

## **SECTION 02050**

### **EXCAVATION, DEMOLITION AND DISPOSAL**

#### PART 1 -- GENERAL

##### 1.01 WORK INCLUDED

- A. The Work includes excavation, purging of flammable or combustible vapors, removal, and disposal of the underground petroleum storage tanks (USTs). The following is a description of the tanks:

(Completed by Specifier)

- B. The Work also includes excavation and stockpiling of contaminated soils if any from the tank pit. If deemed necessary by the Contracting Officer, the Contractor will return to the site to excavate and stockpile additional contaminated soils.

##### 1.02 REFERENCES

- A. State of Alaska, Department of Environmental Conservation, Underground Storage Tanks, 18 AAC 78.
- B. OSHA Regulations for Construction shall be adhered to and shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- C. Alaska Administrative Code, Title 18, Chapter 75, Oil and Hazardous Substance Pollution Control, and Alaska Statute, Title 46, Water, Air and Environmental Conservation, Chapters 03 and 04.
- D. American Petroleum Institute, Publication 2015, January 1991, Cleaning Petroleum Storage Tanks.
- E. American Petroleum Institute, Recommended Practice 1604, December 1987, Supplement 1989, Removal and Disposal of Used Underground Petroleum Storage Tanks.
- F. National Fire Protection Association (NFPA) 30, "Flammable and Combustible Liquids Code."
- G. Uniform Fire Code, Section 79, "Flammable and Combustible Liquids."
- H. U.S. EPA, 40 CFR 280, "Underground Storage Tank Regulations."

## 1.03 SUBMITTALS

### A. Material Submittals

#### 1. Material Disposal Plan

- a. Develop a plan describing the transportation and disposal of fuel and contaminated fuel products from the tank systems as well as tank and pipe demolition materials.

#### 2. Fuel Spill Cleanup Plan

- a. Develop a plan describing the cleanup of Contractor-caused fuel spills.

## PART 2 -- PRODUCTS

### 2.01 POLYETHYLENE SHEETING

- A. Polyethylene shall be hydrocarbon resistant reinforced sheeting, 10-mil bottom layer, 6-mil top cover, for the placement and protection of contaminated soils.

## PART 3 -- EXECUTION

### 3.01 DESCRIPTION OF WORK

- A. Remove and dispose off-site, existing underground fuel storage tanks, contents, and selected associated fuel piping (as shown on drawings) in accordance with the requirements of these specifications and API, Recommended Practice 1604, whichever is most stringent.
- B. Excavate petroleum contaminated soil and stockpile on-site or off-site as applicable in accordance with the requirements of the State of Alaska and these specifications.
- C. Locate all utilities and disconnect electrical power to the work area.
- D. All remaining fuel, water and sludge shall be removed from the tank in which it is being stored and either reused by the Contractor or properly and legally disposed of. Hand pumping may be required to empty the bottom few inches of sludge. These liquids shall not be discharged into or upon any roadway, ditch, storm drain, sewer line, lake or upon the ground.
- E. Following the removal of the remaining fuel, water and sludge, the Contractor shall then excavate carefully down to the top of the tank and remove the piping, filler, and vent tubes, and temporarily plug all tank openings. The tank can be conditioned by adding solid crushed carbon dioxide (dry ice) in the amount of 15 pounds/1,000 gallons of tank capacity evenly distributed over the greatest possible area. (When using carbon

dioxide, pressures in the tank shall not exceed 5 psig.) An alternative may be to ventilate the tanks with air or other method proposed by the Contractor and accepted by the Contracting Officer. All normal safety and pollution precautions shall be used. The Contractor shall then complete the excavation and remove the tank. The tank can become explosive after initial inerting due to vapor from material still remaining on the interior walls. Therefore, the tank shall be continuously monitored for explosive vapors to determine if the tank contents are inert.

- F. Upon removal, the tank shall then become the property of the Contractor and may be recycled or legally and properly disposed. Contractor may clean and dispose of the tank using alternative methods. Notify the Contracting Officer in writing that the tank has been legally disposed.
- G. Excavate petroleum contaminated soil if any from the tank pit as determined by the Contracting Officer. The Contracting Officer will field screen each backhoe bucket of excavated soil for volatile hydrocarbons. Contractor shall separate contaminated soil and uncontaminated soil into two stockpiles. The contaminated soil shall be placed on a reinforced polyethylene membrane of thickness not less than 10 ml. Contractor shall provide membrane material to stockpile all of the contaminated soil. The Contractor shall have extra membrane at the site if the Contracting Officer determines additional excavation and stockpiling is necessary. Contractor shall provide and cover the contaminated soil stockpile with a nonwoven polyethylene membrane of thickness not less than 6 ml. The stockpile shall be covered in order to adequately protect it from wind and rain.
- H. The tank excavation shall remain open (unfilled) until such time determination is made by the Contracting Officer on the completeness of removal of the petroleum contaminated soil. The Contractor shall erect and maintain security fencing or barricades around the perimeter of the tank excavation until the project site is accepted by the Alaska Department of Environmental Conservation (ADEC) for closure.
- I. The Contractor may be required to return to the project site to excavate additional petroleum contaminated soil dependent on the analytical test results of the undisturbed soil surrounding the tank excavation. The additional contaminated soil shall be stockpiled in the like manner described above as directed by the Contracting Officer.

### 3.02 EXCAVATION

- A. Locate all utilities and disconnect electrical power to the work area.
- B. Excavate and remove the existing UST systems (including underground piping). Excavate only the quantity of soil necessary to remove the existing UST systems and install the new UST systems unless directed by the Contracting Officer.

### 3.03 CONTAMINATED SOIL

- A. Place the contaminated soils on protective membrane, as directed by the Contracting Officer.
- B. Contractor shall return to the site to excavate additional contaminated soils, as directed by the Contracting Officer.

### 3.04 DISPOSAL OF TANKS

- A. The tanks, piping, and other UST demolition material shall become the Contractor's property and shall be transported and disposed of off-site. The tanks shall be removed from the site before they are crushed, cut up or otherwise demolished.
- B. Submit documentation to the Contracting Officer regarding the location of final disposal of the tanks.

END OF SECTION