

CITY OF GLENDALE FIRE PREVENTION BUREAU

CERTIFIED UNIFIED PROGRAM AGENCY

**UNDERGROUND STORAGE TANK INSTALLATION
APPLICATION PACKAGE**



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UNDERGROUND STORAGE TANK INSTALLATION/MODIFICATION CHECKLIST

This checklist is to assist businesses and contractors with UST installations, removals, and modifications. It is used to provide a concise list of items that are required in order to obtain an underground storage tank (UST) permit for construction. It is separated into three sections: 1) Installation/Modification Plan Submittal requirements, 2) Inspection Requirement, 3) Final Construction Requirements and 4) Final Documentation Requirements. All construction must conform to the requirements of the California Health and Safety Code, California Code of Regulations, the California Fire Code, and building and safety codes. In cases where modification involves replacing or removing piping and/or dispensers, a separate Closure Report with environmental sampling will be required.

SECTION I

Installation/Modification Plan Submittal Requirements

Installation of new UST systems shall comply with the documentation requirements below. Documentation for modifications shall be submitted as applicable and inspected as applicable. Two copies of detailed plans are required. For simple UST repairs and modifications please refer to page 6 of this package. Allow approximately 45 days for plan review. A Health and Safety Plan is required for all tank installations/modifications and must be available on the work site. It is required to be submitted upon Glendale Fire Prevention Bureau request only. Additional information may be needed to obtain permit approval. Approval of the plans and application is an authorization for construction and not a permit to operate the tank. To process your plan reviews, provide the following:

- Glendale Fire Prevention Permit Application Form
- Detailed plans shall consist of but not be limited to:
 - a scaled aerial view plot plan with north arrow, scope of work, piping runs, setbacks to property lines, distance from dispensing to building openings
 - cross sectional drawings of the tank set area showing the depth of burial, thickness of foundation, construction and thickness of the UST cover (i.e. concrete pad), vent height, fill turbine and dispenser sump penetration detail
 - an equipment list with the manufacturer name, model number, and third party approval of equipment (i.e. UL listing) for the tank, dispenser, penetration fittings, hose, nozzle, piping, breakaway device, shear valve, and monitoring devices.
 - detail on the spill container and overfill protection
 - a statement if UST anchoring is required. If anchoring of the tank is needed, the details shall be provided on the plans.
 - a schematic in plan view shall be included that identifies each continuous monitoring zone for all interstitial spaces of the UST Systems
 - Compatibility of the UST with the tank contents must be demonstrated
- Copy of Contractors License
- Copy of Workers Compensation Insurance
- Copy of UST ICC Installers certification
- Copy of training certificate from the leak detection manufacturer(s)
- Authorization letter from UST owner allowing contractor to perform work/secure permits
- Notification/Permit Requirements and Contractors Declaration (attachment)
- Fees: Checks made payable to the City of Glendale

SECTION II

Inspection Requirements

The following FPB inspections are required for new UST installations and must be requested at least 48 hours in advance. Not all inspections are required for modifications. Please contact the FPB should you need assistance determining your site specific inspection requirement(s). The FPB inspector shall witness the following items as applicable:

- Tank set and UST testing as required per 2019 CFC 5704.2.12, NFPA 30, 23 CCR 2635(a) (3) and/or manufacture's specifications (i.e. holiday test, vacuum or pressure test, etc.)
- Primary piping inspection
- Secondary piping inspection
- Enhanced Leak Detection Test
- Final inspection including monitor certification, spill bucket test, line leak detector tests, verification of interstitial space

SECTION III

Final Construction Requirements

The following items must be completed before the final permit sign off (as applicable):

- Completion of all required inspections.
- As-built drawings must be submitted to the FPB (if the installation varies from the approved plans)
- A passing enhanced leak detection test for new UST systems or integrity testing (as applicable) must be submitted to the FPB. The report of these findings is required within 30 days of testing

SECTION IV

Final Documentation Requirements

The following documents must be submitted once construction is complete, the hazardous substance is placed into the UST, before putting the UST system into service, and before the operating permit will be issued.

- Certification of Installation/Modification Form
- CERS information must be submitted at <http://cers.calepa.ca.gov/>
 - For new UST installations, the UST module of CERS must be submitted. The UST module of CERS must be accepted and the remaining modules of CERS must be in significant compliance prior to issuing the UST operating permit.
 - For repairs, changes to CERS must be submitted within 30 days of the repair.
- Enhanced Leak Detection test results for new UST systems or tank tightness testing, line test results, or other approved method to satisfy requirements of the HSC/CCR, secondary containment testing results (for UST systems installed before 2004), monitoring system certification, spill bucket testing, and line leak detector certification (for pressurized systems), must pass.

The following documents must be submitted to the FPB within 30 days:

- Results of any of the tests from the preceding paragraph.
- If the modification required sampling, the sampling results must be submitted within 30 days of the sampling event and/or the Closure Report must be submitted 180 days from the date the permit was approved.

INSTALLING AN ENHANCED VAPOR RECOVERY PHASE II SYSTEM IN STATION DIAGNOSTICS (I.S.D.) AND HEALY CLEAN AIR SEPARATOR (C.A.S.) INSTALLATION REQUIREMENTS

Permit Application

- A Plan Review/Permit Application form must be completed. These are available over –the counter at the time of submittal.

Fees

- Plan review fees must be paid at the time of submittal. The fee can vary based on the scope of work. Please visit the City wide Fee Schedule website at <https://www.glendaleca.gov/home/showdocument?id=49856> for applicable fees. Checks are to be made payable to the City of Glendale.

Site Map

- Plans shall be to scale and show the complete site, if the site is very large then additional pages shall detail the specific areas on the site. Site map shall show all tanks, buildings, property lines, street names, overfill alarm panel, main electrical panels, emergency shut offs, new and existing UST alarm panel locations.

Scope of Work

- Shall be written on the main cover page under the heading “Scope of Work”
- Shall be complete as to the work being done
- Shall include any installation, modification or removal of any components in the UST system

Legend

- Shall contain a description of any symbols or abbreviations being used

Product Equipment List

- Shall be complete and of a matrix style that include the Make/Model #/Size/and Quantity of components being utilized (this would include any auxiliary parts such as clam shells, nipples, etc.)
- In the case of piping additions or replacement, “Quantity” shall equal feet of piping used

Procedures for C.A.S. (Healy) Installation

- Vapor processing systems shall be located a minimum of ten (10) feet from adjacent property line, from any important building on the same property, and from a public way
- Vapor processing systems shall be located a minimum of twenty (20) feet away from fueling dispensers
- Vapor processing systems shall be located a minimum of (15) feet from combustible materials storage areas
- Vapor processing systems shall not be located under canopies, overhangs or other areas where vapors may become trapped
- Any manifolding of vent piping from the risers to the Healy tank shall be a minimum of 8’ above grade and accurately depicted
- All vertical vent risers shall be accurately depicted [site specific] including Pressure/Vacuum Vent Valves
- If any underground vent lines are to be removed or relocated, then a detail of the new vent line runs shall be shown
- A “NO SMOKING”/” FLAMMABLE VAPORS” sign shall be provided at C.A.S. locations with minimum three (3) inch high lettering on a contrasting background; NFPA placarding may also be required
- One minimum rated 2-A: 20BC fire extinguisher shall be located within 75’ to 20’ of the Tank
- The City of Glendale Planning will need to review the to-hour enclosure

Certifications Required

- Proof of ICC EVR certification- Vapor Recovery System Installation and Repair
- Proof of AQMD EVR application for permit
- Proof of Healy and other manufacturer certifications
- All required Executive Orders certifications

Enclosure Requirements: An enclosure for the vapor recovery processor may be required by the Building Planning Departments but is mandatory when the above required distance cannot be provided. In the case, the following alternate method shall be applied;

- When Vapor processing systems are located less than (10) feet from adjacent property lines, important buildings on the same property or public ways, they shall be enclosed within an approved and permitted one-hour fire rated enclosure.
- The enclosure is required to be on at least 3 sides with an approved protective metal gate at the opening. When within ten (10) feet, enclosure opening shall not face property lines that can be built upon, important buildings on the same property, fuel dispensing pumps, or the public way
- The enclosure shall extend a minimum of eighteen inches (18") above the highest part of the tank and provide an 18" minimum clearance between the tank and the enclosure
- In no case shall vapor processing equipment (even when enclosed) be located within five (5) feet of adjacent property lines, building openings, or a public way

Bollard Protection

- Bollards shall be provided for protection around C.A.S. tanks as required
- Bollards shall be not less than 4" diameter steel, concrete filled, not less than 3' above grade and not less than 3' below grade into a minimum 15" concrete base
- Bollards shall be spaced not more than 4' apart and located not less than 3' from the Tank
- Bollards shall be provided in front of enclosure openings which exceed three (3') in width

Dispensers/ISD

- Whether modifying an existing dispenser or installing a new dispenser for I.S.D. and/or vapor recovery, the make and model of the dispenser(s) shall be given and a complete detail including, but not limited to, the exterior of the dispenser, whip breakaway, hose, and nozzle shall be given
- All work being done behind the dispenser skirt and/or in the UDC shall be complete as to detail and shown for existing and new as designated by (E) existing and (N) new
- The diagram shall include but not be limited to details of vacuum pumps, flow meters, and sensors. If a flow limiter is being used, it shall be shown
- If existing UDC does not meet footprint of new dispenser, new UDC's must be installed, or SWRCB approved spill containment/control system.
- Vapor Recovery piping in UDC must have a vapor shear/impact valve and a flex connector. Both must be mounted/installed correctly.

Monitoring Systems/ISD

- Panels shall be located in a normally occupied area; or provided with remote on-site or off-site audible/visual alarm indication in a normally occupied area
- A revised Facility Monitoring Plan may be required for the ISD and software upgrade additions
- Shall include an alarm matrix that shows "Sequence of Operations" for ISD warning and failure status
- Matrix shall include current software version and if upgrading, then new software version also
- Monitoring and equipment details shall be site specific (not generic)
- Diagram shall include all sensors, alarms, printers, and devices on the monitoring system
- Line diagram shall be in the form of an electrical "block type" diagram
- A complete monitoring certification test shall be performed and passed prior to final approval

Inspection Requirements

- Inspection must be scheduled with the Glendale Fire Prevention Bureau a minimum of 48 hours in advance. The inspector will witness primary and secondary piping pressure tests (if piping is modified) and be present for the final inspection. If ISD is installed, the monitor certification shall be conducted during the final inspection.

NOTE: All installations shall meet the State approved installation instructions for the Healy Systems Incorporated Clean Air Separator and the State approved In-Station-Diagnostics installation instructions. For additional information, you may contact the Glendale Fire Prevention Bureau at (818) 548-4810. Code references: NFPA 30A, chapter 10; CFC-chapters 22, 27, 312, 34 [UFC chapter 5202.13.3, 2000 edition]

UNDER DISPENSER CONTAINMENT (UDC) REPLACEMENT/INSTALLATION PLANS

SECTION I

Installation Plan Submittal Requirements

- Submit the Plan Review/Permit Application form and required plan review fees.
- Submit copies of the Contractor's License, Worker's Compensation Insurance, ICC Certifications, and manufactures certification.
- Plan must be site specific and include a written Scope of Work. Drawings showing the plan view and cross section showing UDC penetration detail shall be submitted. A cut sheet shall be provided for the UDC and the manufacturer's name and model number(s) must be listed on the plans. Primary and secondary piping replacements must be UL listed or approved, shown on the drawings, and identified by manufacturer and model number. For UST systems installed after 2004, rigid UDC sump penetrations must be used. It must be demonstrated that the UDC, piping and ancillary equipment installed is compatible with the substance being stored.
- Plans shall specify how the dispenser sensors will comply with monitoring requirements for the site if they are different that the existing monitoring or the installation is for a new site. If dispenser monitoring is changed, the UST Monitoring Plan Information in CERS must be updated within 30 days of the final inspection.
- Plans shall include details on an approved UDC Spill Control Containment Device (UDCSCCD) if the footprint of the dispenser is larger than the footprint of the UDC.
- For UDC replacement, the form "Supplemental Soil Sampling" shall be completed by the inspector and attached to the plans. This identifies the soil sampling requirements which are a condition of the permit.

Assumptions

- Equipment not identified on the plans will be assumed to remain unchanged.

Additional Requirements for Shallow UDCs

- A cut sheet or other information from the manufacturer for secondary containment on the flex line connecting secondary piping to dispenser pan must show the secondary containment line compatible with the substance stored. The seal between the rigid secondary containment piping and the flexible secondary containment must be factory sealed by the manufacturer and not rely on band clamps for a assembly or a tight seal. Flexible secondary containment cannot be connected using stainless steel clamps and adhesive to connect the flexible secondary pipe to the rigid primary pipe in the field. If steel clamps are used in addition to a factory sealed piping connection, they must be protected from corrosion using isolation.
- The dispenser containment must be adequately protected from corrosion. Epoxy coatings on steel dispenser pans is not adequate. Steel dispenser pans must be fiberglass coated.

SECTION II

Inspection Requirements

- Inspections must be requested a minimum of 48 hours in advance
- Primary piping pressure test (110% of the maximum operating pressure if pneumatically tested or State approve line integrity test), secondary containment test on UDC (2-15-minute lake tests) and secondary containment piping pressure test (5 psi for I hour), verification of the monitoring system, and field verification of the installation prior to backfilling. This may be done in one or two inspections as arranged with the inspector.

SECTION III

Final Documentation Requirements Required within 30 Days of Final Inspection

- Pipeline integrity test results and secondary containment tests results or enhanced leak detection test for USTs installed after 2004 must be submitted to the FPB
- Laboratory analysis for required soil samples shall be submitted before the permit expiration date or within 30 days of sampling. The case will be referred to RWQCB if an unauthorized release is suspected.
- "As built" drawings if different from the originally permitted installation plans
- Complete the UST Installation Certificate form in CERS
- Update Underground Storage Tank Information/ Monitoring Plan in CERS.

EXPEDITED PERMITTING FOR SIMPLE UST REPAIRS

The Glendale FPB encourages immediate replacement of malfunctioning sensors with operating sensors. This guidance is provided to expedite the replacement of defective monitoring and testing equipment. In general, there are three common underground storage tank repairs that can be quickly approved. These are like-for-like sensor and line leak detector replacement, replacing a sensor or line leak detector with a model that is different than the original installation, and installing split boots for secondary containment testing purposes.

1. Like-for like sensor or line leak detector replacement

A permit is not required for like for like sensor or line leak detector replacement. Certification of the newly installed equipment must be performed by an ICC Certified Underground Storage Tank Service Technician with proper licensing and training from the monitoring device's manufacturer. The results of the certification must be documented on the State Monitor Certification Form. A worksheet documenting the test parameters of the line leak detector certification must accompany the Monitor Certification Form. These documents must be submitted to the Glendale Fire Prevention Bureau within 30 days of the installation.

2. Replacing a sensor or line leak detector with a different model

A permit is required and the monitoring plan must be updated in the California Environmental Reporting System (CERS); however, sensors may be replaced prior to obtaining a permit provided an application for the permit is submitted within 30 days of the installation. Please see the checklist below for plan submittal requirements. Permission to replace sensors prior to obtaining a permit does not guarantee the Glendale Fire Prevention Bureau will approve the installation. All monitoring equipment must comply with the applicable laws, regulations, and City Ordinance. You must submit the following items:

- Glendale FPB Permit Application Form
- An aerial plot plan no greater than 11" x 17" depicting the modification and a detailed written description explaining the location of the monitoring device or repair (i.e. replaced Veeder Root sensor model 074380-208 in the 91 supreme unleaded gasoline fill sump with a Veeder Root model number 074380-340).
- Revised Underground Storage Tank Monitoring Plan submitted to CERS at: <http://cers.calepa.ca.gov/>
- Copy of current Contractors License
- Copy of current Workers Compensation Insurance
- Copy of current Contractors ICC UST Service Technician Certification
- Copy of the Manufacturer's Training Certification
- Pay Fees (checks may be made payable City of Glendale)

3. Retrofitting secondary containment testing boots with split boots for UST systems installed before 2004

A permit and inspection is required to install secondary containment split boots. Plan submittal requirements are the same as listed above for item 2 "Replacing a sensor or line leak detector with a different model" plus the following additions:

- A cut sheet describing the split boot and showing it is third party approved shall be provided
- The type of filler used in the split boot shall be specified and proof of its compatibility with the product stored shall be provided
- A copy of the contractors ICC UST Installers Certification is required
- An inspection to verify installation is required and must be scheduled with the FPB a minimum of 48 hours in advance.

NOTIFICATION/PERMIT REQUIREMENTS AND CONTRACTOR'S DECLARATION

Storage tank work is subject to compliance with all applicable laws and regulations relating to the performance of work including, but not limited to, business license requirements, Building Codes, Fire Codes, Air Quality regulations, Health and Safety Codes, Water Codes and Transportation regulations.

You are required to complete **the entire** agency notifications indicated below within 48 hours prior to the commencement of work on this project. A request for an inspection within 48 hours does not guarantee you will receive the desired inspection appointment time. You may want to schedule appointments in advance of the 48 hour minimum requirement.

48 HOURS NOTIFICATION REQUIRED TO:

- (X) Glendale Fire Prevention Bureau
 780 Flower Street,
 Glendale, CA, 91201
 (818) 548-4810

- (X) Glendale Building & Safety
 633 E Broadway Avenue, Rm. 101
 Glendale, CA, 91206
 (818) 548-3200

- (X) South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, CA 91765
 (909) 396-2000

NOTICE TO UST PERMIT APPLICANTS

The South Coast Air Quality Management District (SCAQMD) has adopted Rule 1166 regulating emissions of Volatile Organic Compounds (VOC) from decontamination of soil effective August 6, 1988. A Site Specific Soil Mitigation Plan or a Various Site Soil Mitigation Plan may be required. The SCAQMD has provided a link to Rule 1166 at:

<http://www.agmd.gov/home/regulations/compliance/rule1166-site-specific-and-various-locations-soil-mitigation-plan>.

Please contact the SCAQMD at (909) 396-2000 for details regarding Rule 1166. It is the business's responsibility to ensure SCAQMD and California Air Resources Board requirements are met.

FAILURE TO PROVIDE NOTICE AS REQUIRED ABOVE MAY RESULT IN PERMIT REVOCATION, ADDITIONAL SITE ASSESSMENT REQUIREMENTS, AND/OR ADMINISTRATIVE PENALTIES AS PROVIDE BY LAW.

- A City of Glendale Business Operator Tax Certificate is required by contractors performing work in the City of

Glendale.

- No work is to begin on the project until the application and plans are approved.
- The City of Glendale Fire Prevention Bureau must be contacted at least 48 hours in advance to schedule each required inspection.
- Site and worker safety are solely the responsibility of the property owner or his agent and the responsibility is not shared nor assumed by the City of Glendale.
- A Health and Safety Plan shall be prepared before performing any site work and a copy of that Plan shall be available on the job site.
- A late fee will be charged as a result of an inspection not being canceled in a timely manner or a "not ready for inspection" condition existing upon arrival of a Department of Fire Prevention Bureau Inspector.
- Variations from the approved plans may void the approval of the plans.

STORAGE TANK CLOSURE REQUIREMENTS AND CONDITIONS

A permit is required to perform storage tank closure work. No on-site work shall begin until plans have been submitted and approved by the City of Glendale Fire Prevention Bureau. The Fire Prevention Bureau must witness parts of the work and an inspection must be scheduled at least 48 hours in advance. A fee is also required. Any other governmental agency having jurisdiction must be notified before starting closure work in order to obtain proper clearance, permits, and arrange for required inspections. A copy of the Health and Safety Plan and other necessary permits must be obtained and kept available at the site. A tank closure report is required for all aboveground storage tank removals when soil or groundwater sampling is required and all underground storage tank closures that are not temporary. The requirements for this report are listed under Closure Report Requirements.

CONDITION A

PERMANENT UNDERGROUND AND ABOVE GROUND STORAGE TANK REMOVALS NON-HAZARDOUS METHOD

The Glendale Fire Prevention Bureau Inspector shall witness items 10-16.

1. A minimum of two 2A 40 BC rated fire extinguishers must be on site no further than 75 feet from the tank removal location. Extinguishers must have a current State Fire Marshal's tag attached.
2. All ignition sources must remain at least 50 feet away from the excavation. No smoking signs shall be posted.
3. Colored tape, fencing, and/or appropriate barriers shall be used to maintain site security.
4. All tanks shall be monitored for flammability and oxygen by a monitoring device that has been calibrated within the last six months. A sticker or tag with the last calibration date must be on the unit.
5. All piping associated with the tank shall be removed and disposed of unless removal might cause damage to other structures or pipes that are being used in a common trench, in which case the piping to be closed.
6. All liquids, including rinseate, shall be removed from the tank and connected piping prior to excavation by approved methods. Grounding and bonding procedures shall be followed. Hazardous waste shall be manifested and transported to a fully approved and permitted TSD facility by a Licensed Hazardous Waste Transporter. The fire inspector shall be provided with a copy of the Hazardous Waste Manifest. Associated piping, including vent lines, electrical lines, and in-tank pumps, shall be disconnected from the tank and removed from the ground unless approved by the Chief. Continuous supervision must be maintained during the operations by the contractor named on the permit.
7. Vapor recovery shall be in accordance with AQMD Rule 1149.

8. NFPA guidelines shall be followed for the cleaning process. Bonding and grounding shall be in place. No "hot" work is permitted for any tanks that previously contained flammable or combustible materials. A pneumatic cold-cutting tool may be used to cut openings for the cleaning procedures. Use only beryllium or approved non-sparking tools. The lower explosive limit must be below 10% to conduct such work.
9. Each tank is cleaned on-site, certified by a Certified Marine Chemist, Certified Industrial Hygienist, or Certified Safety Professional as "clean" and vapor free. Tank cleaning shall be timed such that it is completed prior to the arrival of the fire inspector.
10. The Certified Marine Chemist, Certified Industrial Hygienist, or Certified Safety Professional must take the lower explosive limit reading in the presence of the fire inspector *before* adding dry ice to the tank. The monitor must be properly calibrated. The LEL must be 0% for the "clean" certification.
11. A minimum of 15 pounds of dry ice per thousand gallons of tank capacity shall be placed into the tank. Dry ice is not required if tanks are immediately cut on-site.
12. The certified Marine Chemist or certified Industrial Hygienist shall apply an identification number and date to each tank that corresponds to the "certification". A copy of the signed "clean" closure certification form must be given to the fire inspector before he/she leaves the job site. Tanks can only be moved the same day of the date of certification.
13. Tanks shall be lifted using a crane unless the contractor, at the time of permit application, can show the inspector that another piece of equipment is acceptable and safe. The tank exterior can only be cleaned with beryllium or non-sparking tools.
14. The tank shall be secured on an appropriate vehicle for immediate removal from the premises. The tank(s) shall be transported for material recycling or salvage with their respective certification(s). Demolition of above ground tanks shall be conducted as in the work plan approved by the Glendale Department.
15. In the event that a Certified Marine Chemist, Certified Industrial Hygienist, or Certified Safety Professional will not certify the tank as clean, the tanks shall be handled as a hazardous waste and be transported under all applicable regulations. See Condition B
16. Soil samples shall be taken as listed on the Closure Permit Sampling Supplement form.
17. Each tank will be allotted a maximum of one hour for removal, loading, off-site transportation, and soil sampling. Closure periods which exceed this time frame, are subject to the fire inspector's schedule and will be charged at the Fire Department hourly inspection rate.
18. The site shall be backfilled and compacted to a relative compaction of 90%.
19. All Closure Report Requirements must be submitted to the Fire Department within 30 days from the sampling date or 180 days from the date of the permit, whichever is earlier.

CONDITION B

PERMANENT UNDERGROUND AND ABOVE GROUND STORAGE TANK REMOVALS

HAZARDOUS METHOD Per CHSC §67383.5

The Glendale Fire Prevention Bureau Inspector shall witness item numbers 4-6.

1. Items 1-7 as described for Condition A, shall be followed as applicable.
2. All residual liquids, solids, or sludges, shall be removed and handled as a hazardous waste or recyclable materials in accordance with Chapters 6.5 and 6.7 of the Health and Safety Code. NOTICE: Contaminated tanks and residues that may be left in tanks to be closed may be a hazardous waste which must be transported and disposed of pursuant to Chapter 6.5 of the California Health and Safety Code. Failure to comply may be prosecuted as a felony conviction.
3. The tank's interior atmosphere shall be inerted using 22.2 pounds of dry ice per 1000 gallons of tank capacity.
4. A Certified Industrial Hygienist, Certified Marine Chemist, or Certified Safety Professional shall take **LEL** readings with a CGI that has been properly calibrated prior to inerting the tank. Oxygen content shall also be measured and must be below 8% or less than 50% of the oxygen concentration required to support combustion, whichever is less, during the entire period that work is in progress. The readings shall be taken at the top, center and bottom of the tank before it is loaded onto the transport vehicle.
5. All openings in the tank shall be plugged, except a 1/8 vent. Cracks, holes or other damage shall be covered to contain any release.
6. Items 16 -19 as identified in Condition A shall be complied with.

CONDITION C

PERMANENT IN PLACE UNDERGROUND STORAGE TANK CLOSURES

The Fire Department Inspector shall witness item numbers 4-6.

1. All in place storage tank closures request must be done in writing and be stamped by a Professional Engineer stating reasons why tank need to stay in place. The drawing must show the location of the tank in plan view and in cross section. The drawing must show the angle (in degrees) from the closest footing of the permanent structure to the closest part of the tank system.
2. Items 1-7 as described for Condition A, shall be followed as applicable.
3. All residual liquids, solids, or sludges, shall be removed and handled as a hazardous waste or recyclable materials in accordance with Chapter 6.5 and 6.7 of the Health and Safety Code.
4. A Certified Marine Chemist, Certified Industrial Hygienist, or Certified Safety Professional shall monitor the tank interior and exterior for potential harmful vapors. LEL must be below 10%.
5. The tank shall be completely filled with an Inert solid. Cement slurry is acceptable. Sand or water is not. Alternative proposals must be submitted in writing and are subject to the Glendale Fire Prevention Bureau's approval.

6. Each tank will be allotted a maximum of one hour for filling of the tank and soil sampling. Closure periods which exceed this time frame, are subject to the fire inspector's schedule and will be charged at the Glendale Fire Prevention Bureau's hourly inspection rate.
7. Soil samples shall be taken as listed on the Soil Sampling. Requirement from the Application for Storage Tank Closure.
8. All Closure Report Requirement must be submitted to the Fire Department within 30 days from the sampling date or 180 days from the date of the permit, whichever is earlier.

CONDITION D

TEMPORARY STORAGE TANK CLOSURES

The Fire Department Inspector shall witness items 2-5.

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| <ol style="list-style-type: none"> 1. Items 2 and 3 as described in Condition C, shall be followed as applicable. 2. The Department of Fire-Rescue shall witness verification that the tank is empty. This may be done by dip sticking the tank. Afterward, the storage tank may be filled with a non-corrosive liquid that is not a hazardous substance. Proof of compatibility of the liquid with the tank must be submitted to the Glendale Fire Prevention Bureau. 3. Except for required venting, all fill and access locations and piping shall be sealed using locking caps or concrete plugs. 4. Power service shall be disconnected from all pumps associated with the use of the storage tank unless the power services some other equipment | <p>which is not being closed, such as an impressed-current cathodic protection system.</p> <ol style="list-style-type: none"> 5. Monitoring shall continue pursuant to the permit during the temporary closure, unless determined otherwise by the Glendale Fire Prevention bureau. 6. The storage tank shall be inspected every 3 months by the owner or operator to verify temporary closure requirements are still in place. 7. Temporary closure permits are valid for six months from the date of approval. The tank must be removed, closed in place, or put back into use. If the tank is reused, it must meet the requirements of the California Fire Code, Article 3 or 6 of Title 23 of the California Code of Regulation, Division 3, Chapter 16, and Health and Safety Code Ch. 6.7. |
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CONDITION E

WELL ABANDONMENTS

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| <ol style="list-style-type: none"> 1. All abandoned wells shall be destroyed in such a way that they will not produce water or act as a channel for interchange of water or act as a channel for interchange of water, when such interchange may result in deterioration of the quality of water in any or all water bearing | <p>formations penetrated, or present a hazard to the safety and well being of people and animals.</p> |
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| <p>2. A well destruction permit issued by the Los Angeles Department of Public Health shall be required for all wells requiring a permit for their initial construction.</p> | <p>the Department of Water Resources, contained in bulletin 74-81, December 1981, or any other methods that will provide equivalent or better protection.</p> |
| <p>3. Well destruction shall be accomplished according to methods described in the latest "Water Well Standards: State of California" by</p> | <p>4. Verification of well abandonment may be submitted in writing or by requesting a Department of Fire Prevention Bureau.</p> |

CONDITION F

CONFINED SPACE ENTRY

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| <p>1. The Glendale Fire Prevention Bureau requires 48-hours notification prior to performing permitted confined space entry work where the Glendale Fire Prevention Bureau or 911 is designated as the confined space rescue team. The notification must be made verbally during business hours (voice mail messages not accepted).</p> | <p>2. Any permitted confined space entry shall be performed in accordance with Cal OSHA standards.</p> |
| | <p>3. It is the businesses' responsibility to prove the confined space rescue team is qualified to perform such work.</p> |

CLOSURE REPORT REQUIREMENTS

A closure report for storage tanks shall be submitted to the Glendale Fire Prevention Bureau containing the items listed below. All closure report requirements must be submitted to the Glendale Fire Prevention Bureau within 30 days from the sampling date or 180 days from the date of this permit, whichever is earlier.

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| <p>1. Site address of tank closure location.</p> | <p>closure shall be certified by California Professional Geologist, a California Certified Engineering Geologist, or a California Registered Civil Engineer with sufficient experience in soils.</p> |
| <p>2. Plot plan to scale showing the location of tanks, sampling points building, adjacent streets, and a north arrow. Use a legend to identify tank size and past contents.</p> | |
| <p>3. Description of methods for obtaining, handling, and transporting samples.</p> | <p>The certification must clearly state that all work was done under the supervision of the person signing.</p> |
| <p>4. Time and date samples were obtained.</p> | |
| <p>5. Soil sampling certification (including but not limited to soils classification, boring logs, sample procedures, sample locations, initiating chain of custody, and groundwater location) for tank</p> | <p>6. Chain of custody documentation initiated by the person obtaining samples through the person at a Cal/EPA Department of Toxic Substances Control certified laboratory.</p> |

7. Copy of "clean" closure certification signed by a Certified Marine Chemist, Certified Industrial Hygienist, or Certified Safety Professional.
8. Copy of Glendale Building & Safety Department permit. This is required on all underground tank closures and some aboveground tank closures.
9. Disposal documentation of tanks and legal evidence of disposal. Include copy of the Storage Tank Closure Certification from if tanks were removed as hazardous waste.
10. Disposal documentation, such as manifests, signed by the receiving facility, for the disposal of any removed soil, tank rinseate, and/or remaining tank contents. Records shall also include a proper waste determination for all waste material related to the removal of the tank(s).
11. Analysis results by the State certified laboratory submitted on laboratory letterhead showing analysis date, method of extraction, and method of analysis.
12. Documentation as to depths of groundwater at facility.
13. Any observations of site contamination.
14. Remedial action plan to mitigate contamination or recommendation for closure.
15. Report to be signed by a California Professional Geologist, a California Certified Engineering Geologist, or a California Registered Civil Engineer with sufficient experience in soils.

CLOSURE PERMIT SAMPLING SUPPLEMENT

To satisfy the permanent closure requirements for storage tanks previously storing hazardous materials, site integrity must be demonstrated by the analysis of soil samples and, if applicable, groundwater samples as outlined below. These requirements are in addition to the conditions listed on the Application for Storage Tank Closure or contained in an approved Closure Permit. Compliance with the "Soil Sampling Requirements for Extremely Hazardous Materials" may be required. Additional guidelines regarding soil sampling requirements are available upon request.

1. Samples shall be obtained at the sampling points (SP) indicated on the attached plot plan.
2. For each SP, samples shall be obtained at the following depths identified below. Note: UST sites undergoing closure or modifications requiring sample testing for all constituents of the previously stored substance(s) and their breakdown or transformation products. Testing must also be conducted in accordance with according to Health and Safety Code §25296.15 and the Los Angeles Regional Water Quality Control Board's "General Laboratory Testing Requirements for Petroleum Hydrocarbon Impacted Sites". Preparation method 5035 must be used for testing of volatile organic compounds.

SP	Depth(s)	Compounds	Analysis Method

CLOSURE PERMIT SAMPLING SUPPLEMENT (CONT.)

3. All soil samples obtained shall be discrete, undisturbed and unexposed prior to analysis. The method used to obtain the samples and the data of sampling shall be included in the final report.
4. If groundwater is encountered during sampling, a groundwater monitoring well shall be established at the most down gradient sampling point. The well shall be developed by removing a minimum of four well volumes and a groundwater samples shall be obtained and analyzed.
5. The analytical results for all soil samples shall be expressed milligrams per kilogram (mg/kg), or micrograms per kilogram (ug/kg) as appropriate. Analytical results for groundwater samples shall be expressed in ug/l (ppb). Required Minimum Detection Limits shall comply with the Los Angeles Regional Water Quality Control Board’s “General Laboratory Testing Requirements for Petroleum Hydrocarbon Impacted Sites”
6. Analytical results shall be reported on laboratory letterhead and shall include the following information: a) The date and analysis was conducted; b) The method of extraction (if applicable); c) Detection limits for each analytical procedure and determination; d) The method of analysis; e) Signature of chemist certifying results.
7. All soil/groundwater samples obtained shall be handled and transported to the laboratory in strict accordance with applicable EPA regulations utilizing chain-of-custody procedures. Chain-of-custody documentation shall be included in the final report.
8. If the soil/groundwater analysis indicates contamination at the facility, the case will be referred to the Los Angeles Regional Water Quality Control Board.
9. The number of samples is dictated by title 23, Division 3, Chapter 16, Section 2672(d), all UST(s) require a minimum of two soil samples taken at each end, two feet into native material, a separate sample be taken for each 20 linear-feet of trench for piping, groundwater samples needed if groundwater is found in excavation pit, and if UST or any portion therefore is not removed, at least one boring shall be taken as close as possible to the midpoint beneath the tank. Exceptions might exist and may include, but are not limited to, the extreme hazard of the material stored, bulk tank configurations, encountering groundwater, length of time of UST abandonment, or history of a possible release. Stockpiled soil must also be sampled. A chart identifying typical sampling requirements is provided below for your reference. Sampling for aboveground tanks is prescribed on a case by case basis.

UST CAPACITY, PIPING, & STOCKPILES	SAMPLE LOCATION GUIDELINES
Less than or equal to 999 Gallons	Two Samples
1,000 to 9,999 Gallons	Three Samples
10,000 Gallons and Greater	Four Samples
Piping runs (include product, vent, vapor)	Every 20 linear feet and 2’ - 4’ below the pipe and elbows
Stockpiled soil	One sample for every 100 cubic yards, two to four feet into the stockpile
One sample to be taken below the inverted fill; others (if necessary) to be equally distributed below tank. PLUS: • One sample beneath each dispenser	

10. All Closure Permits are site specific and may be subject to additional sampling as necessary to protect the public health and safety, underground and surface water supplies, and may include requirements requested by other agencies.
11. A final report that contains all of the required information shall be submitted to the Glendale Fire Prevention Bureau within one (1) month from the sampling date or 180 days from the date of this permit, whichever is earlier.

SOIL SAMPLING REQUIREMENTS FOR EXTREMELY HAZARDOUS MATERIALS

Site integrity shall be demonstrated as indicated below prior to tank removals where the tank presently or previously contained either 1) a volatile or semi-volatile priority pollutant as defined by the Federal Register, Vol. 44, No. 233, December 3, 1979 (Revised 1981), or 2) any material which, as a waste, would be considered an extremely hazardous waste as defined by Title 22, California Administrative Code, Section 66680.

1. Test borings shall be slant drilled to intercept a point beneath the center of the tank, if possible. If slant drilling is not feasible, the test borings may be as close as practicable to the tank.
2. For single tanks, a minimum of two test borings will be required, each located on opposite sides of both the major and the minor axis of the tank. The borings shall be as close as practicable to the tank.
3. For multiple tanks, as a minimum, borings shall be placed at 20 foot intervals around the tank cluster. The actual number and location of borings shall be evaluated on a case-by-case basis. Tanks separated by 20 feet or more shall be considered single tanks for the purpose of boring location and placement.
4. Samples shall be obtained under the direct supervision of a California Certified Engineering Geologist, California Registered Geologist or California Registered Civil Engineer with sufficient experience in soils.
5. Soil samples shall be obtained at depths of 5, 10, 20, 30, and 40 feet below grade level.
6. A Shelby Tube or a Modified California Sampler shall be utilized for obtaining all soil samples.
7. Soil samples shall be capped immediately with teflon or aluminum foil.
8. Soil samples shall not be extruded in the field but are to be immediately placed in a protected and chilled ice chest and transported to a State certified laboratory for analysis, using suitable methods.
9. If groundwater is encountered during sampling, a groundwater monitoring well shall be established at the most downgradient sampling point. The well shall be properly developed and a groundwater sample shall be obtained and analyzed. Groundwater monitoring well installation and sampling shall meet current Los Angeles Regional Water Quality Control Board guidelines.
10. All soil samples obtained shall be discrete, undisturbed, sealed and unexposed prior to analysis. The method used to obtain the samples and the date of sampling shall be included in the final report. Samples submitted for laboratory analysis are not to be used for field screening.
11. The analytical results for all soil samples shall be expressed in milligrams per kilogram (mg/kg), or micrograms per kilogram (ug/kg) as appropriate. Practical quantitation limits of 5-10 ug/kg (ppb) for volatile organics and 1 mg/kg (ppm) for the petroleum hydrocarbons must be achieved by the laboratory. Analytical results for groundwater samples shall be expressed in ug/l (ppb) and practical quantitation limits of .5-.5 ug/l (ppb) for volatile organics and 1 mg/l (ppm) for petroleum hydrocarbons must be achieved by the laboratory.
12. Analytical results shall be reported on laboratory letterhead and shall include the following information: a)

The date the analysis was conducted; b) The method of extraction (if applicable); c) Detection limits for each analytical procedure and determination; d) The method of analysis; e) Signature of chemist certifying results.

13. All soil/groundwater samples obtained shall be handled and transported to the laboratory in strict accordance with applicable EPA regulations utilizing chain-of-custody procedures. Chain-of-custody documentation shall be included in the final report.

Owners/Operators can also demonstrate site integrity in the field using an organic vapor analyzer for head space analysis of soil samples obtained at boring and sampling locations and depths specified above. Alternative field demonstration methods may be acceptable if approved by this Department in advance. Field demonstrations shall not be substituted for the requirement of laboratory analysis.

Either the laboratory analytical results of soil/groundwater samples or the field demonstration results must be available to tank removal field personnel and this Department's inspector at the time the tank is removed.

Owners/Operators must report the detection of an unauthorized release to this Department within 24 hours. If contamination is inadvertently found during excavation, backfill immediately and report the finding to this department within 24 hours. If contamination is indicated by laboratory analysis or found in the field, the case will be referred to the Los Angeles Regional Water Quality Control Board for oversight.