

**SECTION 026100**

**REMOVAL AND DISPOSAL OF CONTAMINATED SOILS**

**PART 1 GENERAL**

**1.01 RELATED WORK SPECIFIED ELSEWHERE**

- A. Construction Facilities and Temporary Controls, Rubbish Removal: Section 015000.
- B. Removals, Cutting, and Patching: Section 017329.
- C. Earthwork: Section 310000.
- D. Erosion and Sediment Control: Section 312513.
- E. Offsite Treatment of Petroleum Contaminated Soil: Section 310001.

**1.02 SUBMITTALS**

- A. Waiver of Submittals: The “Waiver of Certain Submittal Requirements” in Section 013300 does not apply to this Section.
- B. Quality Control Submittals:
  - 1. Removal procedures and schedule.
  - 2. Plan of Operations:
    - a. Include, at a minimum, a description of project approach covering methods for sampling, analysis, removal and disposal of all waste. Additionally, the Plan of Operations shall include:
    - b. Description of soil removal methods to be employed; including excavation protection.
    - c. Description of a method for the decontamination of the excavator bucket prior to the procurement of soil samples at the completion of principal excavation work in each tank area.
    - d. Description of the waste segregation and staging methods to be used for soils, poly sheeting, and spent personal protective equipment.
    - e. Methods to be used for dewatering.
    - f. Methods to be used for placement and compaction of backfill materials.
    - g. Identification of all waste transporters and disposal facilities including copies of all required certifications and permits.
    - h. Description methods to be employed to prevent storm water pollution from staged petroleum-contaminated soil, if encountered.
    - i. Required certifications and permits including copies of valid permits for all waste haulers, disposal sites, and weigh scales.
    - j. Submit at a minimum of two (2) weeks prior to commencing work.
    - k. Waste shall include, but not be limited to wash water, soils, samples, and used personal protective equipment.

3. Copy of notifications to the New York State Department of Environmental Conservation, informing the Department of the planned closure and removal of the tank.
  4. Health and Safety Plan, (HASP): Including regulations for confined space entry (29 CFR 1910.146) and other applicable portions of 29 CFR 1926, that addresses exposure of workers to residual product and accumulated sludge that may need to be removed from the tanks. The Owner will review and comment on the HASP but will neither approve nor disapprove it.
  5. Confined Space Entry Permit and the worker training certificates required to clean out the tank once it is excavated.
  6. Excavation Procedure: Submit a lay out drawing or detailed outline of intended excavation procedure for the Director's information. This submittal will not relieve the Contractor of responsibility for the successful performance of intended excavation methods.
  7. Submit certifications and licenses where required in Section 1.03.
- C. Contract Closeout Submittals:
1. Completed waste manifests (or bill of lading for non-hazardous materials) as described herein, accounting for all materials removed from the site.
  2. Manifests: Copies of all load tickets and manifests, if applicable. Certification of destination, receipt, and disposal of demolition materials must also be submitted.

### **1.03 REQUIRED CERTIFICATIONS AND LICENSES**

- A. Employees involved in hazardous waste operations shall have been trained in accordance with OSHA Final Standards to Protect Workers in Hazardous Waste Operations 29 CFR 1910.120 or most recent revision thereof.
- B. Waste haulers shall maintain a valid 6 NYCRR Part 364 Permit.

### **1.04 REGULATORY REQUIREMENTS**

- A. Abide by all applicable rules and regulations, including but not limited to the following:
  1. New York State Uniform Fire Prevention and Building Code.
  2. New York State Petroleum Bulk Storage Regulations, 6 NYCRR Part 613.
  3. New York State Department of Environmental Conservation's memorandum for Permanent Closure of Petroleum Storage Tanks (and most recent revision).
  4. NYSDEC Spill Technology and Remediation Series Memo No. 1 - Petroleum Contaminated Soil Guidance Policy 1992 (use the most current version).
  5. NYSDEC Spill Technology and Remediation Series Memo No. 14 - Site Assessment at Bulk Storage Facilities (use the most current version).
  6. American Petroleum Institute, Recommended Practice 1604, Second Edition, December, 1987, "Removal and Disposal of Used Underground Petroleum Storage Tanks", and revisions thereof.
  7. Federal Underground Storage Tank (UST) Regulations, 40 CFR Part 280.
  8. Applicable OSHA worker safety regulations.

9. State, county, and federal regulations pertaining to the handling, storage, transport, and disposal of wastes generated during the project.
10. Coordinate and obtain all permits as required by permitting authorities.

**1.05 ABBREVIATIONS**

- A. The following terms shall have the meanings ascribed to them in this Section, wherever they appear in this Section.
1. API: American Petroleum Institute.
  2. FRP: Fiberglass-Reinforced Plastic.
  3. NFPA: National Fire Protection Association.
  4. NYSDEC: New York State Department of Environmental Conservation.
  5. NYSDOT: New York State Department of Transportation.
  6. OSFM: Office of the State Fire Marshal.
  7. OSHA: Occupational Safety and Health Administration.
  8. PBS: Petroleum Bulk Storage.
  9. USEPA: United States Environmental Protection Agency.
  10. UST: Underground Storage Tank.
  11. HASP: Health and Safety Plan.

**1.06 EXISTING CONDITIONS**

- A. Protect and safeguard from damage all existing structural systems, fencing, equipment, and surfaces that will remain. Repair any damage to structures, appurtenances or the landscape not scheduled for removal work.



**PART 2 PRODUCTS (Not Used)**

**PART 3 EXECUTION**

**3.01 PREPARATION**

- A. Locate and clearly mark all subsurface utilities in the area of excavation. Conduct activities to minimize interference with, and to protect the existing surfaces of, adjacent structures or utilities.
- B. Provide, erect, and maintain temporary barriers and security devices.
- C. Conduct operations with minimum interference to public or private thoroughfares. Do not close or obstruct drive areas or sidewalks without permits.
- D. Prevent movement or settlement of adjacent structures. Provide bracing and shoring.
- E. Remove and dispose of abandoned conduit or piping within excavated areas and plug ends. Identify disconnection locations on Project Record Documents.
- F. Provide monitoring equipment at site as required by the Site Health and Safety Plan. Operate and maintain in accordance with manufacturer's recommendations.
- G. Perform the Work with consideration for facility personnel and the public. Maintain barriers between work areas and adjacent facilities at all times, with necessary signs, lights, bracing and guards for the protection of all facility personnel, the public, and existing facilities.
- H. Schedule the Work in advance with the Owner to coordinate work schedules.

**3.02 REMEDIATION**

- A. Perform the following items of Work in accordance with the Department of Environmental Conservation regulations, and other listed references. Follow guidelines as directed, unless otherwise shown or specified.
  - 1. Dispose of petroleum contaminated waste.
  - 2. Remove and dispose of petroleum-contaminated water.
  - 3. Remove and dispose of recovered petroleum.
  - 4. Obtain soil samples for lab testing by testing agency.

- B. Disposal of Petroleum Contaminated Soil - Non-Hazardous Regulated Solid Waste, and Disposal of Petroleum Contaminated Soil - Hazardous Waste: Includes the Work required for loading, trucking and disposal of the material.
  - 1. Petroleum Contaminated Soil: contains sufficient petroleum residue to require disposal at a designated incineration facility for which a disposal fee is required. The Department of Environmental Conservation will classify such soils as hazardous waste or non-hazardous regulated solid waste.
  - 2. The DEC and EPA regulations allow the generator of the waste to use knowledge of the waste and/or laboratory analysis to make a hazardous waste determination. Contaminated soil is considered a characteristic hazardous waste when it exhibits any of the following characteristics: ignitibility, corrosivity, reactivity, or toxicity, as defined in 6NYCRR Part 371.3, or 40 CFR Section 261. The only characteristic of concern for soil contaminated with only virgin petroleum is toxicity. The Toxicity Characteristic (TC) Rule identifies benzene and lead as compounds that may cause petroleum-contaminated soil to be hazardous, if present in sufficient concentration.
- C. Disposal of Contaminated Water: Includes the Following:
  - 1. Transport contaminated water to installed wastewater treatment plant.
  - 2. Treat water.
  - 3. Discharge per County permit requirements
- D. Drum Disposal: Includes the loading, securing, labeling, transporting, and disposal of the drum.
- E. Moving and Stockpiling Petroleum Contaminated Soil (Non-Hazardous Regulated Soil Waste) to Another Location at the Work Site: Includes the following:
  - a. Work required for loading, trucking, and disposal of the material to another location on the site as directed by the Director's Representative.
  - b. Protecting stockpiled material with heavy-duty polyethylene sheeting under and over pile.
  - c. Providing polyethylene sheet protection inside of truck.
  - d. Petroleum Contaminated Soil: Contains sufficient petroleum residue to require disposal at a designated incineration facility for which a disposal fee is required.
- F. Perform excavation in the presence of the Owner who will check material for possible contamination using a organic vapor meter (OVM). Place excavated material in a separate stockpile, pending disposal.
- G. Backfill excavations with clean Type 2 material, compact, grade, place topsoil, and seed or pavement to restore area to original condition. Refer to Section 310000, and coordinate fill material with Contract Document C-108.
- H. Cease operations and notify the Owner immediately if adjacent structures appear to be endangered. Do not resume operations until corrective measures are taken, and written approval is received by the Director's Representative.
- I. Except where noted otherwise, immediately remove demolished material from site.

- J. Do not burn or bury materials on site.
- K. Excavate, segregate, stockpile, and protect soils with evidence of possible petroleum contamination (by visible staining, odors, or by the readings on the Soil Tester's field instrumentation) in accordance with NYSDEC STARS No. 1 and other applicable NYSDEC guidance. Such soils shall be placed on poly sheeting (6-mil minimum) bermed to prevent run-off, covered with same type of poly to keep precipitation off of the staged soil, and the cover shall be secured to keep the pile dry.
- L. Assist the Soil Tester with sampling of soils in accordance with NYSDEC STARS No. 1 and other applicable NYSDEC guidance. Provide excavator with bucket for gathering samples; decontaminate bucket prior to collecting each sample.
- M. Backfill and compact areas excavated for removal of petroleum contaminated soil, in accordance with Section 310000 Earthwork. And as directed by the Director's Representative.
- N. Rough grade, and compact areas affected by petroleum contaminated soil removals and resurface in accordance with Section 310000 Earthwork.
- O. Dispose of removed materials from the site as Work progresses. Leave site in clean condition.
- P. Dispose of all wastewater off-site in accordance with applicable federal, state, and local regulations.
- Q. Stockpile petroleum-contaminated soil encountered during the work.
- R. Coordinate with the Owner in providing soil samples for lab testing and analysis by a testing agency.
- S. Submit waste disposal documents. Organize and index records, and include the following:
  - 1. Waste characterization and waste profiles submitted to each permitted disposal facility. Include documentation of waste stream acceptance by the disposal facility.
  - 2. Bills of lading or receipts or certifications and weigh tickets generated during the handling and disposal process.
  - 3. Copies of all written approvals from duly authorized persons and agencies for the discharge of wastewater, where allowed, into storm or sanitary sewer systems, onto the ground, or into the groundwater.
  - 4. Copies of 6 NYCRR Part 364 permits for waste haulers used in the work, with a separate listing of the material hauled by each entity listed and the final disposal locations of each waste material removed from the site.

**3.03 CONTAMINATED MATERIAL DISPOSAL DOCUMENTATION**

- A. Submit contaminated material disposal documentation prior to payment of any units involving disposal of contaminated materials.

**END OF SECTION**