

**STANDBY
POWER SYSTEMS**

Installation or Operation of Standby Power Systems Having an Associated Diesel Fuel Reservoir (less than 660 gals*)

These guidelines apply to the installation or operation of any diesel powered emergency power generating system having a sub-base diesel supply – not exceeding 660 gallons – within the City of Ventura. They serve as supplements to other requirements or guidelines (e.g., 2010 California Fire Code, California Health and Safety Code, manufacturers’ guidelines). Where such regulations or guidelines conflict, the more stringent requirements shall apply.

General Information

- Contractor shall secure an installation permit through Fire Prevention prior to the start of on-site work.
* *Securing a permit requires the Contractor to submit documentation verifying that they possess a current State License (A, B, C-36, C-61/D-40), Workmen’s Compensation Insurance, and City business license. In addition, all associated fees must be paid.*
- Contractor shall secure all associated permits* as required prior to the start of on-site work.
 - Plumbing/Mechanical – contact Construction Services at 805/654-7734
 - Electrical – contact Construction Services at 805/654-7734
 - Fire Prevention – contact 805/658-4717
 - Air Resources (Phase I & II Vapor Recovery) contact Ventura County APCD at 805/645-1401
- Contractor shall submit three (3) sets of construction plans to Fire Prevention for review.
- On-site work shall not commence until signed approval from Fire Prevention has been received.
- Contractor shall be responsible for ensuring that conditions on site provide for workplace safety, protection of the environment, and maintenance and integrity of nearby structures.
- Under no circumstances shall any regulated material be placed into the associated fuel tank without prior approval from Fire Prevention.

Specific Design and Installation Criteria (per 2007 CFC Chapters 34 & 27)

- Sub-base fuel tank(s) shall be designed and constructed in accordance with nationally recognized standards (UL 142/2244 or equivalent).
- Tank shall be separated from property lines, buildings, public ways, and other tanks as follows:

<u>Tank size (gal)</u>	<u>Property Lines (feet)</u>	<u>Right of Ways/Buildings/Tanks (feet)</u>
0-275	5	5
276-660	10	5

- When placed indoors, fuel tank and generator shall comply with installation criteria set forth in NFPA 110 – including a minimum 36” clearance around both components (NFPA 110, Section 7.2.5).
- Sources of ignition not associated with operation of system as designed and approved (recognized third-party) shall be kept a minimum of 25 ft. from fuel source.
- Guard posts or other approved means shall be provided to tank subject to vehicular damage. When installed, posts shall be:
 - Constructed of steel not less than 4 inches in diameter and concrete filled;
 - Spaced not more than 4 feet between posts on center;
 - Set with the top of the posts not less than 3 feet aboveground;
 - Located not less than 5 feet from the tank
- Tank shall be provided with secondary containment (i.e., containment external to and separate from primary containment). Secondary containment shall be constructed of materials of sufficient thickness, density, and composition so as not to be structurally weakened as a result of contact with the fuel stored.
- Tank annular space shall have hard-wired electronic leak detection (audible and visual alarm).
- Associated electronic leak detection shall be installed in accordance with manufacturers’ guidelines.
- Associated leak detection alarm panel shall be installed at a location that is supervised during normal working hours
- Tank shall have overfill protection (physical shutoff at 90% or audible alarm at 85% capacity).
- Signage identifying points-of-contact in the event of sensor alarm or uncontrolled product release shall be clearly posted at front of enclosure.
- Adequate spill control equipment (boom, absorbent, or like material) together with a fire extinguisher (2A:10BC) shall be readily available on site at all times.
- Final inspection with signed approval by Fire Prevention is a prerequisite to commencing with standard operation of associated standby power system.

STANDBY POWER SYSTEMS (CONT'D)

Submittals Associated with Permitted Storage of Regulated Materials

- New or revised Hazardous Materials Business Plan shall be submitted to Fire Prevention within 30 days of permit to operate.
- Facilities which exceed 1320 gallon of aboveground petroleum storage shall prepare a Spill Prevention Contingency and Countermeasures Plan (SPCC) prior to initiating storage of petroleum product.

On-site Inspection Criteria

Tank and Associated Piping

- System design, construction and installation in accordance with CFC 3404.2.7, CFC 3404.2.9.6 and UL 2085.
- Tank storage capacity for Class I or Class II liquids does not exceed 12000 gallons (individual) and 48000 gallons (aggregate). NFPA 30, Table 22.4.1(b).
- Tank storage capacity for facilities dispensing Class II or Class III-A liquids does not exceed 20000 gallons (individual) and 80000 gallons (aggregate). NFPA 30, Section 4.3.2.5.
- Tank and associated distribution piping secondary containment (shell or diking) per CFC 3404.2.9.7.4.
- Dike capacity minimum 24-hour rainfall (25-year storm) per local ordinance.
- Tank location in accordance with NFPA 30, Table 4.3.2.4.

<u>Size (gal)</u>	<u>Lot Lines (ft)</u>	<u>Buildings (ft)</u>	<u>Shell to Shell (ft)</u>	<u>Bldg Opening (ft)</u>
0-6000	15	5	3	5
6001-12000	25	15	3	5
12001-20000*	25	15	3	5

- Range applicable for fuel dispensing facilities housing both Class II and Class III-A
- Tank venting per *CFC 3404.2.7.3*.
- Tank emergency venting per *CFC 3404.2.7.4*
- Piping and connections per *CFC 3403.6*
- Installation (anchors, supports, other) in accordance with CBC per *CFC 3404.2.9.3*.
- Annular space electronic leak detection (audible and visual alarm) per local ordinance
- Vehicle impact protection (bollards, K-rails) per *CFC 3404.2.9.7.5*.
- Fill connections equipment with five gallon spill container per *CFC 3404.2.9.7.8*
- Minimum clearance (10 feet) of weeds and/or combustibles per *CFC 2205.7*
- Overfill protection (mech. Shutoff 95%, alarm 90% capacity, or 15 gpm restricted flow) per *CFC 3404.2.9.7.6*
- Field test tanks(s) and associated piping prior to operation. *CFC 3403.6.3 and manufacturer requirements*

<u>Component</u>	<u>Test</u>	<u>Duration</u>
Primary Tank	Manufacturer Specs (or 5 psig)	Manufacturer Specs (or 30 mins)
Secondary Tank	Manufacturer Specs (or 3 psig)	Manufacturer Specs (or 30 mins)
Primary Piping	Manufacturer Specs (or hydrostatic*)	Manufacturer Specs (or 30 mins)
Secondary Piping	Manufacturer Specs (or 5 psig)	Manufacturer Specs (or 30 mins)

*150% of anticipated pressure

- Warning signs ("DANGER -- _____ LIQUIDS/NO SMOKING") per *CFC 3403.5*
- Adequate spill equipment (not more than 30 feet from tank) per *CFC 3403.4*
- Fire extinguishers (2A-10BC; within 10-30 feet) per *CFC 3403.2.1*.

Associated Dispensing System

- Dispensing system(s) comply with *CFC 2206.7*
- Emergency shutdown device between 20-100 feet from dispenser. *CFC 2203.2*
- Electrical disconnect provided on all dispensers in accordance with the Electrical Code. *CFC 52015.4*
- Unsupervised location; 25-gallon dispenser reactivation in place. *CFC 2204.3.7*
- Unsupervised location; signage addressing emergency, fire, releases provided in a conspicuous location. *CFC 2204.3.5*

In case of Fire, Spill or Release

1. Use emergency pump shut off!
2. Report the accident!
3. Call 9-1-1

Facility address _____

STANDBY POWER SYSTEMS (CONT'D)

- Emergency shutdown device* between 20 and 100 feet from dispenser. *CFC 2203.2*
* Clearly labeled: "EMERGENCY FUEL SHUTOFF"
- Dispenser hoses equipped with emergency breakaway devices. *CFC 2202.3.3.2*
- Dispenser located at least 10 feet from building/lot lines; nozzle fully extended not within 5 feet of building opening. *CFC 2203.1*

General Health and Safety

- Owner/Operator acknowledges a comprehensive understanding of proper operating procedures relating to the regulated aboveground tank system(s), as specified by the manufacturer and regulated under *CFC 407.4*
- Owner/Operator acknowledges a comprehensive understanding of proper storage and handling procedures relating to hazardous material(s) housed in the tank system(s), as specified in the associated Material Safety Data Sheets and regulated under *CFC 407.4*
- Owner/Operator acknowledges a comprehensive understanding of proper response procedures resulting from an uncontrolled material(s) release, fire or explosion, as specified in the facility's Hazardous Materials Management Plan (HMMP). *CFC 407.4*
- Owner/Operator acknowledges training facility personnel in proper response procedures resulting from an uncontrolled material(s) release, fire or explosion, as specified in the facility's Hazardous Materials Management Plan (HMMP). *CFC 407.4*