA; however, contact the AHJ for fire code requirements on separation distances. The intent of the direct viewing requirement is to have the ability to check for visible signs that the tank is leaking, e.g. staining on the wall, liquid on floor near tank, etc.

Direct viewing of the exterior of the tank (such as a double-walled storage tank) is not required if inspections of the interstitial space are performed or if the storage tank has a mechanical or electronic device that will detect leaks in the interstitial space or containment structure and alert the tank operator.

Are tank facilities with less than 1,320 gallons of petroleum subject to APSA? ⁴

Yes, if the tank facility has a TIUGA. Only the TIUGAs are subject to APSA if a tank facility has less than 1,320 gallons of total aboveground petroleum storage capacity. However, the following TIUGAs are excluded from the requirements of APSA if a tank facility has less than 1,320 gallons of total aboveground petroleum storage capacity (including TIUGAs):

- The tank holds hydraulic fluid for a closed loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, or other similar devices.
- The tank is a heating oil tank.
- The tank is a sump, separator, clarifier, catch basin, or storm drain.

If a tank facility has a total aboveground petroleum storage capacity of 1,320 gallons or more (including TIUGAs), then a TIUGA storing hydraulic fluid for a closed loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, or other similar devices is subject to the requirements of APSA.

What if my below grade petroleum tank does not meet the definition of a TIUGA as described in APSA?

A petroleum storage tank located substantially beneath the surface of the ground that does not meet the definition of a TIUGA as described in APSA is an underground storage tank (UST) system. UST systems are

⁴ While [Assembly Bill \(AB\) 1566 \(Wieckowski, Ch. 532, Stats. of 2012\)](#) introduced the term 'TIUGA,' only tank facilities with a total aboveground petroleum storage capacity of 1,320 gallons or more, including TIUGAs, were regulated under APSA. However, [Senate Bill \(SB\) 612 \(Jackson, Ch. 452, Stats. of 2015\)](#) amended the applicability provisions for tank facilities that would be regulated under APSA. SB 612 required tank facilities with one or more TIUGAs to be subject to APSA, regardless of the tank facility's total aboveground petroleum storage capacity.

required to comply with the requirements of the [California Health and Safety Code \(HSC\), Division 20, Chapter 6.7](#) and [23 CCR Division 3, Chapter 16](#).

Can existing TIUGAs continue to be regulated under UST requirements or are they subject to APSA requirements?

If an existing storage tank meets the definition of a TIUGA, then it is subject to APSA.

If an existing storage tank containing hazardous substances does not meet the definition of a TIUGA, then it may be considered a UST system subject to the provisions of HSC Chapter 6.7 and 23 CCR.

I have a TIUGA. What are the requirements under APSA?

For a tank facility with one or more TIUGAs, the owner or operator is required to do the following:

- Prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan **OR** amend an existing SPCC Plan and implement the amended SPCC Plan,⁵
- Conduct periodic inspections of each TIUGA (per the tank facility's SPCC Plan),
- Comply with current Federal SPCC regulations found in 40 CFR 112,
- Mark the APSA question on the Business Activities section as "Yes" and make a submittal into the statewide information management system, also known as the California Environmental Reporting System (CERS),
- File or submit an annual tank facility statement (<http://osfm.fire.ca.gov/cupa/pdf/TankFacilityStatement.pdf>) or Hazardous Materials Business Plan (HMBP) into CERS,
- Complete additional APSA data fields in CERS, if applicable, and
- Pay the applicable fee(s) to the UPA, including the Unified Program state surcharge for the APSA program (<http://osfm.fire.ca.gov/cupa/pdf/APSA-Surcharge.pdf>).

A tank facility with one or more TIUGAs in the "**Other**" category (refer to page 2 for TIUGA categories) must also comply with the 24 CCR Part 9 piping requirements referred to in APSA and included in the fire code.

Contact your UPA for additional requirements and for assistance to ensure your tank system complies with all applicable APSA requirements. The OSFM website has an optional form to notify your UPA that you have a TIUGA: http://osfm.fire.ca.gov/cupa/pdf/TIUGA_Notification_form-18May2018.pdf. A directory of UPAs may be found at <http://cersapps.calepa.ca.gov/Public/Directory/>.

What are the piping requirements for TIUGAs referred to in APSA and included in the fire code?

Under APSA, with the exception to an emergency vent line that is solely designed to relieve excessive internal pressure, all piping connected to TIUGAs in the "**Other**" category (refer to page 2 for TIUGA categories), including any portion of a vent line, vapor recovery line, or fill pipe that is beneath the surface of the ground, and all ancillary equipment that is designed and constructed to contain petroleum, must either be visually inspected by direct viewing **or** has both secondary containment *and* leak detection that meet the requirements of the regulations adopted by the OSFM.

⁵ This requirement became effective January 1, 2013, for tank facilities with 1,320 gallons or more of petroleum, including TIUGAs that contain petroleum (new oil or used oil) as a lubricant or coolant in a motor engine or transmission. This requirement became effective January 1, 2016, for all tank facilities, regardless of the tank facility's total aboveground petroleum storage capacity, with one or more TIUGAs that contain petroleum (new oil or used oil) as a lubricant or coolant in a motor engine, transmission, or oil-filled operational/manufacturing equipment.

Effective July 1, 2018, the following fire code requirements for TIUGAs and their associated piping systems are found in 24 CCR Part 9 (California Fire Code [CFC]).⁶

- All TIUGAs and associated piping systems shall be provided with spill control and secondary containment that are designed and constructed as outlined in Section 5004.2, except as modified by Section 5703.6.2.2. [2016 CFC Section 5703.4.1]
- Below-grade or underground piping systems connected to TIUGAs in the “**Other**” category shall have secondary containment. The building, room, or area where the tank and piping are located may be used as secondary containment if it meets the containment and drainage methods described in Section 5004.2.2.1. [2016 CFC Section 5703.6.2.2]
- All portions of below-grade and underground piping systems connected to TIUGAs in the “**Other**” category shall be monitored for leaks by one of the following methods: [2016 CFC Section 5703.6.2.2]
 - 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 Section 1.11.2.4.

All tank systems will be required to meet additional applicable fire code requirements. Contact the AHJ, typically a fire code official, for additional and/or more stringent fire code requirements.

Are the fire code requirements for TIUGAs retroactive?

No. The fire code requirements for piping systems connected to TIUGAs that became effective July 1, 2018, are not retroactive. The requirements are only for systems installed or constructed on or after July 1, 2018.

What are the requirements for piping systems connected to a TIUGA that is installed before July 1, 2018?

An owner or operator of a TIUGA, including connected piping systems, installed or constructed before July 1, 2018, must follow the applicable piping requirements for UST systems found in HSC Chapter 6.7 and 23 CCR. Alternatively, the owner or operator may choose to modify or upgrade the tank system so it meets the current definition of a TIUGA.

I have an emergency generator connected to a day tank in the basement. The day tank is fed by a UST. Is the day tank regulated as a TIUGA per APSA?

No. Although the day tank may be directly viewed through direct visual inspection, the tank is connected to a UST. The day tank and UST are considered one UST system that is subject to the requirements of HSC Chapter 6.7 and 23 CCR.

Note: For purposes of APSA, the storage capacity of the day tank does not count toward the facility’s total storage capacity if it’s part of a UST system.

⁶ To view the current fire code online, visit the International Code Council public access website at <https://codes.iccsafe.org/public/collections/CA>. Click on the current edition and then click on Part 9 of 24 CCR. Refer to the most recent applicable version, which may include an errata and/or supplement.

I have an emergency generator connected to a day tank in the basement. The day tank is fed by an AST. Is the day tank regulated as a TIUGA per APSA?

Yes.

I have only one TIUGA and have less than 1,320 gallons of petroleum. Can I use the Tier I or Tier II Qualified Facility SPCC Plan template?

Yes. A tank facility with less than 1,320 gallons of petroleum may use a qualified facility SPCC Plan template or prepare a full SPCC Plan.

Is a partially buried tank in a below grade area considered a TIUGA?

No. A tank must be located in a structure that is at least 10 percent below the ground surface and be situated on or above the surface of the floor to meet the definition of a TIUGA. While a partially buried tank cannot be considered a TIUGA, a partially buried tank with less than 10 percent below the ground surface can be an aboveground storage tank subject to APSA.

Below are three examples of tank configurations and a determination of requirements the tanks are subject to.

- If the tank is located in a structure that is at least 10 percent below the ground surface and any portion of the exterior of the tank, other than the part in contact with the floor of the structure, cannot be directly viewed, then the tank system is a UST system and is subject to UST requirements.
- If the tank is located in a structure that is less than 10 percent below the ground surface and at least 10 percent of the entire tank system's volume, including piping, is below the ground surface or enclosed in earthen materials, then the tank system is a UST system and is subject to UST requirements.
- If the tank is located in a structure that is less than 10 percent below the ground surface and less than 10 percent of the entire system's volume, including the piping, is below the ground surface or enclosed in earthen materials, then the tank system is an aboveground storage tank and may be subject to APSA.

Is a 55-gallon drum of petroleum or *portable* container or *portable* tank considered a TIUGA?

No. However, if a *portable* container/tank in an underground area is managed as a *stationary* or *fixed* container/tank, then the container/tank may be subject to the requirements of APSA, including requirements of TIUGAs.

Is a TIUGA with less than 55-gallon shell capacity regulated under APSA?

Yes. However, a tank facility with a TIUGA that has a capacity to store less than 55 gallons of petroleum is excluded from the APSA requirement to pay fees, file or submit an annual tank facility statement or HMBP into CERS, or prepare and implement an SPCC Plan, *if* the TIUGA has secondary containment, is inspected monthly, and if the owner or operator maintains a log of inspection records for review by the UPA upon request.

Note: These smaller tank systems do not count toward the tank facility's total aggregate aboveground petroleum storage capacity.

RESOURCES

APSA:

APSA (HSC Division 20, Chapter 6.67):

http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=20.&title=&part=&chapter=6.67.&article=

AB 1566: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120AB1566

SB 612: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB612

AB 2902: http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB2902

The State Water Board guidance on TIUGAs, including flowcharts, to provide additional assistance to owners and operators of these tank systems, is available at:

https://www.waterboards.ca.gov/water_issues/programs/ust/tech_notices/docs/sb612_20151204.pdf.

For information on calculating a tank facility's storage capacity under APSA, visit the CERS Resources website at <https://cers.calepa.ca.gov/about-cers/help-materials/#APSA> and view the document titled "Is My Facility Regulated Under APSA?"

For more information on APSA:

- Visit the OSFM APSA website at <http://osfm.fire.ca.gov/cupa/apsa> or contact OSFM staff via email at cupa@fire.ca.gov.
- Contact your local UPA. A directory of UPAs may be found at <http://cersapps.calepa.ca.gov/Public/Directory/>.

Federal SPCC Rule:

The Federal SPCC Rule (40 CFR 112) is available at https://www.ecfr.gov/cgi-bin/text-idx?SID=bc434db0071a3841382083e28a2aa9fb&mc=true&tpl=/ecfrbrowse/Title40/40cfr112_main_02.tpl.

For more information on the Federal SPCC rule, visit the U.S. Environmental Protection Agency's website at <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations>. Or visit their *SPCC Guidance for Regional Inspectors*, which is available at <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/spcc-guidance-regional-inspectors>.

UST:

UST law (HSC Division 20, Chapter 6.7):

http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=20.&title=&part=&chapter=6.7.&article=

UST regulations (23 CCR Division 3, Chapter 16)

[https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I1EB45220D45B11DEA95CA4428EC25FA0&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I1EB45220D45B11DEA95CA4428EC25FA0&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

Hazardous Waste Tanks:

Hazardous waste tank standards (22 CCR Division 4.5, Chapter 15, Article 10):

[https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IF612B400D4BA11DE8879F88E8B0DAAE&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IF612B400D4BA11DE8879F88E8B0DAAE&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))