
PETROLEUM STORAGE TANK REMOVAL

PART 1 – GENERAL

1.1 SCOPE

- A. If petroleum bulk storage tank(s) are encountered as part of the project, work of this Section shall be performed in accordance with the requirements of the Contract Documents and all applicable regulations.
- B. It is noted that to date, no actual storage tank(s) and contents have been located on Site, however, if tanks(s) and contents are encountered during construction the following procedures are to be adhered to.
- C. CONTRACTOR shall provide all labor, materials, services, and equipment necessary for removal, transportation and disposal of the above-noted storage tanks, piping, vent lines and all associated appurtenances, including any tank contents. All tank closures will be done in accordance with applicable state, federal and local regulations, and appropriate professional codes (i.e., NFPA).
- D. CONTRACTOR shall provide all labor, materials, services, and equipment necessary to provide air monitoring and soil sampling services during the tank closure. All tank closures shall be done in accordance with applicable federal, state, and local regulations.
- E. CONTRACTOR shall provide all labor, materials, services, and equipment required for the removal, transportation and disposal of contaminated liquids, and sludges contained in the tanks.
- F. CONTRACTOR shall provide all labor, materials, services, and equipment required to remove gravel fill or asphalt surface cover layer and subsequent contaminated soils identified in any of the underground tank excavations. Petroleum-impacted soils removed from the excavations shall be staged on-Site pending disposal. The staging area will be determined by the CONTRACTOR in concurrence with the CONSULTANT. The CONTRACTOR should plan for the use of a truck to transport contaminated soils to the staging area.
- G. CONTRACTOR shall provide all labor, materials, services, and equipment required to remove contaminated soils around building foundations and footers. Contaminated soils removed to facilitate demolition shall be staged on-Site pending treatment or disposal. The staging area will be determined by the CONTRACTOR.
- H. CONTRACTOR shall provide all labor, materials, services, and equipment required to construct the contaminated soil staging area and an equipment decontamination area.

1.2 SUBMITTALS

- A. Submit the following items in accordance with the General Conditions:

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1. Copies of written notifications to state and local regulatory agencies.
2. Written certification of proper transport and final disposal locations of the tank, and any liquids or sludges found in the tank or generated during cleaning operations shall be submitted to the CONSULTANT within one (1) week following transportation of these items off the Site.
3. Tank closure report for each tank in accordance with the requirements of NYSDEC CP-51.
4. Copies of any permits issued by the City of Amsterdam, if required.

1.3 BID QUANTITIES

A. The work of this section shall include:

1. Excavation and staging of petroleum-contaminated Soils.
2. Characterization sampling of staged petroleum-contaminated soils.
3. Removal and disposal of unknown size storage tank(s).
4. Removal and disposal of gravel fill and petroleum-impacted soils from within the excavation, if encountered. Quantity of petroleum-impacted soil and gravel fill to be removed is subject to change according to field screening by the CONSULTANT during actual tank(s) removal activities.
5. Removal and disposal of residual tank contents (remaining fuel oil, gasoline, and petroleum-impacted ground or surface waters), rinse water, and/or groundwater in the tank excavations.
6. Sampling and laboratory analysis of the residual tank contents, rinse water, and/or groundwater in tank(s) excavations.
7. Contact and coordination with receiving transport and disposal facilities of removed storage tank and any associated sludges/piping/residual materials, petroleum-contaminated soils, and potentially contaminated residual tank contents, rinse water, and/or groundwater in tank excavations.

PART 2 – PRODUCTS

None specified.

PART 3 – EXECUTION

3.1 REMOVAL OF TANKS, PIPING AND ACCESSORIES

- A. CONTRACTOR shall remove all designated tanks in accordance with all applicable federal, state, and local regulations.
- B. Asphalt, gravel, or concrete pavement overlying the underground tanks must be removed and disposed of in order to access tanks. Soil beneath the topsoil shall be carefully

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removed to expose the top of the tank without damaging the piping connections to the extent practicable.

- C. CONTRACTOR shall remove and dispose of all residual liquid, solids and sludges from the tanks and piping. All piping connected to the tank shall be drained into the tank or other containers prior to removal.

The tank and/or piping shall be made clean, inert and/or non-explosive prior to removal of the tank from the ground and job site. An inerting method similar to one described in API Publication 2015 or NFPA 327 shall be used. The actual method of cleaning and inerting the tank used shall comply with all applicable State and local requirements and shall be appropriate for the substance(s) stored in the tank. Sampling and analysis shall be conducted as required for proper disposal of the sludge and rinsate. Sludge and rinsate shall be contained, removed, and disposed of in accordance with all applicable Federal, State and local requirements.

- D. Motors used in the area of the tanks must be "explosion-proof." Proper bonding or grounding shall be used.
- E. CONTRACTOR shall include all costs to properly dispose of tank contents in his base bid. This shall also include the costs for sampling and analysis as required by the Treatment, Storage and Disposal Facility (TSDF) for screening and certification purposes.
- F. CONTRACTOR shall include in his base bid all costs for the removal, testing and disposal of contaminated liquid generated from tank rinsing and cleaning operations. Removal and disposal shall be in accordance with Local, State and Federal regulations.
- G. CONTRACTOR shall excavate and manage all soils in conformance with the NYSDEC Petroleum-Contaminated Soil Guidance Policy and CP-51: Soil Cleanup Guidance.
- H. Excavation around the perimeter of the tank shall be performed in a manner which limits the amount of potentially contaminated soil that could be mixed with previously uncontaminated soil. Excavation of contaminated soil shall be kept to the minimum practical excavation needed to perform the work.
- I. CONTRACTOR is responsible for furnishing safe conditions for workers. Existing structures, surrounding soils, sidewalks, and paving shall be safely supported to prevent undermining during excavation. Sheeting, bracing, or shoring shall be installed if there is a need for workers to enter the excavated area.
- J. All piping and appurtenances associated with the tanks shall be removed, unless stated otherwise in the Contract Documents. Excavation shall be performed as necessary to remove tank piping and associated equipment in accordance with the requirements for tank removal.

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- K. The CONTRACTOR will check with the local municipality to determine if it is acceptable to cut-up the tanks prior to disposal. If tanks are to be cut, an appropriate method to displace oxygen inside the tank will be used (i.e., dry ice).

3.2 DISPOSAL OF TANKS, PIPING AND ACCESSORIES

- A. After being cleaned and purged of product vapors, the petroleum storage tanks shall be rendered unfit for further use by the CONTRACTOR. This shall be done in accordance with the NYSDEC Memorandum "Permanent Closure of Petroleum Storage Tanks," API 1604, "Removal and Disposal of Used Petroleum Storage Tanks.
- B. The petroleum storage tank, piping and associated equipment shall be recycled by the CONTRACTOR or disposed of, following approval by the CONSULTANT, at a disposal facility permitted to receive wastes of this type. This disposal will be in accordance with the NYSDEC Memorandum "Permanent Closure of Petroleum Storage Tanks," API 1604, "Removal and Disposal of Used Petroleum Storage Tanks. Costs for recycling or disposing of tanks, piping and associated equipment shall be part of the CONTRACTOR'S base bid.
- C. The CONTRACTOR shall retain the rights to salvage value of recycled or reclaimed product and metal not turned over to the OWNER, so long as all applicable Federal, State and local requirements are met. At the end of the contract, and before Final Payment is issued, the CONTRACTOR shall provide documentation on the disposition of salvaged materials.

3.3 REMOVAL OF PETROLEUM CONTAMINATED SOILS

- A. CONTRACTOR shall excavate and stage any petroleum contaminated soils encountered during the removal of the oil storage tank.

3.4 HANDLING OF CONTAMINATED SOILS

- A. CONTRACTOR shall remove contaminated soils from the tank excavation in accordance with the Contract Documents. The CONTRACTOR shall stockpile all excavated soils until laboratory analysis for contamination is completed. Separate stockpiles for suspected clean (non-contaminated) and suspected contaminated soils may be constructed, however, all excavated materials shall be tested.

Contaminated soils shall be staged on the Site at the locations selected by the CONTRACTOR in concurrence with the CONSULTANT. The CONTRACTOR shall take care during the field work portion of this project to ensure that the contaminated soil is properly isolated from its surrounding environment and is incapable of having its

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contaminant released into the environment. The soil storage sites shall be designed and constructed to meet these environmental isolation requirements.

- B. The soil storage site shall be at a higher elevation than the surrounding ground to avoid the potential for stormwater run-on and accumulation. Minimum of 6-mil thick polyethylene plastic sheeting shall be used to line the bottom of the soil storage areas and to corner the soil piles. CONTRACTOR shall provide anchoring as needed to hold the sheeting in place. Polyethylene sheeting shall be resistant to UV degradation and shall be of sufficient strength to resist rips and tears. If more than one continuous piece of plastic is used for the liner or cover, it shall be sealed at the edges with an appropriate sealer. The liner and cover should be sufficiently larger than the area of stored soil to cover the stored soil plus two feet of excess on all sides. All material needed to construct the plastic liner and cover shall be provided by the CONTRACTOR and shall remain on the job Site at the end of the job.
- C. Berms surrounding the soil storage areas are required to prevent the soil from coming into contact with surface water runoff. The berms should be of sufficient height and thickness to prevent this runoff and to help prevent the release of contaminated soil or leachate from the sole storage area. Dimensions of one (1) foot thick and one (1) foot high minimum are required. Trenches are not an acceptable substitute for berms. All material needed to construct the berms shall be provided by the CONTRACTOR and shall be remain on the job Site at the end of the job.
- D. The removal and stockpiling of petroleum contaminated soil associated with tank removals and building demolition shall be included in the lump sum base bid.

3.5 BACKFILLING

- A. Excavation(s) shall be backfilled within seven (7) calendar days after determining that all contaminated soil has been excavated. Each area shall be restored to its original condition or to the condition indicated in the contract drawings. Surface restoration work shall be coordinated with related work shown on the contract drawings.
- B. Excavation(s) shall be backfilled with compacted select granular fill to the subgrade level or as required to match adjacent areas.

3.6 TANK CLOSURE REPORTS

- A. The CONTRACTOR shall submit a report at the end of the project including:
 - 1. A log of the work completed.
 - 2. A narrative report describing what was encountered at each Site including the condition of the storage tank, any visible evidence of leaks or stained soils, results of vapor monitoring, actions taken including quantities of materials removed,

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- sample locations, collection data such as time of collection and method of preservation and whether or not groundwater was encountered.
 3. Copies of confirmatory laboratory results of soil samples taken after the removal of the tanks will provided to the CONTRACTOR by the CONSULTANT for inclusion in the final report submittal.
 4. Copies of all analyses performed for disposal.
 5. Copies of all waste analyses or waste profile sheets.
 6. Copies of all certifications of final disposal signed by the responsible disposal installation official.
 7. Information on who sampled, analyzed, transported, and accepted all wastes encountered, including copies of manifests, waste profile sheets, land disposal restrictions, notification and certification forms and other pertinent documentation.
 8. Scaled one-line drawings showing tank locations, limits of excavation, limits of contamination, underground utilities within 50 feet of the tank, sample locations and sample identification numbers.
 9. Photographs of the removal operation, excavation after removal, tank, soil stockpile area, fill placement and grading.
 10. The report is to be prepared as per the requirements of STARS MEMO #1 and CP-51.
- B. All laboratory testing must be completed by a laboratory certified by the New York State Department of Health.

3.7 TANK PIT SOIL SAMPLING

- A. Confirmatory soil sampling of the underground storage tank pits shall be conducted in accordance with CP-51 by the CONSULTANT.
- B. If the results of the initial tank pit sampling indicate contaminants above levels found in CP-51, the CONTRACTOR shall excavate additional soil and conduct additional soil sampling and analysis. Excavation, sampling and analysis shall be completed until soils remaining in the tank pit are below contaminant levels found in CP-51.

3.8 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 and local laws and regulations. Cleanup costs for spills or leaks which are the result of the CONTRACTOR'S actions shall be borne by the CONTRACTOR.

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3.9 DECONTAMINATION OF EQUIPMENT

- A. CONTRACTOR shall decontaminate equipment as necessary to prevent cross contamination on the Site and prior to the equipment leaving the Site.
- B. Decontamination of any equipment that contacts contaminated soil shall consist of steam cleaning within an enclosed pad/temporary structure. The enclosed pad shall be constructed by the CONTRACTOR. The pad shall be constructed such that it contains rinsate and particulate matter removed from the equipment. All decontamination fluids generated shall be removed from the Site and disposed of in accordance with applicable regulations. The CONTRACTOR shall sample the decontamination water for disposal purposes.

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