

**NORTH COUNTY FIRE PROTECTION DISTRICT
Policy and Procedure Manual**

FIRE PREVENTION
PLANS AND PERMITS

SECTION 340.19
10/18/99
PAGE 1 OF 4

Underground Storage Tanks

PURPOSE: The purpose of this guideline is to provide information regarding the removal and/or installation of underground storage tanks and their related piping and devices.

POLICY: This guideline shall be used when reviewing underground storage tank installation and removal.

PROCEDURE:

- I. **UNDERGROUND STORAGE TANK REMOVAL:** The following procedure should be used prior to the removal of any underground tank that previously stored a flammable or combustible liquid. In addition, the procedures outlined below must be followed to ensure that the entire preparation and removal operation is conducted in a safe manner and the possibility of an explosive incident is minimized.
 - A. **Schedule of Removal.** No plan approval is required by NCFPD, however a fire safety permit is required per CFC 105.8 F.3 (6).
 - B. **Notification:** At least two (2) working days prior to the scheduled removal of the underground storage tank(s), the Fire Prevention Bureau shall be contacted to request an inspection to be performed concurrently with the Fire Dept. and Environmental Health inspectors in attendance.
 - C. **Removal/On Site Procedures**
 1. The contractor shall ensure that all flammable liquids/materials have been removed from the tank(s) by means of an approved vacuum truck prior to excavation.
 2. Under no circumstances shall welding equipment, torches for any device capable of acting as an ignition source be located within 50 feet of the tank to be removed.
 3. The top of the tank shall be exposed to provide access to all tank openings.
 4. Any piping containing product shall be carefully disconnected and the contents shall be disposed of in an approved manner. All piping associated with the underground tank shall be removed and disposed of.
 5. Remove all possible products from the tank by means of an approved pump with suction resting on the bottom of the tank. All products shall be properly

NORTH COUNTY FIRE PROTECTION DISTRICT
Policy and Procedure Manual

FIRE PREVENTION
PLANS AND PERMITS

SECTION 340.19
10/18/99
PAGE 2 OF 4

Underground Storage Tanks

disposed of.

6. Two openings at opposite ends of the tank shall be used for the removal procedure; all other openings shall be sealed.
7. A flammable vapor detection device that has been calibrated to an approved standard (i.e., xylene) within the past six (6) months shall be on the job site prior to excavation or removal.
8. Tanks shall be purged of flammable vapor in accordance with NFPA guide lines. It shall be the contractor's responsibility to demonstrate to the fire inspector, upon arrival, that the vapor concentration inside the tank is not more than 10% of the lower explosive limit (LEL) of the product previously in the tank. Atmosphere inside the tank shall be checked at the top and bottom. An oxygen-measuring device may also be used to ensure that the vapor has been removed. An oxygen reading of below 13% will be purged prior to removal.
9. It is necessary that the vapors be purged prior to arrival of the Fire Inspector. Each tank will be allotted 1 hour for removal, loading and transport.
10. Openings are to be closed using a pressure-vacuum relief device or other NFPA approved device.
11. Tanks are to be lifted using proper equipment. it will be the fire inspector's responsibility to stop any operation the inspector believes to be unsafe.
12. Tanks shall not be dragged at any time. Only non-sparking tools may be used to clean the exterior of the tank.
13. Immediate transport tanks from site to an approved location.
14. Underground waste oil tanks may be opened on site to be triple rinsed provided the vapor concentration is below 10% LEL (lower explosive limits). All liquid is to be properly disposed of under manifest as hazardous waste.
15. Fire extinguisher with a rating of 2A:40BC should be readily available.
16. Site shall be properly barricaded to prevent unauthorized entry.
17. San Diego County Environmental Health Shall:

NORTH COUNTY FIRE PROTECTION DISTRICT
Policy and Procedure Manual

FIRE PREVENTION
PLANS AND PERMITS

SECTION 340.19
10/18/99
PAGE 3 OF 4

Underground Storage Tanks

- a. Inspect the tank after its removal from the excavation for evidence of leaks or corrosion.
- b. Inspect the excavation for preliminary evaluation of product release or soil contamination.
- c. Direct the collection of soil samples from the excavation.
- d. Initiate any required clean-up action.

II. TANK INSTALLATION:

A. Plan Submittal. Two sets of plans are required. Projected turn around time is 5-10 days. Plans are reviewed for compliance with the code requirements set forth in CFC, Article 79.

B. Plan Review and Site Inspection:

1. NCFPD Personnel shall inspect the following on plan review and site inspection:

- a. Dispenser installation,
- b. shear valves,
- c. fire extinguisher installation,
- d. emergency shut off switch location and operation,
- e. vent installation.
- f. vent lines,
- g. swing joints,
- h. location of tank openings,
- i. provisions for secondary containment,
- j. leak detection and spill control,
- k. appropriate cover
- l. piping installation prior to cover.

2. Environmental Health shall:

- a. Witness holiday test of fiberglass coated tanks prior to placement in the excavation and document test results on the job-site card.
- b. Witness the pressure test of lines and tanks and document test results on the job-site card.

NORTH COUNTY FIRE PROTECTION DISTRICT
Policy and Procedure Manual

FIRE PREVENTION
PLANS AND PERMITS

SECTION 340.19
10/18/99
PAGE 4 OF 4

Underground Storage Tanks

- c. Inspect the monitoring/leak detection system.
- d. Review the results of precision test.