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**APPLICABILITY FOR
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Project teams shall refer to their executed project contracts for applicable document versions/revisions.

SECTION 02 65 00**UNDERGROUND STORAGE TANK REMOVAL****NOTE TO SOUND DESIGNER:**

THE PURPOSE OF THIS SPECIFICATION FOCUS IS ON REMOVAL OF USTS. SECTION 02 65 00 SHOULD ALWAYS BE USED WITH SECTION 01 35 43 HAZARDOUS AND CONTAMINATED SUBSTANCE HEALTH AND SAFETY PROGRAM AND 31 23 01 EXCAVATION SPOILS DISPOSAL. SECTION 02 61 13 SHOULD BE UTILIZED IF CONTAMINATED SUBSTANCES AND DANGEROUS WASTE ARE PRESENT FROM A UST RELEASE. SECTION 02 65 00 MAY BE USED WITH SECTION 02 61 00 REMEDIAL ACTIONS.

OVERSIGHT OF UST REMOVAL MUST BE COMPLETED BY A UST SITE ASSESSOR OVERSEEN BY A CONTAMINATED SUBSTANCE SME. THE CONTAMINATED SUBSTANCE SME IS A 3RD PARTY RESPONSIBLE FOR QUALITY ASSURANCE AND QUALITY CONTROL THAT UST REMOVAL AND REMEDIATION WERE SUFFICIENTLY COMPLETED AND CONTAMINATED SUBSTANCES AND DANGEROUS WASTE WERE PROPERTY HANDLED AND DISPOSED.

THE CONTAMINATED SUBSTANCE SME/UST SITE ASSESSOR QUALIFICATIONS ARE INCLUDED IN THIS SECTION. THE CONTAMINATED SUBSTANCE SME/UST SITE ASSESSOR HAS THE FOLLOWING RESPONSIBILITIES:

- OBSERVATION OF UST, SOIL AND GROUNDWATER CONDITIONS DURING UST DECOMMISSIONING INCLUDING DAILY FIELD REPORTS.
- COLLECT SAMPLES FOR CHEMICAL ANALYSIS DURING UST SITE ASSESSMENT.
- EVALUATE CHEMICAL ANALYTICAL RESULTS TO DETERMINE WHETHER REMEDIATION CONTINUES OR HAS ACHIEVED CLEANUP ACTION OBJECTIVES.
- EVALUATE UNKNOWN CONTAMINATED SUBSTANCES OR DANGEROUS WASTE WHICH MAY INCLUDE SAMPLE COLLECTION, CHEMICAL ANALYSIS AND OVERSEE REMEDIATION, AS NECESSARY.
- PREPARE UST CLOSURE REPORT TO DOCUMENT UST REMOVAL ACTIVITIES AND UST SITE ASSESSMENT RESULTS.

EACH PROJECT TEAM WILL CHOOSE IF THE CONTRACTOR OR SOUND TRANSIT IS RESPONSIBLE FOR RETAINING THE CONTAMINATED SUBSTANCE SME. THIS SPECIFICATION COVERS BOTH APPROACHES AS "OPTION 1" AND "OPTION 2". THE SPECIFICATION NEEDS TO BE MODIFIED FOR THE PROJECT. TEXT ASSOCIATED WITH THE TWO OPTIONS IS ITALICIZED. NON-ITALICIZED TEXT SHOULD BE MAINTAINED IN ALL SPECIFICATIONS. THE OPTIONS INCLUDE:

- **OPTION 1** TEXT TO BE USED WHEN SOUND TRANSIT IS RESPONSIBLE FOR RETAINING THE CONTAMINATED SUBSTANCE SME/UST SITE ASSESSOR UNDER A SEPARATE CONTRACT TYPICALLY AS PART OF THE CONSTRUCTION MANAGEMENT TEAM OR UNDER THE ENVIRONMENTAL DUE DILIGENCE ON-CALL. THE CONSTRUCTION CONTRACTOR IS RESPONSIBLE FOR RETAINING THE REMEDIATION CONTRACTOR WHOSE DUTIES INCLUDE GENERAL PLAN DEVELOPMENT, OBTAINING PERMITS, COMPLETE APPROPRIATE NOTIFICATIONS, OPERATION OF CONSTRUCTION EQUIPMENT, CHARACTERIZATION AND SAMPLING FOR DISPOSAL, AND TRANSPORTATION AND DISPOSAL OF CONTAMINATED SUBSTANCES AND DANGEROUS WASTE. OPTION 1 IS TYPICALLY USED ON DESIGN BID BUILD AND GCCM PROJECTS BUT CAN BE USED ON DESIGN BUILD PROJECTS.
- **OPTION 2** TEXT TO BE USED WHEN CONTRACTOR IS RESPONSIBLE FOR RETAINING THE CONTAMINATED SUBSTANCE SME/UST SITE ASSESSOR AND TO PERFORM THE CONTRACTOR-RESPONSIBLE ITEMS OF OPTION 1. OPTION 2 IS TYPICALLY USED ON DESIGN BUILD PROJECTS, AND CAN BE USED ON GC/CM PROJECTS. OPTION 2 IS TYPICALLY NOT USED ON DESIGN BID BUILD PROJECTS. SOUND TRANSIT CONSTRUCTION MANAGEMENT TEAM STILL RETAINS A CONTAMINATED SUBSTANCE SME FOR REVIEW OF SUBMITTALS AND COMPLIANCE WITH CONTRACT DOCUMENTS.

DESIGNER TO DELETE TEXT ABOVE FOR FINAL SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Requirements for the removal, decontamination, and disposal of known or discovered underground storage tanks (USTs), associated piping and ancillary equipment, whether used for petroleum storage or storage of other contaminated or hazardous substances.

1.02 REFERENCES

A. This Section incorporates by reference the latest revision of the following documents:

1. American Petroleum Institute (API):
 - a. API Recommended Practice, 1604 Closure of Underground Petroleum Storage Tanks.
 - b. API Standard 2015 Safe Entry and Cleaning of Petroleum Storage Tanks, Planning and Managing Tank Entry From Decommissioning Through Recommissioning.
 - c. API Recommended Practice 2016, Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks.
2. National Fire Protection Association (NFPA):
 - a. Standard 326, Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair.
3. National Institute for Occupational Safety and Health:
 - a. Publication 80-106, Criteria for a Recommended Standard: Working in Confined Spaces.
4. Washington State Department of Transportation (WSDOT):
 - a. Standard Specifications for Road, Bridge, and Municipal Construction.
5. Washington State Department of Ecology (Ecology):
 - a. Publication No. 21-09-050 Site Assessment Guidance for Underground Storage Tank Systems.
 - b. Publication No. 94-49 Guidance on Sampling and Data Analysis Methods.
 - c. Publication No. 97-602 Analytical Methods for Petroleum Hydrocarbons.
 - d. Publication No. 10-09-057 Guidance for Remediation of Petroleum Contaminated Sites.
 - e. Publication No. 16-09-057 Model Remedies for Sites with Petroleum Impacts to Groundwater.
 - f. Publication No. 15-09-043 Model Remedies for Sites with Petroleum Contaminated Soils.

- g. Publication No. 09-09-047: Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action.
6. Code of Federal Regulations (CFR):
- a. 29 CFR 1910 Occupational Safety and Health Standards.
 - b. 40 CFR 261 Identification and Listing of Hazardous Waste.
 - c. 40 CFR 262 Standards Applicable to Generators of Hazardous Waste.
 - d. 40 CFR 264 Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.
 - e. 40 CFR 268 Land Disposal Restrictions.
 - f. 40 CFR 279 Standards for the Management of Used Oil.
 - g. 40 CFR 280 Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST).
7. Washington Administrative Code (WAC):
- a. WAC 173-303 Dangerous Waste Regulations.
 - b. WAC 173-340 Model Toxics Control Act – Cleanup.
 - c. WAC 173-360A Underground Storage Tank Regulations.
 - d. WAC 296-62 General Occupational Health Standards.
 - e. WAC 296-843 Hazardous Waste Operations.
- B. Definitions:
1. The following definitions required by the Contract:
- a. Contaminated Soil.
 - b. Contaminated Substance.
 - c. Contaminated Water.
 - d. Dangerous Waste.
 - e. Hazardous or Contaminated Substances.
 - f. Hazardous Waste.
 - g. Suspected Contaminated Substance.
 - h. Solid Waste.
 - i. Site Safety Health Officer (SSHO).
 - j. Unknown Hazardous or Contaminated Substances Screening and Handling Plan (UHCS-SHP).
 - k. Contaminated Substance Subject Matter Expert (SME).
 - l. Contaminated Substance Handling Plan (CSHP).

2. Photoionization Detector (PID): A field screening device to detect contaminated substances, utilizing an ultraviolet light to detect ions from volatile organic compounds emitted from a sample.
3. Underground Storage Tank (UST): Any one or a combination of tanks, including underground pipes, fill ports, and dispensers connected thereto, that contained or contains an accumulation of hazardous materials, the volume of which, including the volume of underground pipes connected thereto, is ten percent or more beneath the surface of the ground except for the following: any tank that forms an integral part of an industrial or commercial process (flow-through process tank) through which there is a steady or uninterrupted flow of materials during the operation of the process, and subject to proper spill and management practices; any on-site sewage disposal system or holding tank that serves exclusively as a method of storage, conveyance, treatment, or disposal of sewage, any surface impoundment, pit, pond, or lagoon.
4. UST Decommission. When an UST system, or a tank or piping run that is part of an UST system, undergoes permanent closure.

1.03 COORDINATION

A. Meetings:

1. The Contractor, at a minimum, must conduct the following meetings:
 - a. A preconstruction meeting with the Sound Transit Resident Engineer is required before beginning each UST removal. Attendance at these meetings is mandatory for the UST Decommissioner [Option 2] and *Contaminated Substance SME*.
 - b. Meeting(s) with the Sound Transit Resident Engineer if suspect USTs and/or contaminated substances are discovered during construction.
 - c. Meeting(s) with the Sound Transit Resident Engineer to discuss chemical analytical results prior to backfill.

1.04 SUBMITTALS

A. Submit:

1. UST Removal Work Plan: Do not perform Contract Work, with the exception of site inspections and mobilization, until the Work Plan review is complete. At a minimum, include the following:
 - a. Summary of location, size, regulated/exempt status, and product contents for known USTs.
 - b. Summary of location, size, regulated/exempt status, and product contents for suspected USTs.
 - c. [Option 1] Summary of plan for supplemental sampling to classify and characterize Hazardous or Contaminated Substances within and around each UST for disposal and/or reuse. Summary must include sampling approach and analytical methods.

[Option 2] Summary of sampling approach and analytical methods for supplemental sampling to:

- 1) Classify Contaminated Substances and Dangerous Waste within and around the USTs for disposal and/or reuse including but not limited to characterization of Solid Waste and Dangerous Waste.
 - 2) Complete UST Site Assessment in accordance with Department of Ecology requirements.
- d. Sampling and analysis plan(s) including identification of chemical analytical methods, chemical analytical laboratories, analyte target reporting limits, field and laboratory QC samples and frequency, sample containers and preservation methods and planned sample locations.
 - e. Methods for identification of Hazardous and Contaminated Substances in UST(s).
 - f. Methods and procedures for UST removal, UST cleaning, inerting, purging and UST cutting procedures. Include methods and procedures of excavation and equipment to be used and methods to prevent the spread of Hazardous or Contaminated Substances.
 - g. Methods for shoring or sidewall slopes. Include methods to prevent non-contaminated soil excavated during sloping sidewalls from mixing with Contaminated Substances.
 - h. Relevant additions to project-wide Spill Prevention, Control, and Countermeasures (SPCC) Plans.
 - i. Equipment decontamination procedures to prevent cross contamination.
 - j. Methods to be employed for product, sludge, vapor, and pumpable liquid removal and storage.
 - k. Methods for water management including groundwater, stormwater runoff, and surface water.
 - l. Methods and procedures for the transportation and disposal of the UST and Hazardous or Contaminated Substances, in compliance with applicable federal, state, and local laws and regulations, including the identification of disposal and treatment facilities, and the use of certified, licensed transporters.
 - m. Backfill material sources including chemical analytical data or plan to obtain chemical analytical data prior to use of material for backfill.
 - n. Treatment and disposal facilities, and the use of certified, licensed transporters.
 - o. Requirements of the Contaminated Substances Handling Plan as required by the Contract.
2. [Option 1] *UST Closeout Information: Within 4 weeks of completion of each UST removal*
 [Option 2] *UST Removal and Site Assessment Report: Within 8 weeks of completion of each UST removal*
- B. Transmit:
1. Qualifications: 21 days after Notice to Proceed.

2. Certifications: 21 days after Notice to Proceed.
3. Local permits and Department of Ecology “30-day Notice for UST Systems”: One week before UST decommissioning.
4. Analytical testing results within 24 hours of receipt, including field screening results.
5. Daily field logs during removal of Contaminated Substances and Dangerous Waste: One week from date of activity.

1.05 QUALITY ASSURANCE

- A. Comply with local, state, and federal regulatory requirements and guidance documents included in Article 1.02 in this specification.
- B. Qualifications:
 1. CIH and SSHO: As required by the Contract, Hazardous or Contaminated Substance Health and Safety Program.
 2. ICC-Certified UST Decommissioner: Minimum of two (2) years of UST removal experience and be certified by the International Code Council (ICC) for UST Decommissioning, include license number in submittal.
 3. Employees who are involved with UST removal must have HAZWOPER training and certification. For Level D and above personal protective equipment (PPE) protection:
 - a. Completed appropriate safety training in compliance with 29 CFR 1910.120, 29 CFR 1910.134, and WAC 296-843-100.
 - b. Minimum of 40 hours health and safety training.
 - c. Minimum 24 hours of “on the job” training.
 - d. Eight (8) hours annual refresher training.
 - e. Respirator training and medical monitoring (as required for respirator use).
 4. Disposal or recycling facility for USTs and piping: Permitted UST disposal or recycling facility.
 5. Disposal facility for Hazardous or Contaminated Substances inside UST: Licensed disposal facility based on chemical analytical results of substance inside the UST.
 6. Contractor performing UST cleaning and transporting: Washington state-licensed transporter.
 7. [Option 2] *Contaminated Substance SME: To be a first-tier subcontractor to the Contractor and must not be retained by the earthwork contractor Washington State Professional Engineer, Licensed Geologist, Licensed Hydrogeologist, or demonstrate a minimum of 12 years of experience in the management of Hazardous or Contaminated Substances.*
 8. [Option 2] *UST Site Assessor: Certification of UST Site Assessment from the ICC or licensed as a professional engineer or licensed hydrogeologist Washington state under chapter 18.43 or 18.220 RCW and being able to demonstrate*

competence in site assessment by means of examination, experience, or education with a minimum of 3 years' experience in UST removal.

- C. Certifications:
 - 1. Certification from the ICC as a UST Decommissioner.
 - 2. All personnel must have respirator fit test certification (qualitative/quantitative) for the respirators they intend to use.
 - 3. Disposal sites are certified for proper disposal or treatment of Hazardous or Contaminated Substances.
 - 4. The transporter is a state-licensed transporter of Hazardous or Contaminated Substances.
 - 5. *[Option 2] Certification of UST Site Assessment from the ICC or licensed as a professional engineer or licensed hydrogeologist Washington state under Chapter 18.43 or 18.220 RCW and being able to demonstrate competence in site assessment by means of examination, experience, or education.*
- D. Perform Hazardous or Contaminated Substances excavation and disposal work in compliance with applicable statutes and regulations, including the Washington State Model Toxics Control Act, chapter 70A.305 RCW ("MTCA") and associated regulations and Washington State Department of Ecology Guidance.
- E. Obtain permits as required by the local fire, planning and health departments.
- F. Submit 30-day notice to Department of Ecology.
- G. Manifesting: conform to WSDOT and all applicable federal, state, and local regulations.
- H. Meetings: Attend meetings to discuss the UST removal, analytical test results, and the course of action.
- I. Laboratories: Use laboratories as required by the Contract, Hazardous or Contaminated Substances Health and Safety Program.
- J. Calibrate the PID screening devices as specified in instrument user manuals. Utilize the appropriate lamp for the known or expected contaminants.
- K. Comply with the following hold points:
 - 1. Contractor must modify plans included in this specification when project information changes throughout the duration of the project. Contractor must notify Resident Engineer when changes or modifications are made. Additional review and approval of such modifications will require transmittal or resubmittal as directed by the Resident Engineer.
 - 2. A clean copy of all plans and modified plan provided to Resident Engineer at least 5 days before work described in the plan can proceed.
 - 3. *[Option 1]: Backfill of an excavation at Contractor's expense until receiving confirmation from Resident Engineer that excavation is complete. Confirmation may be up to 10 days from the date of sample collection by the Resident Engineer.*

1.06 PROJECT CONDITIONS

- A. USTs are anticipated to be encountered during the Work. These conditions will require decommissioning, screening, excavation, handling, stockpiling, temporary storage, transportation and off-site disposal of USTs, Contaminated Substances or Dangerous Waste.
- B. Known and suspected USTs, Contaminated Substances and Dangerous Waste that may be encountered as required by the Contract.

PART 2 - PRODUCTS

2.01 PRODUCTS

- A. Personal Protective Equipment (PPE) and Monitoring Equipment: Conform to requirements set forth by federal and state regulations as required by the Contract.
- B. Utilize a PID to perform screening for Contaminated Substances and/or Dangerous Waste. Use a PID that is able to perform headspace analysis and is able to detect the contaminants of concern.
- C. Obtain all required permits and notifications for removal, excavation, dewatering, storage, transportation, and disposal of Hazardous or Contaminated Substances. Obtain permits at no additional cost to Sound Transit.

2.02 MATERIALS

- A. Backfill Material: As required by the Contract.
- B. Spill Response Materials:
 - 1. As required and described in the Contaminated Substances Handling Plan.
 - 2. Containers, adsorbents, shovels, and personnel protective equipment.
 - 3. Available at all times in which Hazardous or Contaminated Substances are being handled or transported.
 - 4. Compatible with the type of materials and contaminants being handled.
- C. Staging Material:
 - 1. Plastic liner or material cover:
 - a. Chemical resistant.
 - b. Minimum 6 mil thickness.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Implement environmental controls as required by the Contract prior to the start of excavation.
- B. Conduct UST decommissioning and removal as required by the Contract. Perform an independent evaluation of site data provided. Notify the Resident Engineer immediately if Contaminated Substances and/or Dangerous Waste is discovered which has not been

previously identified, or if other discrepancies between data provided and actual field conditions are discovered.

- C. Notify the Resident Engineer at least 14 days prior to UST removal.
- D. Notify Ecology, the local fire department, and other agencies in accordance with applicable reporting requirements.
- E. Obtain local, state, or federal permits and licenses that are required to perform the Work prior to commencing removal operations.
- F. Provide assistance to the Resident Engineer during UST removal. Assistance includes providing access to collect soil and water samples and otherwise document site activities.
- G. Coordinate the work in as required by the Contract.
- H. Comply with 29 CFR 1910 and WAC 296-62.
- I. Use of explosives or burning debris is not allowed.
- J. Install sheeting, bracing, or shoring in the absence of adequate side slopes if there is a need for workers to enter the excavation in accordance with WAC 296-62 and as required by the Contract.
- K. Identify specific Hold Points in the UST Work Plan. The Sound Transit Resident Engineer may add Hold Points at the Sound Transit Resident Engineer's discretion.

3.02 [OPTION 2] SITE DATA

- A. *Collect and document each UST system and background data in accordance with Ecology Publication 21-09-050 Site Assessment Guidance for Underground Storage Tank Systems.*

3.03 UST CONTENTS VERIFICATION

- A. Prior to removing the UST contents, characterize the contents by collecting a sample of each phase (product, water, solids) for chemical analysis of hydrocarbon identification by NWTPH-HCID, volatile organic compounds (VOCs) by EPA method 8260, total RCRA metals by EPA method 6000/7000 series and TCLP as necessary for disposal. If heavy oil petroleum hydrocarbons (e.g., motor/lube) are detected during the NWTPH-HCID analysis the sample must also be analyzed for PCBs by EPA method 8082.
- B. Determine if the UST contents must be disposed of as a Dangerous Waste based on state and federal regulations. Perform waste classification in accordance with 40 CFR 261, 40 CFR 279, and applicable state regulations.
- C. Be responsible for any additional requirements identified by the disposal facility.

3.04 PREPARATION FOR UST REMOVAL

- A. Drain product piping back to the UST and remove all material from the UST; and purge and vent the tank in accordance with API RP 1604.
- B. Contain UST contents, pumpable liquids and sludge, store and label on-site prior to disposal, or directly place in an appropriate tanker truck in accordance with local, state, federal regulations.
- C. Remove and dispose of UST contents, pumpable liquids and sludge. Temporary storage on Sound Transit facilities will be allowed once testing and manifests are complete, and transportation is arranged.

- D. Obtain required permits and notifications.
- E. Provide approved containers, vehicles, equipment, labor, signs, labels, placards, and manifests and associated Dangerous or Hazardous Waste notices and notifications, to accomplish the work, including materials for cleaning up spills that could occur from UST removal operations.

3.05 EXCAVATION

- A. Mark, flag, and/or barricade excavation areas, as well as work near roadways to maintain site safety. Complete utility locates of UST work location as required by the Contract prior to the start of excavation.
- B. Implement environmental controls as required by the Contract prior to the start of excavation.
- C. Excavate exploratory trenches to determine the UST location, limits, and the locations of ancillary equipment.
- D. Perform excavation to limit the amount of Contaminated Substances and Dangerous Waste that becomes mixed with noncontaminated soil.
- E. Strip and stockpile noncontaminated soil separately from Contaminated Substances and Dangerous Waste, for areas that are considered to be below Cleanup Levels based on field screening or chemical analytical data. Be responsible for staging and protecting this material from becoming contaminated. Dispose of such soil that becomes contaminated as a result of work activities at Contractor's own expense.
- F. Maintain around the UST an excavation of sufficient size to allow workers ample room to complete the work, but also protect the workers from sliding or cave-ins.
- G. Maintain a log of the materials and visible indications of contamination encountered during excavation for each area of excavation. Prepare excavation logs in accordance with ASTM D 5434.
- H. Extend excavation to remove UST piping and ancillary equipment, as well as any areas of Suspected Contaminated Soil.
- I. Secure open excavations and stockpile areas while awaiting site assessment test results.
- J. Perform field surveys immediately prior to and after excavations of USTs. Develop cross-sections on 30-foot intervals and at obvious break points for excavated areas. Survey all sample locations. Perform field surveys of stockpiled soil in order to estimate the volume of the stockpile if tonnage cannot be verified through weight tickets.
- K. Backfill the excavation as required by the Contract, as soon as possible after UST and Contaminated Soil removals have been completed, confirmation samples have been taken, and acceptable analytical results are received, [Option 1] *upon approval of the Resident Engineer.*
- L. Divert water to prevent entry into the excavation. Minimize infiltration of water that enters excavation. Dispose of such water that enters excavation as a result of work activities at Contractor's own expense. Limit dewatering to ensure adequate access, a safe excavation, and to ensure that compaction requirements can be met.
- M. Stage excavated material as required by the Contract.
- N. Contain water generated during dewatering until collection and analysis of samples in accordance with applicable federal, state, and local waste characterization and disposal regulations are complete and analytical results are received.

- O. Provide approved containers, vehicles, equipment, labor, signs, labels, placards and manifests, and associated disposal notices and notifications, necessary for accomplishment of the Work.

3.06 REMOVAL OF PIPING, ANCILLARY EQUIPMENT AND UST

- A. [Option 2] *Complete screening of all excavated material. Transmit results of all screening testing to the Resident Engineer.*
- B. Disconnect piping and ancillary equipment from the UST:
 1. Remove the piping completely (including piping to the burner/boiler).
 2. Cap UST ancillary equipment and piping connections, except those connections necessary to inert the UST.
 3. Clean the piping exterior and ancillary equipment to remove soil and inspect for signs of corrosion and leakage.
- C. Remove the UST from the excavation and clean the exterior to remove soil and inspect for signs of corrosion, structural damage, or leakage. For materials coming into contact with the UST, or in the vicinity of the excavation such as shovels, slings, and tools, use non-sparking type.
- D. After removal from the excavation, place the UST on a level surface adjacent to the UST excavation and secure with wood blocks to prevent movement.

3.07 UST CLEANING

- A. Continuously monitor the UST atmosphere for combustible vapors if the UST is purged, or continuously monitor for oxygen if the UST is inerted in accordance Ecology Guidance, and in accordance with API Standard 2015.
- B. Clean the UST interior under the supervision of a registered UST decommissioner, and in accordance with Ecology Guidance manuals, and API Standard 2015.
- C. Collect contaminated water resulting from cleaning operations and transfer offsite by a certified hauler in accordance with applicable DOT and disposal regulations.

3.08 SOIL EXAMINATION, TESTING, AND ANALYSIS

- A. After soil excavation is complete, sample the stockpiled soils with procedures, number, location, and methodology in accordance with Ecology guidance and as required by the Contracts. Ensure sample preservation and analytical procedures conform to method requirements.
- B. During sampling activities the Contractor is responsible for maintaining safe excavation sidewalls to ensure the Resident Engineer can safely access the excavations.

[Option 1]

- C. *Assist the Resident Engineer in the performance of duties during UST Site Assessment, general excavation and site remediation activities. Such assistance includes providing access for the Resident Engineer to document site activities and to collect soil and water samples. Such assistance may also include collecting soil samples with a backhoe at the direction of the Resident Engineer.*
- D. *After Suspect Contaminated Substances are removed, confirmation samples from the excavation will be collected and analyzed by the Resident Engineer*

- E. *Anticipate a delay of up to five (5) days between the collection of confirmation samples and the completion of chemical laboratory analyses and secure and maintain excavation areas during that time.*
- F. *Based on chemical analytical results, proceed with additional excavation that may be required to remove Contaminated Substances above action levels as required by the Contract at the direction of the Resident Engineer. Mark locations of samples in the field and document on the surveys and the as-built drawings*

[Option 2]

- B. *Complete UST Site Assessment in accordance with Ecology Publication 21-09-050 Site Assessment Guidance for Underground Storage Tank Systems, and soil management activities, including documenting site activities, removing and properly disposing of Contaminated Substances and Dangerous Waste, and collecting soil and groundwater samples to confirm limits of Contaminated Substances and Dangerous Waste in accordance with applicable regulations, Ecology guidance and standards of practice.*
- C. *If Contaminated Soil is removed, have the Contaminated Substance SME employed by the Contractor inspect the removal of existing Contaminated Substances from each area of Contaminated Substances and Dangerous Waste. The Contaminated Substance SME must complete field screening during excavation. After Suspected Contaminated Substance is removed, the Contaminated Substance SME must sample the limits of excavation in accordance with the Ecology required frequency of one sample per 400 square feet of exposed base, and one sample every 20 feet horizontally and one sample vertically of sidewalls. Samples must be collected in areas where contamination is likely to be present (for example same depth as known Contaminated Soil, areas where field screening indicate Contaminated Soil is present, near groundwater table). Investigation samples are not acceptable to be used to define limits of excavation.*
- D. *Have laboratory retained by the Contractor perform chemical analysis of collected samples with testing per the chemicals of concern and as required by the Contract and WAC 173-340 Table 830-1 Required Testing for Petroleum Releases. Based on test results, proceed with additional excavation that may be required to remove material that is contaminated above Cleanup Levels. Resident Engineer must approve removal of Contaminated Substance beyond what is required by the Contract. Mark locations of all samples in the field and document on the surveys.*
- E. *Anticipate a delay between the collection of confirmation samples and the completion of chemical laboratory analyses and secure and maintain excavation areas during that time.*
- F. *Based on chemical analytical results, proceed with additional excavation that may be required to remove Contaminated Substances above action levels as required by the Contract. Mark locations of samples in the field and document on the surveys and the as-built drawings*

3.09 BACKFILLING

- A. Backfill excavations only after Contaminated Substances and Dangerous Waste removal is complete.
- B. Consider Contaminated Soil removal to be complete after the bottom and sidewalls of the excavation are determined to have contaminant levels below than applicable Cleanup Levels, as required by the Contract or at the direction of the Resident Engineer.
- C. All noncontaminated soil removed to access Contaminated Soil for removal must be stockpiled, sampled and tested prior to backfill.

- D. The testing for backfill must conform to the requirements of Reuse Criteria as required by the Contract and local, state and federal regulations.
- E. Transmit soil chemical analytical results for material used as backfill to the Resident Engineer prior to placement of backfill.
- F. Place and compact backfill as required by the Contract.

3.10 DISPOSAL REQUIREMENTS

- A. Dispose of excavated material with Hazardous and Contaminated Substances as required by the Contract and local, state, and federal requirements including but not limited to WAC 173-303 and WAC 173-350.
- B. Transmit to Resident Engineer documentation of off-site disposal facilities' acceptance criteria and associated soil sample chemical analytical data for soil to be disposed that meet acceptance criteria prior to transport of soil to facility.
- C. Contractor is responsible obtaining a contained in determination (CID) from Ecology for listed waste.
- D. Sound Transit's Environmental Compliance Manager or an individual delegated with such authority by Sound Transit's Environmental Compliance Manager must sign the waste profile as the generator. The Contractor is responsible for coordinating with the Sound Transit Environmental Compliance Manager and providing sufficient chemical analytical data and information for Sound Transit's Environmental Compliance Manager to verify waste characterization.
- E. For disposal of all Dangerous Waste, with the exception of those wastes resulting from the release of Hazardous or Contaminated Substances negligently disturbed, removed, or handled by Contractor, its employees, agents, officers, or subcontractors, or any other persons for whom the Contractor may be contractually or legally responsible, ensure that the Generator's Certification portion of the Uniform Hazardous Waste Manifest is signed only by Sound Transit's Environmental Compliance Manager or by an individual delegated with such authority by Sound Transit's Environmental Compliance Manager.
- F. Dispose of the UST and piping sections in a licensed recycling or disposal facility.
- G. Do not allow a UST to leave the site until it is labeled and cut or crushed to render it unusable.
- H. Manifest each UST disposed of in this manner to document delivery and acceptance at the disposal facility.
- I. Provide transportation in accordance with the State and/or Federal Department of Transportation (DOT) Hazardous Material Regulations and federal, state, and local transportation requirements, including obtaining necessary permits, licenses, and approvals.

3.11 LOGS, REPORTS AND RECORDKEEPING

- A. Maintain field reports covering the implementation of the CSHP.
- B. Include in Daily Field Report when working in areas of Contaminated Substances and/or Dangerous Waste, at a minimum, the following:
 1. Date and time of day during which work was performed.
 2. Weather conditions (temperature, precipitation).

3. Area (site specific) where work occurred.
4. Employees in particular area and regulators observing the work.
5. Equipment and monitoring instruments utilized in the course of the work.
6. Any substantive deviations from the specifications, plans or submittals as it relates to the daily work performed.
7. Activities completed including, but not limited to:
 - a. Text and visual summary of activities including but not limited to drilling, excavation, backfill, dewatering, soil types encountered, groundwater conditions encountered, subsurface features encountered if any.
 - b. Field screened sample locations and results.
 - c. Map with locations, coordinates and identification of samples collected.
 - d. Copies of chains of custody.
 - e. Estimated quantities of soil or groundwater excavated and/or contained or disposed.
 - f. Summary of disposal activities include quantity disposed and disposal locations.
 - g. Mapped location and surveyed volume of stockpiles generated.
 - h. Representative photographs of daily work performed.

3.12 CLOSEOUT ACTIVITIES

A. [Option 1] *Closeout Documentation:*

1. *Provide the following information to allow the Resident Engineer to prepare a UST Removal and Site Assessment Report:*
 - a. *Summary of excavation and backfill activities, sampling (if completed) and disposal.*
 - b. *Documentation prepared for Ecology, local fire, planning or health department, including permits, notices, and closure checklists.*
 - c. *A letter signed by a responsible company official certifying that decommissioning services were performed in accordance with the applicable regulations and the terms and conditions of these Specifications.*
 - d. *UST removal checklist, sample chains of custody, analytical test results, and other relevant documentation.*
 - e. *UST Disposal Certifications: UST disposal certificates signed by the responsible disposal facility official.*
 - f. *Bills of Lading and/or Certificates of Disposal or Treatment for soil and groundwater.*
 - g. *Information on who transported and accepted wastes encountered, including copies of manifests, waste profile sheets, land disposal*

restriction, notification and certification forms, disposal ticket and receipts, certificates of disposal, and other pertinent documentation signed by the responsible disposal facility official.

- h. Scaled one-line drawings showing tank locations, limits of excavation, limits of contamination, and underground utilities within 50 feet.*
- i. Salvage Rights: Record of the disposition of salvaged materials.*

B. [Option 2] UST Removal and Site Assessment Report:

- 1. Submit report that meets reporting requirements described in Ecology Publication 21-09-050 Site Assessment Guidance for Underground Storage Tank Systems and applicable sections of the Cleanup Action Report per Section 02 61 13 Excavation and Handling of Contaminated Substances and/or Dangerous Waste.*

END OF SECTION