

DIVISION 02 – EXISTING CONDITIONS**Section 02 61 00 – Removal and Disposal of Contaminated Soil**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes specifications for excavating, handling, stockpiling, temporarily storing, and/or disposing of existing contaminated material (e.g., soil, water, debris) either known or unknown to exist that may be encountered during the work. This section includes preparation of a Contaminated Material Management Plan (CMMP) that includes several smaller plans. Hazardous materials include those defined in the General Conditions. This section also includes procedures applicable to Contractor's generation, use, and/or release of hazardous or contaminated substances in the course of Contractor's operation, for which Contractor is responsible under the General Conditions.
- B. Environmental data provided as reference information.

1.02 RELATED SECTIONS

- A. The work of the following Sections is related to the work of this Section. It is the Contractor's responsibility to perform all work required by the Contract Documents. Other Sections, not referenced below, may also be related to the proper performance of this work.
 - 1. 01 35 13 Special Provisions for Contaminated Sites
 - 2. 31 20 00 Earth Moving
 - 3. 31 23 19 Site Water Control and Treatment
 - 4. 33 40 00 Storm Sewers

1.03 DEFINITIONS

- A. Hazardous Materials. See Section 00 72 00 General Conditions, Article G-01.02.
- B. Contaminated Materials. See Hazardous Materials above.
- C. Samples. Physical examples that illustrate materials, equipment, or workmanship and establish standards by which the work will be judged.
- D. Exclusion Zone. The contaminated area of the site requiring personal protective equipment to minimize human exposure to chemicals of concern.

1.04 GENERAL REQUIREMENTS

- A. Potentially hazardous materials, or contaminated soils and/or water, will be encountered during the work that may require excavation, handling, stockpiling, temporary storing, and disposal. The Contractor shall manage these materials in compliance with applicable statutes and regulations.
- B. Potential contaminants that may be encountered include petroleum hydrocarbons, volatile organic compounds (VOCs), metals, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and dioxins/furans.

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- C. The extent of known contaminated materials and the types of known contaminants are provided in reference information. Notify the Engineer immediately if contaminated substances are discovered that were not previously identified or assumed, or if other discrepancies between data provided and actual field conditions are discovered.
- D. Conduct work in accordance with direction received from the Engineer; with the accepted CMMP; and with applicable federal, state, and local statutes, regulations, and guidance.
- E. Obtain all required permits and notifications for removal (excavation/dewatering), storage, transportation, and disposal of contaminated material, including sanitary sewer discharge. Permits shall be obtained at no additional cost to the Port in accordance with Section 00 72 00 General Conditions.
- F. Contractor shall be responsible for the collection, sampling (for permit compliance or disposal facility requirements), treatment (if necessary), and disposal of water (sump water and dewatering effluent). Water disposal may be permitted for sewer discharge or taken offsite for disposal at licensed facility.

1.05 SUBMITTALS

- A. Submittals shall be in accordance with Section 01 33 00 Submittals.
- B. Submit CMMP to the Engineer for review and acceptance within 14 Days after Notice to Proceed. No work, with the exception of site inspections and surveys, shall be performed until the CMMP is accepted. The Contractor shall allow 7 days in the schedule for the Engineer review. No adjustment for time or money will be made if re-submittals of the CMMP are required due to deficiencies. At a minimum, the CMMP shall include:
 - 1. Schedule of activities
 - 2. Spill Contingency Plan, including procedures for documenting and reporting to the Engineer encounters with and releases of hazardous or contaminated material
 - 3. Spill Prevention Plan
 - 4. Methods and procedures of excavation and equipment to be used
 - 5. Shoring or side-wall slopes proposed
 - 6. Staging and storage (stockpiling) methods, procedures, and locations for segregating contaminated and potentially contaminated soils (based on soil categories), providing for runoff, runoff, leaching, and fugitive dust controls
 - 7. Staging and storage (stockpiling) methods, procedures, and locations for segregating treated wood, providing for runoff, runoff, leaching, and fugitive dust controls

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8. Methods, procedures, and proposed documentation for the transportation, disposal, and offsite treatment, if required, of contaminated materials, including the identification of disposal and/or treatment facilities, and certified, licensed transporters
 9. Equipment decontamination procedures
 10. Sampling and analysis plan that shall cover Contractor sampling responsibilities for discharge permit compliance requirements (see Section 31 23 19 Site Water Control and Treatment).
 11. Water Management Plan that describes collection, storage, and disposal of water collected during the work (see Section 31 23 19 Site Water Control and Treatment).
- C. Submit qualifications of the task supervisor and the person conducting environmental water sampling for discharge to sanitary sewer.
 - D. Submit surveys, cross-sections, and plans indicating areas of remedial excavation.
 - E. Confirmation soil sample collection and chemical analyses will be performed by the Engineer. The Engineer will notify the Contractor within 7 business days to proceed with backfilling of the DP04 Excavation and DP06/SVP-2SO Excavation. For the MW24S Excavation, the Contractor will be notified within 7 business days. Additional excavation in the three areas may be required based on chemical testing.
 - F. Contaminated soil, overburden (above contaminated soil), and cut stockpile soil sample collection and chemical analyses will be performed by the Engineer. The Engineer will notify the Contractor within 7 business days to proceed with re-use of material for backfilling or offsite disposal.
 - G. The Engineer will complete the soil waste characterization and the offsite disposal facilities waste disposal profile and provided to the Contractor within 45 business days.
 - H. Submit records, reports, or certificates of contaminated soil disposal/treatment within 5 business days of disposal/treatment.
 - I. Submit records, reports, and/or certificates of contaminated water disposal/treatment within 5 business days of disposal/treatment.

1.06 QUALITY ASSURANCE

A. Qualifications

1. Work shall be directed by a supervisor trained and experienced in hazardous and contaminated material handling. The supervisor shall have completed OSHA training requirements for working with hazardous substances, including the 8-hour supervisory course. The supervisor shall have a minimum of 3 years of experience in managing hazardous materials projects. Submit a copy of the supervisor's qualifications and experience for Engineer review.

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2. Site Safety and Health Officer qualifications shall include the following, in addition to the requirements identified in Section 00 73 19 Health and Safety Provisions:
 - a. Completion of required OSHA training in accordance with 29 CFR 1910.120, including completion of 40-hour supervisory training, 8-hour annual updates, and completion of 3 days onsite training by a fully qualified instructor
 - b. Minimum of 3-years' experience in hazardous substance/waste site remediation or related work
 - c. Current certification in first aid and cardiopulmonary resuscitation (CPR)
 - d. Working knowledge of federal, state, and local occupational health and safety regulations
 - e. Working knowledge of air monitoring techniques and the development of health and safety programs for personnel working in potentially hazardous or toxic environments
 3. Personnel working with hazardous material and substances shall have received training and have experience for the work to be performed.
 4. Contractor and subcontractor personnel assigned for the purpose of performing or supervising hazardous materials work in accordance with the provisions of the Health and Safety Plan (HASP), above Level D protection, shall have received appropriate safety training in compliance with 29 CFR 1910.120, 29 CFR 1910.134, and WAC 296-62. Minimum of 40 hours health and safety training, 24 hours of "on the job" training, 8 hours annual refresher training, and annual medical monitoring by an occupational physician is required. Minimum of 8 hours additional specialized training in managing hazardous waste operations is required for supervisory personnel. Workers without current certification will not be allowed to enter the Exclusion Zone.
 5. Comply with the medical surveillance program requirements of OSHA standards 29 CFR 1910.120, 29 CFR 190.134, and WAC 296-62-300. Provide documentation that personnel have received medical examinations and are certified for respirator use (if necessary) within the last 12 months, and are cleared to work on hazardous sites before entering an Exclusion Zone or contacting hazardous materials.
- B. Responsibilities
1. Site Safety and Health Officer:
 - a. See also Section 00 73 19, Health and Safety Provisions
 - b. Required to be on site and present during hazardous and/or contaminated substance Work to be completed by Contractor

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- c. Responsible for the development, implementation, enforcement, and monitoring of the work in accordance with the HASP
- d. Responsible for conducting the pre-construction training, pre-entry briefings, and other periodic training of onsite personnel with regard to contents of the HASP and other safety requirements to be observed during construction
- e. Responsible for performing air monitoring as required by the HASP.

PART 2 - PRODUCTS

2.01 SPILL RESPONSE MATERIALS

- A. The Contractor shall provide spill response materials including, but not limited to: containers, adsorbents, shovels, and personnel protective equipment. Spill response materials shall be available at all times during which hazardous material is being handled or transported. Spill response materials shall be compatible with the type of materials and contaminants being handled.

2.02 DECONTAMINATION MATERIAL

- A. Contractor shall provide facilities for equipment, tool, and personnel decontamination for the duration of the work.

2.03 STAGING MATERIAL

- A. Geomembranes to be used as liner or material cover shall be chemical resistant, reinforced, and leak proof, with minimum thickness of 10 mils.

PART 3 - EXECUTION

3.01 CONTAMINATION SCREENING

- A. Visual observations of discoloration or sheen and presence of chemical smell shall be reported to the Engineer as indicators of potential contamination.

3.02 CONTAMINATED SOIL REMOVAL

- A. Conduct all work according to approved CMMP.
- B. Strip and stockpile overburden and cut soil separately from contaminated material, in areas of contamination considered to be below action levels based on contamination screening or testing. Contractor shall be responsible for protecting this material from becoming contaminated. This may include covering the soil with plastic sheeting. Such soil that becomes contaminated as a result of Contractor activities shall be disposed of at Contractor's expense.
- C. In areas where contamination is suspected, Contractor shall place soil in staging areas for disposal characterization by the Engineer.

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- D. Excavation shall be performed in a manner to limit the potential for contaminated material to mix with uncontaminated material. The Contractor shall maintain an excavation of sufficient size to allow workers ample room to complete the work. Additional screening, excavation, and sampling may be required based on analytical results. The Contractor shall assist the Engineer with soil sample collection (e.g., sample collection from the excavator bucket). If required, additional soil sample collection and chemical analyses will be performed by the Engineer.
- E. Install sheeting, bracing, or shoring in the absence of adequate side slopes if there is a need for workers to enter the excavated area. Provide shoring in accordance with WAC 296-62 and the Contract Documents.
- F. Construction debris (man-made materials such as metal, plastic, glass, concrete, asphalt, bricks, and wood products larger than 2 inches) encountered below grade during excavation (overburden or cut material) shall be separated from soil by use of a physical screen or rough brushing, and stored in a separate stockpile. The stockpiled and separated overburden and cut material may be reused as backfill based on chemical testing results and geotechnical suitability, as determined by the Engineer.
- G. Provide approved containers, vehicles, equipment, labor, signs, labels, placards and manifests, and associated disposal notices and notifications necessary for accomplishment of the work.
- H. Provide documentation of proper disposal or treatment to the Engineer.

3.03 CONTAMINATED MATERIAL STOCKPILING

- A. Place potentially contaminated material in stockpiles immediately after excavation while awaiting test results or offsite disposal. Staging units shall be in good condition and constructed of materials compatible with the soil or liquid to be staged. If multiple staging units are required, each unit shall be clearly labeled with an identification number, and a written log shall be kept by the Contractor to track the source of contaminated material in each staging unit.
- B. The Contractor shall maintain stockpiles to prevent comingling of different types of stockpiles or separately tested stockpiles. The Contractor shall also prevent mixing of excavated materials with and imported materials as a result of stockpiling operations.
- C. Isolate confirmed and/or suspected contaminated material from the environment. The maximum stockpile size shall be 100 cubic yards. Stockpiles shall be constructed to include:
 - 1. Bottom liner. The Contractor shall place all stockpiles on an impervious surface, such as concrete, asphalt, or geomembrane. The ground surface on which the geomembrane is to be placed shall be free of rocks greater than 0.5 inches in diameter and other objects that could damage the membrane.

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2. Geomembrane cover to prevent precipitation from entering the stockpile. The cover material shall be anchored to prevent it from being removed by wind.
 3. Berms surrounding the stockpile, a minimum of 12 inches in height. Vehicle access points shall also be bermed.
 4. Liquid collected from stockpiles shall be temporarily stored in 55-gallon barrels or portable tanks. Liquid storage containers shall be watertight. Liquid shall be managed in accordance with Section 31 23 19 Site Water Control and Treatment.
- D. The Contractor shall recover and re-anchor the entire stockpile at the end of each work day.
 - E. The Contractor shall periodically inspect all stockpiles and perform maintenance on the impervious surfaces and cover lines as necessary. The written inspection and repair log should be included in the documentation requirements described in a later section.
 - F. The Contractor shall prepare one or more working stockpiles, and provide at least one (1) working day's notice that soil stockpile(s) are ready for testing. The Engineer will collect sample(s), and characterize each stockpile for reuse or disposal.
 - H. The Engineer will communicate stockpile status through signage as follows:
(a) Class A soil designated with green sign representing soil that can be used under the soil cover, (b) Class B soil designated with a red sign representing soil that cannot be reused and must be disposed offsite, and (c) unclassified soil designated with a white sign that soil has not been tested yet.
 - I. The Contractor shall anticipate delays prior to the reuse of soil while waiting for soil sampling, testing, and review of analytical results. Soil designated for disposal may eventually be loaded directly for disposal, if approved by the Engineer and opportunities for dump truck sampling are provided.
 - J. The Contractor shall maintain all non-stockpile surfaces throughout the area free of contaminated soils to the maximum extent practicable. The Contractor shall restrict the spread of contaminated soil over the general project area.
 - K. The Contractor shall restore all loading area(s), haul road(s), stockpile area(s), wheel washing area(s), and other improvements constructed by the Contractor.
- #### 3.04 DUST CONTROL
- A. The Contractor shall prevent dust generation at all times to the maximum extent practicable.
 - B. The Contractor shall minimize the potential for runoff by limiting water use to the minimum quantity necessary for adequate dust suppression.

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- C. Obtain written approval from the Engineer prior to the use of water on any soil stockpiles. Dust control water shall be supplied by the Contractor. The water quality shall be suitable for its use.

3.05 SAMPLING AND ANALYSIS

A. Contractor Requirements

1. Provide the Engineer with 24 hours advance notice prior to excavation and stockpiling activities and provide the Engineer with access to perform verification sampling.
2. Sump water and dewatering shall be sampled and analyzed by the Contractor in accordance with disposal facility requirements, the CMMP, and Section 31 23 19 Site Water Control and Treatment. Notify the Engineer prior to water sampling and allow observation.
3. The Contractor shall be aware and anticipate that up to 7 business days may be required between the collection of soil samples and completion of chemical laboratory analyses.

B. Engineer Requirements

1. The Engineer will inspect removal of existing contaminated material from each location. After suspected contaminated material is removed, confirmation samples from the excavation will be collected and analyzed by the Engineer. Based on test results, additional excavation may be required to remove material contaminated above action levels, as directed by the Engineer. Locations of samples shall be marked in the field and documented on the surveys and the as-built Drawings.
2. Perform the required stockpile (contaminated, overburden, and cut) soil sampling and chemical analyses for determining onsite reuse or offsite disposal.

3.06 SPILLS

- A. In the event of a Contractor spill or release of a hazardous material, as defined in this section, notify the Engineer immediately. If the spill exceeds the regulatory reporting threshold, the Contractor shall follow the pre-established procedures as described in the CMMP for immediate reporting and containment. Immediate containment actions shall be taken to minimize the effect of spills or leaks. Cleanup shall be in accordance with applicable federal, state, and local regulations. As directed by the Engineer, additional sampling and testing shall be performed by Contractor to verify spills have been cleaned up. Spill cleanup and testing shall be done at no additional cost to the Port.

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3.07 CREOSOTE TIES AND PILES

- A. Creosote-treated ties and piles potentially encountered below grade during excavation shall be managed onsite according to the CMMP and disposed of at a facility permitted for that waste, identified in the CMMP.

3.08 OFFSITE DISPOSAL OF HAZARDOUS MATERIAL

- A. Load contaminated material for offsite disposal.
- B. Provide transportation in accordance with WSDOT Hazardous Material Regulations and federal, state, and local requirements, including obtaining necessary permits, licenses, and approvals. Evidence that a state-licensed transporter is being used shall be included in the submittals.
- C. Treatment, Disposal, and Recycling
 - 1. The treatment, disposal, and recycling of contaminated materials shall be in accordance with all applicable laws and regulations, and conditions specified herein. This work shall include all necessary personnel, labor, transportation, packaging, equipment, and reports.
 - 2. Contaminated soil can be treated or landfilled, with preference given to treatment as described in WAC 173-340 hierarchy.
 - 3. If soil is to be treated, transport contaminated soil to an approved licensed facility in accordance with applicable requirements:
 - a. The treatment facility must be approved by the Engineer. The Contractor shall make arrangements for transportation and treatment of the contaminated soil with the facility operator.
 - 4. If landfilled, dispose of contaminated soil in a licensed landfill in accordance with applicable requirements:
 - a. The Subtitle D landfill must be approved by the Engineer. The Contractor shall make arrangements for transportation of the contaminated soil with the facility operator.
 - 5. If required, dispose of hazardous material classified as Dangerous Waste, as outlined in WAC 173-303, in a Subtitle C Landfill approved by the Engineer.

3.09 RECORDS

- A. Maintain records of all waste determinations, including appropriate results of analyses performed, substances and sample location, the time of collection, and other pertinent data as required by 40 CFR 280, Section 74 and 40 CFR 262 Subpart D, and other applicable regulations. Transportation, treatment, and disposal methods and dates, quantities of waste, and names and addresses of each transporter and the disposal or reclamation facility shall also be recorded and available for inspection, as well as copies of the following documents:
 - 1. Manifests

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2. Waste analyses or waste profile sheets
 3. Certifications of final treatment/disposal signed by the responsible disposal facility official
 4. Land disposal notification records required under 40 CFR 268 for hazardous wastes
 5. Records shall be provided in accordance with applicable federal, state, and local regulations. Following Contract closeout, the records shall become the property of the Port.
- B. Manifesting shall conform to WSDOT and applicable federal, state, and local regulations. For disposal of Dangerous Waste, the “Generator’s Certification” portion of the Uniform Hazardous Waste Manifest shall be signed only by the Port’s Environmental Compliance Manager or by an individual delegated with such authority by the Port.
- 3.10 DOCUMENTATION OF TREATMENT OR DISPOSAL:
- A. Furnish the original return copy of the hazardous waste manifest, signed by the owner or operator of a facility legally permitted to treat or dispose of those materials furnished to the Engineer not later than 5 working days following the delivery of those materials to the facility.
 - B. Furnish a statement of agreement from the proposed treatment, storage or disposal facility and certified transporters to accept hazardous or special wastes in the CMMP.
 - C. If the Contractor selects a different facility from that identified in the CMMP, documentation shall be provided to the Engineer for approval to certify that the facility is authorized and meets the standards specified in 40 CFR 264 and applicable state and local regulations.

END OF SECTION