Cedar Hills Regional Landfill

Area 9 Development Project

Underground Storage Tank Removal Work Plan

Contract No. KC000021
Deliverable 300.5

King County
Department of
Natural Resources and Parks
Solid Waste Division

Waste **Prevention** | *Resource* **Recovery** | *Waste* **Disposal**

www.kingcounty.gov/solidwaste

March 2023

Cedar Hills Regional Landfill
Area 9 Development Project

Underground Storage Tank Removal Work Plan

March 2023

Prepared by:

O'Neill Service Group

O'Neill Service Group, LLC
17619 NE 67th Ct, Suite 100
Redmond, WA 98052

Prepared for:

BHC CONSULTANTS

BHC
1601 Fifth Avenue Suite 500
Seattle, Washington 98101

Underground Storage Tank Removal Work Plan

Revision History

Revision Number	Revision Date	Description of Changes
00	10/15/21	Initial Submittal
01	11/12/21	Revisions per BHC comments
02	01/27/23	Revisions per KCSWD comments
03	03/3/2023	Revisions per KCSWD comments

Underground Storage Tank Removal Work Plan

Table of Contents

1.0 INTRODUCTION 1
2.0 PROJECT DESCRIPTION 2
2.1 Site Underground Storage Tanks 2
3.0 PRE-TASK PLANNING 2
4.0 UST REMOVAL 3
4.1 UST Cleaning 4
4.2 UST Inerting 4
4.3 UST Removal 5
4.4 UST Disposal 5
5.0 SOIL SAMPLING AND SITE ASSESSMENT 5
6.0 SITE RESTORATION 7
7.0 TRANSPORT AND DISPOSAL INFORMATION 7
8.0 REPORTING AND RECORD KEEPING 7
9.0 REFERENCES 9

Figures:
Figure 1 – Site Map
Figure 2 - Fueling Dispenser, Bldg 46
Figure 3 - Maintenance Facility, Bldg 7

Appendix A – Ecology UST Forms

Appendix B – MTCA Table 830-1

1.0 INTRODUCTION

This Underground Storage Tank Removal Work Plan (USTP) has been prepared in support of the Cedar Hills Regional Landfill Area 9 Project (Project) in King County, Washington.

The USTP described herein was prepared in accordance with King County Health Department, King County Fire District 10, and Washington Department of Ecology (Ecology) guidelines and regulations. The USTP will be implemented in conjunction with the Project Spill Prevention, Control, and Countermeasure Plan (SPCC), Construction Stormwater Pollution Prevention Plan (CSWPP), and in conjunction with State and local contamination regulations and guidance documents. This plan has been developed to address removal of the nine known underground storage tanks (USTs) installed at the Project as reported by King County Solid Waste Division (Section 2.1). The plan will be revised to incorporate potential field changes throughout the course of the project, if necessary.

The intent of this USTP is to outline the general field and administrative activities required to complete the removal of USTs which are present within the Project boundary.

This plan contains the following elements:

- Excavation Procedures
- Stormwater Management
- Tank Cleaning Procedures
- Tank Disposal Procedures
- Removal of Substances within the UST(s)
- Identification of Waste
- Transporter Methods and Information
- Receiving Facilities Information
- Sampling and Analysis
- Data Reporting

2.0 PROJECT DESCRIPTION

King County Solid Waste Division (KCSWD) evaluated waste disposal options in the 2019 Solid Waste Comprehensive Plan and recommended further development of the Cedar Hills Regional Landfill (CHRLF). KCSWD has published the final sitewide EIS and selected an action alternative that includes development of Area 9 to ensure that there is no gap in the County's ability to dispose of waste and meet contractual obligations, KCSWD has authorized the evaluation of developing Area 9 and the work associated with relocating and removal of existing facilities. The development of Area 9 (the Site) within the southeast corner of the landfill footprint is currently being considered with construction planned in two stages, with the first stage beginning in the construction season of 2023 and the second stage completed by December 2026. The schedule may be adjusted during the planning phase in response to alternative approaches to meeting project milestones.

2.1 Site Underground Storage Tanks

Four USTs are installed at the fuel dispenser location at the southwest corner of the Maintenance Facility site (Figure 2). These are comprised of two 20,000-gallon diesel fuel tanks, a 4,000-gallon gasohol tank, and a 4,000-gallon gasoline tank. The fuel is dispensed at two pump islands under a canopy to the southwest of the tanks. All four USTs were installed in 1999.

Five USTs are located on the northwest side of Building 7/Stores and Vehicle Maintenance (Figure 3). These are comprised of a 10,000-gallon waste oil UST, a 4,000-gallon heating oil UST, a 2,500-gallon motor oil UST, and a 2,500-gallon hydraulic oil UST located on the northwest side of Building 7B. A 600-gallon diesel fuel UST for emergency generator supply is located on the northwest side of Building 7D. All five USTs were installed in 1999.

3.0 PRE-TASK PLANNING

Prior to UST removal, the Construction Manager (CM) will be notified at the beginning of the process. The tank locations and sizes will be verified in the field by the UST Site Assessor. If supplemental investigations regarding the location and size of UST(s) on the project are deemed necessary, either for confirmation of a known UST, or due to the discovery or suspicion of an unknown UST, the UST Site Assessor shall be notified and on site to observe the investigations. These investigations may include remote methodologies (i.e. geophysical methods), or direct investigation (i.e. potholing with excavator or vac truck).

All nine known tanks at the Site are registered with Ecology and are regulated tanks. Regulated tanks require an Ecology 30-Day Notice (Appendix A). Depending on demolition or construction schedule, or if

unanticipated tanks are discovered on site, the Site Assessor may request a waiver from Ecology that allows UST removal prior to the end of the thirty-day waiting period. This waiver is generally granted within a day or two of being requested. Regulated and unregulated USTs require a local Fire Marshall Permit prior to UST removal. Fire Marshall permits will be requested from the King County Fire District 10.

All nine known USTs at the site have documented contents for the purposes of product and tank disposal and site assessment sampling. If an unknown UST is discovered, the tank contents (if present) will be sampled by the UST Site Assessor for analysis in general accordance with MTCA Table 830-1 WAC 173-340-900 (Appendix B). The results of the content analysis will be used to verify the appropriate disposal facility, personal protective equipment, and UST cleaning strategy.

4.0 UST REMOVAL

A licensed and certified UST Site Assessor will document the UST removal process in accordance with 40 CFR Part 280, WAC 173-360A, RCW 90.76 and other relevant Contract Documents and local, state and federal permits and requirements.

Excavations for UST removal will be performed by the UST Decommissioner, or the general contractor under the supervision of the UST Decommissioner. Areas around excavations will comply with appropriate safety features, including, but not limited to, flagging, barricades or metal fencing to protect employees and the public. The general contractor shall schedule and provide utility locates before subsurface work begins. Spill kits compatible with the type of materials and contaminants will be on-hand in case of spills from piping or USTs. Chemically resistant plastic sheeting with a minimum thickness of 6 mils will be available onsite for staging and stockpiling as needed. Spill controls shall be detailed in the SPCC and CSWPP prepared by the General Contractor and reviewed by KCSWD prior to beginning any excavation related work.

Prior to cleaning (Section 4.1) and inerting (Section 4.2), the top of the UST may be exposed to allow worker access to the UST. No other excavation, cutting, or hot work may be performed at the UST until it has been certified inert by the UST Decommissioner or similarly qualified person and permit approved by local Fire Department inspector, or as approved by the UST Decommissioner.

Prior to tank excavations, a temporary soil stockpile area will be established. Contaminated soils will be stockpiled on an impermeable material (e.g., asphalt or plastic sheeting) to prevent cross contamination and then cover the material with impermeable sheeting to prevent runoff in the event of a rain event.

Soils excavated from around the top and perimeter of the tank will be segregated and stockpiled separately to limit the amount of contaminated soil and minimize the potential for comingling with uncontaminated soil. Suspected contaminated soil will be segregated into a separate stockpile from the uncontaminated soil and stored on chemically resistant plastic sheeting. The CM will be notified immediately if contaminated soil is encountered.

It is not anticipated that workers will need to enter the excavation, however if required, appropriate sloping will be established, or shoring, bracing, or sheeting will be installed to protect worker safety in and near the excavations in accordance with the General Contractor's Excavation and Shoring Plan, and OSHA and WISHA standards.

Stormwater will be prevented from entering the excavation. Best Management Practices (BMPs) for managing stormwater will be discussed in detail in the General Contractor's CWPP. The plan shall address in detail how water will be prevented from entering UST work sites. The contractor shall establish berms, wattles, scuppers, or other suitable BMPs to route water non-impacted site water around the UST excavations. Any surface or ground water within the UST excavation shall be considered process water and discharged to the on-site leachate system or approved wastewater discharge facility, as needed.

4.1 UST Cleaning

Tank contents from the UST and associated piping will be removed with a vacuum truck, equipped with explosion-proof or air-operated pumps or similar equipment to prevent electrostatic ignition hazards, for transport to the appropriate disposal facility. Product in piping will be drained back into the tank and product will be removed from the tank with a vacuum truck. The UST interior will be cleaned using a high pressure, low volume water spray or until loose scale and sludge is removed, and sheen is no longer visible in the effluent. If during cleaning confined space entry is needed, the entry shall be in accordance with the General Contractor's Confined Space Safety Plan, and OSHA and WISHA standards. Wastewater from UST cleaning will be collected by the vacuum truck for appropriate disposal at a permitted wastewater disposal facility.

4.2 UST Inerting

The UST will be inerted in accordance with the International Fire Code and API RP 1604. The UST will be inerted by either injecting carbon dioxide into the tank, or by using dry ice. If dry ice is used to inert the tanks, a minimum of 3 pounds per 100 gallons of tank volume will be required. A certified UST Decommissioner or similarly qualified person will be onsite to apply the carbon dioxide or dry ice and

continuously monitor the tank atmosphere for combustible vapors (lower explosive limit) and oxygen. The UST Decommissioner or similarly qualified person will determine when the tank has been properly inerted and is suitable for removal from the excavation.

4.3 UST Removal

After the UST has been certified inert and otherwise approved for removal, soils surrounding the UST may be excavated sufficient to expose and remove the UST from the ground. Associated UST equipment and piping connections, except those connections necessary to inert the tank shall be capped to prevent spillage. The UST, piping, and ancillary equipment will be visually observed for signs of corrosion and leakage. Ancillary piping and equipment associated with the UST will be removed during UST excavation. The UST will be lifted from the excavation by an excavator, or equivalent. While above the excavation, dirt and scale will be scraped from the exterior of the UST and ancillary piping and equipment. The UST will then either be placed on plastic, on the ground, or loaded directly onto a flatbed truck. The UST will be secured with wood blocks or equivalent to prevent movement. If groundwater is encountered in the UST excavation, a water sample will be collected and analyzed in general accordance with MTCA Table 830-1 (Appendix B). The excavation will be secured following UST removal while awaiting UST site assessment sampling analytical results.

4.4 UST Disposal

In general, USTs larger than 500 gallons will be cut or crushed onsite. USTs under 500 gallons will be hauled offsite and deconstructed at the UST Decommissioner's facility prior to disposal at a metal recycler. Ancillary piping, and associated equipment will be removed for disposal or recycling.

5.0 SOIL SAMPLING AND SITE ASSESSMENT

UST Site Assessment soil samples will be collected by the UST Site Assessor after removal of the USTs. The UST Site Assessor shall prepare a brief field sampling plan prior to UST removal in accordance with the Ecology Guidance for Site Checks and Site Assessments. The number and location of soil samples will be collected in accordance with the Ecology Guidance for Site Checks and Site Assessments for Underground Storage Tanks. A minimum of one base sample per tank and four excavation sidewall samples will be collected. A minimum number of samples will be collected from stockpiled soils as outlined by Table 5-3 in the Ecology Guidance for Site Checks and Site Assessments. Soil samples will be analyzed in accordance with MTCA Table 830-1 (Appendix B). Since onsite USTs contain different materials, the on-site certified UST Assessor will ensure the appropriate analytes for each specific UST removal are analyzed. The UST

Assessor will follow the guidance in the Department of Ecology Table referenced above. The excavation will be secured while awaiting test results.

In the event that a petroleum release associated with one or more USTs is identified, the UST Site Assessor will notify the CM team. Contaminated soils will be excavated and removed for disposal. Contaminated soils shall be identified by field screening using visual observations and a photoionization device (PID). Once field screening results no longer indicate that potential contamination remains in the excavation, contaminants of concern and analyzed in accordance with MTCA Table 830-1 (Appendix B) and Ecology Guidance for Remediation of Petroleum Contaminated Sites. A minimum of one base of excavation sample and four excavation sidewall samples will be collected. However, the number and location of samples may be increased to provide representative documentation of soil remediation as determined by the presence or absence of contaminants of concern remaining in the soil.

Sample locations will be marked and surveyed in the field and documented in the closure report documentation. Soil samples will be transported to an Ecology-accredited analytical testing laboratory for analysis. The excavation will be secured while awaiting test results.

Contaminated soil removal will be considered complete after the bottom and sidewalls of the tank excavation are determined to have soil contamination levels at or below cleanup standards, negotiated by KCSWD with Ecology, and/or by the direction of the CM. Confirmation results must be received and reviewed by the CM prior to backfilling or additional construction excavation. If sample results indicate that contamination above cleanup levels remains, additional excavation and sampling may occur until contamination above cleanup levels has been removed and the limits of the excavation are below cleanup levels and/or as directed by the CM.

Following excavation, stockpiled soils will be sampled for characterization in support of reuse or disposal. Sampling of stockpiled soils will be in accordance with receiving facility requirements and known contaminants of concern at each UST location.

The CM will be fully briefed during each phase of excavation, sampling, potential re-excavation, and backfilling. The UST Site Assessor will prepare the required Site Assessment documentation in support of the UST closure and removal. The UST Site Assessor will also prepare the UST Closure Report (Section 8.0).

6.0 SITE RESTORATION

If backfilling is required to meet final grades, the tank area and any UST-related-excavations will be backfilled after the confirmation soil test results have been received and reviewed by the CM. Backfill shall be placed and compacted in accordance with the specifications. Disturbed areas that are not planned to be worked during the wet season shall be stabilized as part of the contractor's Temporary Erosion and Sedimentation Control Plan.

7.0 TRANSPORT AND DISPOSAL INFORMATION

A licensed and certified UST Decommissioning contractor will dispose of the USTs, wastewater, and ancillary piping and equipment. Proper disposal of the tank contents and rinsate water will be determined based on the analytical report provided by tank content sampling. Wastewater generated during the cleaning process will be treated and disposed of via appropriate waste treatment and discharge permits held and maintained by the UST decommissioning subcontractor. If the USTs contain pure petroleum products, then the petroleum would be collected and disposed of at a petroleum recycler. The USTs, ancillary piping, and associated equipment will be recycled at Seattle Iron and Metal or equivalent facility after cleaning and being rendered unusable. Disposal of wastes will be in accordance with local, state, and federal regulations.

Stockpiled soils will be reused or disposed of on-site in accordance with the KCSWD landfill permit upon receiving a waste clearance from KCSWD. If soils or other wastes are determined to meet Dangerous Waste criteria, then it will need to be disposed of at a Subtitle C landfill or other facility property permitted to accept Dangerous Waste.

8.0 REPORTING AND RECORD KEEPING

The UST Decommissioner and UST Site Assessor will provide information documenting the underground storage tank removal in preparation of the UST Closure Report for review by the CM prior to submittal to KCSWD. The documentation will be transmitted within 14 days of the task conclusion. The package of information will include the following:

- 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 the Contract Specifications
- UST Site Assessment Checklist (Appendix A)
- Fire Marshall Permit (if required)

- UST Deconstruction Certification
- UST Triple Rinse Certification
- A copy of the Ecology 30-Day Notice (if required)
- A copy of the Permanent Closure Notice to Ecology (Appendix A)
- Analytical Reports for soil and tank-content samples including chains of custody, test results, laboratory electronic data deliverables (EDDs), and other relevant information as collected by the UST Site Assessor
- Waste Profile information sheets
- Certifications of final disposal signed by the responsible disposal facility
- Information about who transported the waste, waste manifests, disposal tickets, receipts and other pertinent information
- Scaled drawings showing tank locations, limits of excavation, limits of contamination, sample locations, and underground utilities within 50 feet

9.0 REFERENCES

American Petroleum Institute (1996). API RP 1604: Closure of Underground Petroleum Storage Tanks.

Washington State Department of Ecology (2021). Site Assessment Guidance for Underground Storage Tank Systems, Publication 21-09-050.

Washington State Department of Ecology (2016). Guidance for Remediation of Petroleum Contaminated Sites Publication 10-09-057.

Washington Administrative Code 173-360A (2018). Underground Storage Tank Regulation.



O'Neill Service Group

CEDAR HILLS REGIONAL LANDFILL
MAPLE VALLEY, WASHINGTON

SITE MAP

Drawn By:	J. Stewart
Reviewed By:	V. Atkins
Approved By:	M. Foster
Date:	October 2021
Project No.:	3023

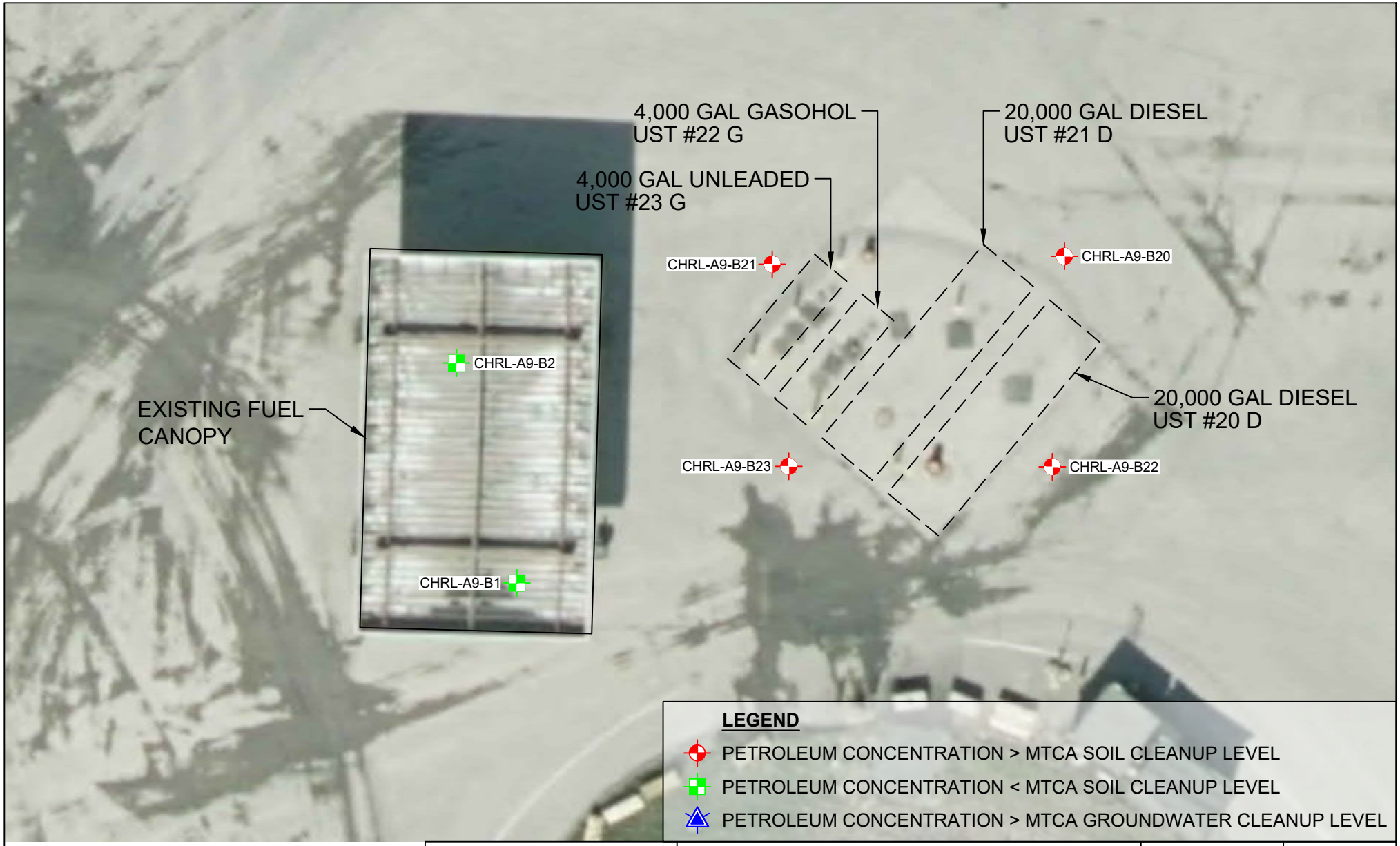
FIGURE 1

10/8/2021 8:44 AM

Z:\Shared\CADD\3023_King County CHRLF Area 9\3023_Work Plan.dwg

Z:\Shared\CADD\3023_King County CHRLF Area 9\3023_Work Plan.dwg

10/8/2021 8:44 AM



N

10 0 10 20

SCALE IN FEET

O'Neill Service Group

CEDAR HILLS REGIONAL LANDFILL
MAPLE VALLEY, WASHINGTON

WORK PLAN
FUELING DISPENSER, BLDG 46
CHRL AREA 9

Drawn By:	J. Stewart
Reviewed By:	V. Atkins
Approved By:	M. Foster
Date:	October 2021
Project No.:	3023

FIGURE

2

10/8/2021 8:44 AM

2,500 GAL MOTOR OIL, UST #25 M.O.

2,500 GAL HYDRAULIC OIL, UST #27 HYD

10,000 GAL WASTE OIL, UST #24 W.O.

CHRL-A9-B16

CHRL-A9-B4

CHRL-A9-B15

CHRL-A9-B3

CHRL-A9-B17

600 GAL DIESEL OIL, UST #28 E.G.

CHRL-A9-B5

4,000 GAL HEATING OIL, UST #26 H.O.

BUILDING 7/7B

APPROXIMATE 2000 UST REMOVAL AREA

BUILDING 7C/7D

BUILDING 7E/7F

CHRL-A9-B13

CHRL-A9-B14

CHRL-A9-B12

CHRL-A9-B11

LEGEND

- PETROLEUM CONCENTRATION > MTCA SOIL CLEANUP LEVEL
- PETROLEUM CONCENTRATION < MTCA SOIL CLEANUP LEVEL
- PETROLEUM CONCENTRATION > MTCA GROUNDWATER CLEANUP LEVEL

N

15 0 15 30

SCALE IN FEET

O'Neill Service Group

CEDAR HILLS REGIONAL LANDFILL
MAPLE VALLEY, WASHINGTON

WORK PLAN
MAINTENANCE FACILITY, BLDG 7
CHRL AREA 9

Drawn By:	J. Stewart
Reviewed By:	V. Atkins
Approved By:	M. Foster
Date:	October 2021
Project No.:	3023

FIGURE

3

Z:\Shared\CADD\3023_King County CHRLF Area 9\3023_Work Plan.dwg

Appendix A - Ecology UST Forms

DEPARTMENT OF ECOLOGY
State of Washington

30-DAY NOTICE
FOR UNDERGROUND STORAGE TANK SYSTEMS

UST ID #: _____

County: _____

This form provides Ecology 30-days' advanced notice for projects, as required by Chapter 173-360A WAC. Instructions are on the back page.

Please ✓ the appropriate box: ☐ Intent to Install ☐ Intent to Close ☐ Change-in-Service

I. SITE INFORMATION	II. OWNER/OPERATOR INFORMATION
Tag or UBI # (if applicable):	Owner/Operator Name:
UST ID # (if applicable):	Business Name:
Site Name:	Mailing Address:
Site Address:	City: State: Zip:
City:	Phone:
Phone:	Email:

III. CERTIFIED SERVICE PROVIDER(S)

Check the appropriate boxes. If more than one service provider is required for this project, fill out both sections.

Note: Individuals performing UST services MUST be ICC-certified or have passed another qualifying exam approved by the Department of Ecology.

1) ☐ Installer ☐ Decommissioner ☐ Site Assessor

Company Name:	Certification Type:
Service Provider Name:	Cert. No.: Exp. Date:
Provider Phone:	Provider Email:

2) ☐ Installer ☐ Decommissioner ☐ Site Assessor

Company Name:	Certification Type:
Service Provider Name:	Cert. No.: Exp. Date:
Provider Phone:	Provider Email:

IV. TANK AND/OR PIPING INFORMATION

TANK ID	TANK CAPACITY	SUBSTANCE STORED	PIPING INSTALLATION OR REPLACEMENT ONLY (Y/N)	DATE PROJECT IS EXPECTED TO BEGIN	COMMENTS

30-DAY NOTICE

FOR UNDERGROUND STORAGE TANK SYSTEMS

GENERAL INSTRUCTIONS

Under WAC 173-360A-0300, 173-360A-0810 and 173-360A-0820, owners and/or operators are required to notify the Department of Ecology (Ecology) **at least 30 days prior** to beginning underground storage tank (UST) and/or piping installation, decommissioning, or change-in-service projects by mailing this notice to the address below. A separate form must be used for each project type (e.g. install, removal). Once this form is received by Ecology, it is date-stamped and returned to the owner/operator listed on the form. Installation and decommissioning projects cannot begin within the first 30 days after the date stamped on this form unless the wait-period has been waived by a regional Ecology UST inspector. If a project cannot meet the deadlines described below, an additional 30-Day Notice may be required.

Department of Ecology
Underground Storage Tank Section
PO Box 47655
Olympia, WA 98504-7655

SITE AND OWNER/OPERATOR INFORMATION

Fill in the site/owner information completely. The contact person listed on this form must confirm the exact date an installation or decommissioning project will begin by contacting the regional UST inspector **at least 3 business days** before proceeding.

INSTALLATION/REPLACEMENT OF TANK AND/OR PIPING

Installation projects must begin within 90 days of the date stamped on this notice. Complete the Tank Information section by assigning Tank ID numbers that have not previously been used at the facility. Once processed, this form allows a one-time drop of product for UST system testing purposes only. The fuel drop is not required to occur within the 90-day period. Once your tank(s) store more than one inch of product, leak detection equipment and monitoring must be in place.

To receive additional deliveries and operate the new tanks/piping, you must submit the Business License application, UST Addendum, and the tank/piping Manufacturer's Installation Checklists to the Department of Revenue (DOR) **within 30 days** of completing the installation. This activates the mailing of your Business License with tank endorsement(s) from DOR and the facility compliance tag from Ecology.

If only piping is being installed or replaced piping, the ICC-certified installer must certify the installation by completing the Retrofit/Repair Checklist with the Manufacturer's Installation Checklist and submitting it to the owner/operator. The form packet must be submitted by the owner/operator to Ecology **within 30 days** of completing the piping installation.

PERMANENT CLOSURE OF TANK AND/OR PIPING

Decommissioning projects must be completed within 90 days after the date stamped on this returned notice. Complete the Tank Information section using Tank ID numbers listed on the Business License. Use the Comments box to include additional information, such as the date when product was removed from both the piping and the tank to less than one inch.

Contact your local fire marshal and planning department prior to tank closure to procure any permits required by county or other local jurisdictions. Compliance with the State Environmental Policy Act (SEPA) Rules, Chapter 197-11 WAC may also apply.

A site assessment is required at the time of closure. If contamination is not discovered, a site assessment report must be submitted to the above address **within 30 days**. If contamination is discovered or confirmed, it must be reported to the appropriate Ecology regional office **within 24 hours** and a site characterization report must be submitted to the above address **within 90 days**.

The following are some examples of tanks that are exempt from the UST regulations.

- Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must be used for farm purposes and cannot be for resale.
- Tanks used for storing heating oil that is used solely for the purpose of heating the premises.
- Tanks with a capacity of 110 gallons or less.
- Emergency overflow tanks, catch basins, or sumps.

If you need this document in a format for the visually impaired, call Toxics Cleanup Program at (360) 407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with speech disability, call (877) 833-6341.

DEPARTMENT OF ECOLOGY
State of Washington

UST ID #: _____

County: _____

SITE CHECK/SITE ASSESSMENT CHECKLIST

FOR UNDERGROUND STORAGE TANKS

This checklist certifies that site check or site assessment activities were performed in accordance with Chapter 173-360A WAC. Instructions are found on the last page.

I. UST FACILITY			II. OWNER/OPERATOR INFORMATION		
Facility Compliance Tag #:			Owner/Operator Name:		
UST ID #:			Business Name:		
Site Name:			Address:		
Site Address:			City:	State:	Zip:
City:			Phone:		
Phone:			Email:		

III. CERTIFIED SITE ASSESSOR					
Service Provider Name:			Company Name:		
Cell Phone:	Email:		Address:		
Certification #:		Exp. Date:	City:	State:	Zip:

IV. TANK INFORMATION

TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	DATE SITE CHECK OR ASSESSMENT CONDUCTED

V. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT (check one)

☐ Release investigation following permanent UST system closure (i.e. tank removal or closure-in-place).

☐ Release investigation following a failed tank and/or line tightness test.

☐ Release investigation following discovery of contaminated soil and/or groundwater.

☐ Release investigation directed by Ecology to determine if the UST system is the source of offsite impacts.

☐ UST system is undergoing a "change-in-service", which is changing from storing a regulated substance (e.g. gasoline) to storing a non-regulated substance (e.g. water).

☐ Directed by Ecology for UST system permanently closed or abandoned before 12/22/1988.

☐ Other (describe):

VI. CHECKLIST

The site assessor must check each of the following items and include it in the report. Sections referenced below can be found in the Ecology publication *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*.	YES	NO
1. The location of the UST site is shown on a vicinity map.	☐	☐
2. A brief summary of information obtained during the site inspection is provided (Section 3.2)	☐	☐
3. A summary of UST system data is provided (Section 3.1)	☐	☐
4. The soils characteristics at the UST site are described. (Section 5.2)	☐	☐
5. Is there any apparent groundwater in the tank excavation?	☐	☐
6. A brief description of the surrounding land use is provided. (Section 3.1)	☐	☐
7. The name and address of the laboratory used to perform analyses is provided. The methods used to collect and analyze the samples, including the number and types of samples collected, are also documented in the report. The data from the laboratory is appended to the report.	☐	☐
8. The following items are provided in one or more sketches:		
• Location and ID number for all field samples collected	☐	☐
• If applicable, groundwater samples are distinguished from soil samples	☐	☐
• Location of samples collected from stockpiled excavated soil	☐	☐
• Tank and piping locations and limits of excavation pit	☐	☐
• Adjacent structures and streets	☐	☐
• Approximate locations of any on-site and nearby utilities	☐	☐
9. If sampling procedures are different from those specified in the guidance, has justification for using these alternative sampling procedures been provided? (Section 3.4)	☐	☐
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method, and detection limit for that method. Any sample exceeding MTCA Method A cleanup standards are highlighted or bolded.	☐	☐
11. Any factors that may have compromised the quality of the data or validity of the results are described.	☐	☐
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred. The requirements for reporting confirmed releases can be found in WAC 173-360-372.	☐	☐

VII. REQUIRED SIGNATURES

Signature acknowledges the Site Check or Site Assessment complies with UST regulations WAC 173-360A-0730 through 0750.

Print or Type Name	Signature of Certified Site Assessor	Date

SITE CHECK/SITE ASSESSMENT CHECKLIST
FOR UNDERGROUND STORAGE TANKS

INSTRUCTIONS

This checklist must accompany the results of a Site Check Report, which is performed if a release of petroleum or other regulated substance is suspected. It is also required to accompany a Site Assessment Report, which is required following the permanent closure or "change-in-service" of an underground storage tank system. This form is required to be filled out whether or not contamination is found. This checklist is to be completed by the Site Assessor and submitted **within thirty days of completing** these activities to the following address:

Dept. of Ecology
UST Section
PO Box 47655
Olympia, WA 98504-7655

I./II. UST Facility and Owner/Operator Information: Fill out these sections completely. If you do not know your UST ID number, include the facility compliance tag number.

III. Service Provider Information: It is the responsibility of the ICC-certified Site Assessor to ensure that sampling and documentation procedures are completed in accordance with Ecology's *Guidance for Site Checks and Site Assessment for Underground Storage Tanks*.

IV. Tank Information: Use the same Tank identification numbers listed on the facility's Business License which is based on the most recent UST Addendum on file with Ecology. List the last substance stored in each tank, the tank sizes and the date the site check or site assessment was completed.

V. Required Signature: The Site Assessor signature certifies these procedures were followed.

All confirmed releases must be reported to Ecology by the owner within 24 hours and by service providers within 72 hours of discovery. A Site Characterization Report must be submitted to Ecology within 90 days after confirming a release.

Further questions? *Please contact your regional office below and ask for a tank inspector to assist you.*

Regional Office	Counties Served
Central (509) 575-2490	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima
Eastern (509) 329-3400	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman
HQ (360) 407-7170	Federal facilities in Western Washington
Northwest (425) 649-7000	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom
Southwest (360) 407-6300	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum

or find a complete list of UST inspectors at:
www.ecy.wa.gov/programs/tcp/ust-lust/people.html

Appendix B - MTCA Table 830-1

Table 830-1
Required Testing for Petroleum Releases.

	Gasoline Range Organics (GRO) (1)	Diesel Range Organics (DRO) (2)	Heavy Oils (DRO) (3)	Mineral Oils (4)	Waste Oils and Unknown Oil (5)
Volatile Petroleum Compounds					
Benzene	X (6)	X (7)			X (8)
Toluene	X (6)	X (7)			X (8)
Ethyl benzene	X (6)	X (7)			X (8)
Xylenes	X (6)	X (7)			X (8)
n-Hexane	X (9)				
Fuel Additives and Blending Compounds					
Dibromoethane, 1-2 (EDB); and Dichloroethane, 1-2 (EDC)	X (10)				X (8)
Methyl tertiary-butyl ether (MTBE)	X (11)				X (8)
Total Lead and Other Additives	X (12)				X (8)
Other Petroleum Components					
Carcinogenic PAHs		X (13)	X (13)		X (8)
Naphthalenes	X (14)	X (14)	X (14)		X (14)
Other Compounds					
Polychlorinated Biphenyls (PCBs)			X (15)	X (15)	X (8)
Halogenated Volatile Organic Compounds (VOCs)					X (8)
Other	X (16)	X (16)	X (16)	X (16)	X (16)
Total Petroleum Hydrocarbons Methods					
TPH Analytical Method for Total TPH (Method A Cleanup Levels) (17)	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx	NWTPH-Dx	NWTPH-Gx & NWTPH-Dx
TPH Analytical Methods for TPH fractions (Methods B or C) (17)	VPH	EPH	EPH	EPH	VPH and EPH

[Editor's Note: See next page for the footnotes associated with Table 830-1.]

Use of Table 830-1: An "X" in the box means that the testing requirement applies to ground water and soil if a release is known or suspected to have occurred to that medium, unless otherwise specified in the footnotes. A box with no "X" indicates (except in the last two rows) that, for the type of petroleum product release indicated in the top row, analyses for the hazardous substance(s) named in the far-left column corresponding to the empty box are not typically required as part of the testing for petroleum releases. However, such analyses may be required based on other site-specific information. Note that testing for Total Petroleum Hydrocarbons (TPH) is required for every type of petroleum release, as indicated in the bottom two rows of the table. The testing method for TPH depends on the type of petroleum product released and whether Method A or Method B or C is being used to determine TPH cleanup levels. See WAC 173-340-830 for analytical procedures. **The footnotes to this table are important for understanding the specific analytical requirements for petroleum releases.**

Footnotes:

(1) The following petroleum products are common examples of GRO: automotive and aviation gasolines, mineral spirits, stoddard solvents, and naphtha. To be in this range, 90 percent of the petroleum components need to be quantifiable using the NWTPH-Gx; if NWTPH-HCID results are used for this determination, then 90 percent of the "area under the TPH curve" must be quantifiable using NWTPH-Gx. Products such as jet fuel, diesel No. 1, kerosene, and heating oil may require analysis as both GRO and DRO depending on the range of petroleum components present (range can be measured by NWTPH-HCID). (See footnote 17 on analytical methods.)

(2) The following petroleum products are common examples of DRO: Diesel No. 2, fuel oil No. 2, light oil (including some bunker oils). To be in this range, 90 percent of the petroleum components need to be quantifiable using the NWTPH-Dx quantified against a diesel standard. Products such as jet fuel, diesel No. 1, kerosene, and heating oil may require analysis as both GRO and DRO depending on the range of petroleum components present as measured in NWTPH-HCID.

(3) The following petroleum products are common examples of the heavy oil group: Motor oils, lube oils, hydraulic fluids, etc. Heavier oils may require the addition of an appropriate oil range standard for quantification.

(4) Mineral oil means non-PCB mineral oil, typically used as an insulator and coolant in electrical devices such as transformers and capacitors.

(5) The waste oil category applies to waste oil, oily wastes, and unknown petroleum products and mixtures of petroleum and nonpetroleum substances. Analysis of other chemical components (such as solvents) than those listed may be required based on site-specific information. Mixtures of identifiable petroleum products (such as gasoline and diesel, or diesel and motor oil) may be analyzed based on the presence of the individual products, and need not be treated as waste and unknown oils.

(6) When using Method A, testing soil for benzene is required. Furthermore, testing ground water for BTEX is necessary when a petroleum release to ground water is known or suspected. If the ground water is tested and toluene, ethyl benzene or xylene is in the ground water above its respective Method A cleanup level, the soil must also be tested for that chemical. When using Method B or C, testing the soil for BTEX is required and testing for BTEX in ground water is required when a release to ground water is known or suspected.

(7)(a) For DRO releases from other than home heating oil systems, follow the instructions for GRO releases in Footnote (6).

(b) For DRO releases from typical home heating oil systems (systems of 1,100 gallons or less storing heating oil for residential consumptive use on the premises where stored), testing for BTEX is not usually required for either ground water or soil. Testing of the ground water is also not usually required for these systems; however, if the ground water is tested and benzene is found in the ground water, the soil must be tested for benzene.

(8) Testing is required in a sufficient number of samples to determine whether this chemical is present at concentrations of concern. If the chemical is found to be at levels below the applicable cleanup level, then no further analysis is required.

(9) Testing for n-hexane is required when VPH analysis is performed for Method B or C. In this case, the concentration of n-hexane should be deleted from its respective fraction to avoid double-counting its concentration. n-Hexane's contribution to overall toxicity is then evaluated using its own reference dose.

(10) Volatile fuel additives (such as dibromoethane, 1-2 (EDB) (CAS# 106-93-4) and dichloroethane, 1-2 (EDC) (CAS# 107-06-2)) must be part of a volatile organics analysis (VOA) of GRO contaminated ground water. If any is found in ground water, then the contaminated soil must also be tested for these chemicals.

(11) Methyl tertiary-butyl ether (MTBE) (CAS# 1634-04-4) must be analyzed in GRO contaminated ground water. If any is found in ground water, then the contaminated soil must also be tested for MTBE.

(12)(a) For automotive gasoline where the release occurred prior to 1996 (when "leaded gasoline" was used), testing for lead is required unless it can be demonstrated that lead was not part of the release. If this demonstration cannot be made, testing is required in a sufficient number of samples to determine whether lead is present at concentrations of concern. Other additives and blending compounds of potential environmental significance may need to be considered for testing, including: tertiary-butyl alcohol (TBA); tertiary-amyl methyl ether (TAME); ethyl tertiary-butyl ether (ETBE); ethanol; and methanol. Contact the department for additional testing recommendations regarding these and other additives and blending compounds.

(b) For aviation gasoline, racing fuels and similar products, testing is required for likely fuel additives (especially lead) and likely blending compounds, no matter when the release occurred.

(13) Testing for carcinogenic PAHs is required for DRO and heavy oils, except for the following products for which adequate information exists to indicate their absence: Diesel No. 1 and 2, home heating oil, kerosene, jet fuels, and electrical insulating mineral oils. The carcinogenic PAHs include benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, benzo(k)fluoranthene, benzo(a)anthracene, and benzo(b)fluoranthene.

(14)(a) Except as noted in (b) and (c), testing for the non-carcinogenic PAHs, including the "naphthalenes" (naphthalene, 1-methyl-naphthalene, and 2-methyl-naphthalene) is not required when using Method A cleanup levels, because they are included in the TPH cleanup level.

(b) Testing of soil for naphthalenes is required under Methods B and C when the inhalation exposure pathway is evaluated.

(c) If naphthalenes are found in ground water, then the soil must also be tested for naphthalenes.

(15) Testing for PCBs is required unless it can be demonstrated that: (1) the release originated from an electrical device manufactured for use in the United States after July 1, 1979; (2) oil containing PCBs was never used in the equipment suspected as the source of the release (examples of equipment where PCBs are likely to be found include transformers, electric motors, hydraulic systems, heat transfer systems, electromagnets, compressors, capacitors, switches and miscellaneous other electrical devices); or, (3) the oil released was recently tested and did not contain PCBs.

(16) Testing for other possible chemical contaminants may be required based on site-specific information.

(17) The analytical methods NWTPH-Gx, NWTPH-Dx, NWTPH-HCID, VPH, and EPH are methods published by the Department of Ecology and available on the department's Internet web site: http://www.ecy.wa.gov/programs/tcp/cleanup.html.