Fire Department
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UNDERGROUND HAZARDOUS MATERIALS STORAGE TANK SYSTEM INSTALLATION SUPPLEMENT

For Use By City of Fremont Fire Department
Authority Cited: 1994 California Fire Code; Title 23, Div. 3, Ch. 16 CCR;
Hazardous Materials Storage Ordinance

I. General Information

This document, accompanied by all required attachments, shall be completed and submitted along with the project plans and installation permit application. It is intended to serve as a general overview of tank installation requirements and should not be considered all-inclusive. The accompanying "Guidelines for Installation of Underground Hazardous Materials Storage Tank Systems" provides additional information on installation requirements.

II. Project Information

Provide the following information:

Facility Name (Tank Site):_____ Bldg. No.:_____

Address:_____ City:_____ Zip:_____

Project Contact Name:_____ Phone No.: (_____)_____

Plan Check No.:_____ Date:_____/_____/_____

This information is intended to expedite the plan review and approval process. Where appropriate, enter, on the line to the right of each item, the ***number of the page*** within your submitted plans on which the item asked for is described. ***Highlight the information in your plans***. If an item is not applicable to this project, mark "N/A" on the "Submittal Page No." line. Calculations, brochures and/or manufacturers' cut sheets for all system components, and other required information shall be submitted as attachments to the plans.

A. Tanks:

Agency Use Only	Code Section		Submittal Page No.
❑	23 CCR 2631(a) 2633(c)	Tank(s) compatible with material intended to be stored.	_____
❑	23 CCR 2631(b) 2633(c)	Design and construction of tank(s) and all other components used to construct primary containment system(s) approved by independent testing organization (e.g. UL).	_____
❑	CFC 7902.6.3	Tanks located not less than 3 feet from the nearest basement, pit, and/or property line.	_____
❑	CFC 7902.6.3	Tanks separated by the following minimum distances, measured shell-to-shell: 1 foot between multiple steel tanks; 1.5 feet between multiple fiberglass tanks.	_____

B. Piping:

Agency Use Only	Code Section		Submittal Page No.
❑	CFC 8001.4.3.2	Piping compatible with material intended to be stored.	_____
❑	CFC 7901.11.1.1	Design and construction of piping approved by independent testing organization (e.g., UL).	_____
❑	UBC 708.0	Piping, including vent lines, sloped toward tank(s) with minimum 1/4 inch slope per 1 foot of run.	_____
❑	23 CCR 2636(a)(2)	Vapor recovery piping must be secondarily contained. *(Note: Ball float valves should not be installed on vent lines or drop tubes.)*	_____
❑	CFC 7901.11.7.1	Metallic product, vent, and vapor return piping, where used, provided with approved swing joints (as defined in CFC Article 2) or approved listed flexible connectors at the following points: • Where piping leaves dispensing island(s) or location(s). • Where piping connects to underground tank fittings. • On piping that is rigidly supported or connected between fixed points and which is subject to thermal expansion or differential movements.	_____
❑	23 CCR 2635(a)(6)	Annular vent piping in accordance with manufacturer's recommendations/guidelines.	_____
❑	CFC 7902.1.10.7	Tank vent piping has minimum 1-1/4 inch internal diameter and is sized to prevent excessive back pressure on the tank(s). *(Note: If vent piping is manifolded, refer to CFC 7902.1.10.6.)*	_____
❑	CFC 7902.1.10.4	Tank vent piping discharges vertically, to the exterior of structures, with the following minimum distances: • 5 feet to any property line or opening into a building. • 12 feet above grade and 8 feet above fill pipe opening. • 2 feet above roofs or structural elements when run near or through a structure.	_____
❑	CFC 7902.1.10.9.4	Tank vent piping extends into tank(s) no more than 1 inch. *(Note: Tank vent piping is not required to be secondarily contained.)*	_____
❑	CFC 5202.5.3.2	Dispenser piping provided with approved shear/fusible link valves.	_____

C. Secondary Containment: *(Note: Laminated, coated, or clad primary containers and piping are considered single-walled, and do not satisfy requirements for secondary containment.)*

Agency Use Only	Code Section		Submittal Page No.
❑	23 CCR 2631(a)	Secondary containment provided for tank(s).	_____
❑	23 CCR 2636	Secondary containment provided for primary product piping.	_____
❑	23 CCR 2636	Secondary containment provided for remote fill piping.	_____
❑	23 CCR 2636	Secondary containment provided for dispenser(s) (e.g. Pan at base of each dispenser).	_____

Agency Use Only	Code Section		Submittal Page No.
❑	23 CCR 2631(d)	Secondary containment systems compatible with materials stored.	_____
❑	23 CCR 2635(b)	Overspill containment having minimum capacity of 5 gallons provided at each tank fill location.	_____
❑	23 CCR 2632(d)(2) 2634(e)	Provision made for safe removal of contained spilled materials and contaminated materials.	_____
❑	23 CCR 2635(b)(2)	Approved overfill prevention device provided at each tank fill location. *(Note: Device shall restrict flow at 90% of tank capacity or trigger an alarm at 90% of tank capacity or positively shut off flow at 95% of tank capacity to alert the operator.)*	_____

D. Corrosion Protection:

Agency Use Only	Code Section		Submittal Page No.
❑	23 CCR 2635(a)(2)	Tanks protected from corrosion.	_____
❑	3 CCR 2636(b)	Piping protected from corrosion.	_____
❑	STI Standard	Tie-downs, required for steel or fiberglass-coated steel tank(s), are separated from tank(s) via dielectric material that is wider than the strapping.	_____
❑	API Standard	Tie-downs, when used, constructed of non-corrosive material or coated steel.	_____

E. Burial and Cover:

Agency Use Only	Code Section		Submittal Page No.
❑	CFC 7902.6.4	Tank(s) set on firm foundation and surrounded by minimum 6 inches sand or pea gravel.	_____
❑	CFC 7902.6.4	Tank(s) covered by minimum 18 inches of earth and 6 inches reinforced concrete slab extending at least 1 foot beyond all edges of tank(s).	_____
❑	CFC 7902.6.4	Certification, stamped by a registered engineer, that flooding will not occur and that ground-water conditions do not warrant additional engineering to counteract tank buoyancy included with application. *(Alternative: Attach buoyancy calculations, stamped by a registered engineer and based upon the assumption that each tank lies completely submerged.)*	_____

F. Dispensers:

Agency Use Only	Code Section		Submittal Page No.
❑	CFC 5201.5.1	Concrete island(s) at least 6 inches high provided.	_____
❑	CFC 5201.4.1.2	Dispensers sited with the following minimum distances: 10 feet to any building or property line; 20 feet to any fixed source of ignition.	_____

Agency Use Only	Code Section		Submittal Page No.
❑	CFC 5201.4.1.2	Dispenser hoses, when fully extended, reach no closer than 5 feet from any building opening.	_____
❑	NFPA 30A 4-2.7	Each dispenser hose provided with approved break-away connector.	_____
❑	CFC 5202.4.3.2	Each dispenser hose provided with listed automatic-closing-type nozzle valve with integral latch-open device. *(Per BAAQMD requirements.)*	_____

G. Emergency Shut-Off:

Agency Use Only	Code Section		Submittal Page No.
❑	CFC 5201.5.3	Switch to shut off electrical power used in dispensing operation(s) distinctly labeled "EMERGENCY FUEL SHUTDOWN DEVICE".	_____
❑	CFC 5201.5.3	Switch installed at approved location no less than 25 feet and no more than 75 feet from any dispenser.	_____
❑	CFC 5201.5.3	Switch or sign visible from all dispensing locations.	_____

H. Monitoring:

Agency Use Only	Code Section		Submittal Page No.
❑	23 CCR 2632	All secondary containment units (e.g. tank annular spaces, secondary piping, sumps, etc.) monitored for leaks using approved electronic leak detection systems.	_____
❑	23 CCR 2632	Electronic monitoring sensors located at the following points: • At the bottom of the interstitial space of each secondarily-contained tank, positioned as near as possible to the bottom of the tank. • In collection sump at end of each secondarily-contained pipe run, positioned as near as possible to the bottom of the collection sump. • In dispenser pans which do not drain into secondary containment piping. *(Note: A mechanical switch which triggers a shear valve may be substituted).* • Along secondarily-contained pipe runs which do not meet the 1/4 inch-per-foot slope requirement, positioned in the depressed or low-lying areas.	_____
❑	23 CCR 2636(f)	Automatic line leak detectors installed to monitor underground pressurized piping OR secondary containment sensors must shut down pumps during leak detection.	_____
❑	23 CCR 2632	All monitoring locations provided with accessible caps for inspection and testing.	_____
❑	23 CCR 2632(c)(2)(B) 2634(b)	Alarm panel provides both audible and visual alarms. It is located in a protected area and within sight and hearing distance of on-site personnel and hard-wired to a dedicated circuit.	_____