



# NASHOBA REGIONAL SCHOOL DISTRICT

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## 2.0 STORAGE TANK CLOSURE AND/OR REMOVAL

This specification covers the requirements for removal, cleaning, and disposal of the existing AST at the project site. The tank included in the scope of this project is to be removed upon excavation, uncovering, and consultation with the Engineer or as specified on the drawings. The tank vault structure, conduit to shed, and vent piping shall be removed.

The Contractor shall interface closely with the Engineer during the performance of AST removals or closure. The Engineer will be collecting environmental data for use in preparation of any necessary closure reports for submission to the applicable regulatory agencies. Therefore, the Contractor shall anticipate the certain excavation activities may be directed by the Engineer, to a reasonable degree, to facilitate screening of soil and collection of samples for environmental analysis. The Contractor Scope of Work does not include the collection or analysis of environmental samples.

The Contractor is advised the removal of the AST and vault structure from the vault may generate petroleum-contaminated soil. Over-excavation, stockpiling, and disposal of contaminated soil, to the extent directed by the Engineer, is included in the project Scope of Work, and shall be paid at the rates provided in the contract.

Existing underground product piping shall be rinsed, cleaned, tightness tested, and capped prior to backfill and abandonment. The publication listed below form a part of this specification to the extent referenced.

The publications are referred to within the test of the basic designation only.

- API PUBL 2219 (1999) Safe Operation of Vacuum Trucks in Petroleum Service ·
- API RP 2003 (1998) Protection Against Ignitions Arising out of Static, Lighting, and Stray Currents ·
- API Std 2015 (2001) Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks ·
- Title 40 CFR Part 279 standards for the Management of Used Oil ·
- NFPA - 30 Flammable and Combustible Liquids Codes ·
- NFPA - 327 Standard Procedure for Cleaning or Safeguarding Small Tanks and Containers ·
- NFPA - 329 Recommended Practice for Handling Underground Leakage of Flammable and Combustible Liquids

## 2.1 SUBMITTALS

In addition to the submittals described in prior sections, the Contractor shall also provide the following to the Engineer at the completion of work: ·

- Copies of all field test reports (e.g., compaction test results, concrete slump and strength test results) ·
- Tank carcass disposal documentation ·
- Waste disposal documentation (all waste streams)

## 2.2 QUALIFICATIONS

The Contractor's onsite foreman or superintendent shall have a minimum of two years tank removal experience. The Contractor shall faithfully execute the work with properly trained, qualified, and experienced personnel. At a minimum, the following requirements shall apply for UST removal work at the site(s): ·

- 40-hour OSHA HAZWOPER in accordance with 40 CFR 1910.120 ·
- Confined Space Entry training, where applicable ·
- Heavy Equipment Operator certification, where applicable

## 2.3 REGULATORY REQUIREMENTS

Tank closure shall be carried out in accordance with 40 CFR 280 as well as all applicable local and Commonwealth of Massachusetts regulations. All waste materials shall be transported and disposed of in accordance with applicable Commonwealth regulations.

The Engineer will be responsible for documentation of proper AST removal and closure including Closure Report, and will rely in part on the submittals provided by the Contractor as detailed herein. The Contractor shall not be responsible for collection or analysis of environmental samples. The Contractor shall be responsible for obtaining the Removal Permit (if required) from the Town of Bolton.

## 2.4 EXECUTION

The Contractor shall carry out the work substantially in accordance with the means and methods described in the Contractor's bid/proposal. Deviations therefrom may be acceptable if approved in advance by the Engineer, but in no case may the Contractor alter the methods without prior notification and approval.

#### 2.4.1 PRODUCT REMOVAL

The Contractor shall use appropriate techniques to remove residual petroleum products from the AST. Residual fuels shall become the property of the Contractor, and may be reused, recycled, or disposed in any legal manner.

#### 2.4.2 PURGE AND REMOVE SUPPLY, RETURN, AND VENT PIPING

The Contractor shall drain and flush all supply and return piping back into the tank before cleaning. A suitable solvent solution, preferably the same as the tank cleaning solvent, shall be used to render the piping runs clean.

Piping runs shall then be exposed, cut, and removed to the limits of excavation. The piping exterior and ancillary equipment shall be cleaned to remove all soil and inspected for signs of corrosion and leakage. Lines that will no longer be required shall be tightness tested, cut, and plugged with neat cement or grout to prevent future use. Building penetrations that will be abandoned shall also be plugged on the inside of the building. In all cases, all underground supply and return piping that is accessible from the exterior ground surface shall be removed.

Concrete or asphalt pavement shall be saw cut at the limits of removal, broken, and removed with the resulting debris disposed of at a suitable location.

#### 2.4.3 CUT AND CLEAN TANKS

After the tank and piping contents have been removed, the Contractor shall disconnect all the piping (except the piping needed to purge or inert the tank). Flammable and toxic vapors shall be purged from the tank or the tank made inert in accordance with API RP 1604, with the exceptions that filling with water shall not be used and, if dry ice is employed, the Contractor shall use a minimum of 3 pounds per 100 gallons of tank volume. The tank atmosphere shall be continuously monitored for combustible vapors if the tank is purged or continuously monitored for oxygen if the tank is made inert.

Cleaning shall be accomplished in a manner that eliminates, to the greatest extent possible, the need for personnel to enter the tank. If entry is necessary, the tanks shall be rendered safe for entry in accordance with industry standard practices, the guidance documents cited herein, and all applicable safety and health regulations. The tanks may be cleaned in place or after removal from the ground. Regardless of method, the Contractor must clean the tanks and render the tank gas-free prior to transporting the tanks from the property.

The tank interior shall be cleaned using a high pressure (greater than 500 psi), low volume (less than 2 gpm) water spray until all loose scale and sludge is removed and contamination, in the form of a sheen, is no longer visible in the effluent stream.

All residual liquids, sludge, and other materials shall be removed from the tank, placed into appropriate containers, and transported for disposal in accordance with applicable regulations.

The Contractor shall discuss the proposed disposal facility and treatment plan with the Engineer prior to transporting wastes from the sites.

#### 2.4.4 EXCAVATE AND REMOVE TANK AND VAULT

The Contractor shall remove the tank from the vault using caution to prevent damaging the tank with digging or lifting equipment so that the tanks can be inspected upon removal from the vault. Prior to removal of existing AST from concrete vault the contractor shall dewater the vault. Upon removal from the vault, the tank exterior shall be cleaned and inspected for signs of corrosion, structural damage, or leakage. The tank may be loaded directly onto a transport vehicle. If the tank is placed on the ground, it shall be set on high-density polyethylene (HDPE) sheeting and chocked to prevent rolling.

Exploratory trenches shall be excavated as necessary to determine the vault location, limits and the location of ancillary equipment. Excavation around the perimeter of the tank vault shall be performed in such a manner as to limit the amount of potentially petroleum contaminated soil that could be mixed with previously uncontaminated soil. Petroleum contaminated soil shall be segregated in separate stockpiles. Surface water shall be diverted to prevent direct entry into the excavation.

Dewatering of the excavation or vault, if necessary, shall be limited to allow adequate access to the tank and piping, to assure a safe excavation, and to ensure that compaction and moisture requirements are met during backfilling. Discharge of water will require a discharge permit from the EPA and the Commonwealth of Massachusetts and shall not proceed until the Engineer has coordinated these permits. Dewatering may result in the production of petroleum contaminated water and/or free product. Free product shall be recovered from the groundwater only as part of necessary dewatering.

Open excavations and stockpile areas shall be secured while awaiting confirmation test results from the soil beneath the vault (by the Engineer). Excavations shall be backfilled as soon as possible after contaminated soil removals have been completed and confirmation samples have been taken. The Contractor shall divert surface water around excavations to prevent water from directly entering into the excavation.

#### 2.4.5 OVER-EXCAVATION (as necessary)

Upon direction from the Engineer, the Contractor shall excavate contaminated soil from the excavation. Though this contract is not a remedial action, some limited amount of excavation may allow rapid assessment and closure of the site without requiring a separate mobilization and will be performed under this contract.

Excavated contaminated soil shall be placed on and covered by HDPE sheeting that is secured against wind and rain. The Engineer will characterize the soil for disposal and provide documentation of such to the Contractor. The Contractor shall then load the soil into trucks coordinated and provided by the Engineer.

#### 2.4.6 BACKFILL AND SITE RESTORATION

Backfill material shall be obtained from a clean offsite source, and shall be as specified in the contract specifications.

Backfill shall be placed in maximum 12-inch lifts and compacted to 95% maximum Proctor. Suitable base course material shall be placed at a thickness of 12 inches as the final lift. For areas beneath new concrete slabs, compaction and base course requirements are as depicted on the design drawings.

Disturbed areas shall receive 6-inches of topsoil, grass seed, fertilizer, and mulch. Seed mix shall be approved by the owner.

#### 2.4.7 WASTE DISPOSAL

All wastes generated during AST cleaning and removal shall be properly packaged and transported from the site. Meeting all regulatory requirements, including the preparation of materials and waste for transportation and preparation of accompanying paperwork (manifests and Bills of Lading) shall be the responsibility of the Contractor.

Temporary storage on the project site will be allowed only until testing is complete, manifests (if necessary) are complete, and transportation is arranged. The Contractor shall provide approved containers, vehicles, equipment, labor, signs, labels, placards and manifests and associated land disposal restriction notices and notification, necessary for accomplishment of the work, including materials necessary for cleaning up spills that could occur from tank removal operations.

Transportation shall be provided in accordance with Department of Transportation (DOT) Hazardous Material Regulations and state and local requirements, including obtaining all necessary permits, licenses, and approvals.

The Contractor shall retain the rights to salvage the value of recycled or reclaimed product and metal, so long as the all Commonwealth of Massachusetts and federal waste disposal requirements are met. At the end of the contract, the Contractor shall provide documentation on the disposition of salvaged materials.

#### 2.6.8 SPILLS

Immediate containment actions shall be taken as necessary to minimize the effect of any spill or leak. Cleanup shall be in accordance with applicable federal, state, local laws and regulations at no additional cost to the Nashoba Regional School District.

