Oregon DEQ Contained In Determination Approval Sheet

Site Name:	East Multnomah County Troutdale Sandstone Aquifer Remedy (ECSI 1479)
Location:	2525 NE 201st Ave. Gresham, Oregon
Media:	Sand and soil from drill cuttings in 17 drums from well abandonments as investigation derived waste (IDW).
Approved Disposal:	No longer contained in determination for drummed investigation derived waste for disposal at Chemical Waste Management Arlington Landfill, Oregon.

DEQ Project Manager: Date: January 5, 2024

Kenneth Thiessen

DEQ HW Staff: Michelle Olson Date : 1/5/2025

Michelle Olson

DEQ Env. Partnerships Manager: Audrey O'Brien Date: 1/5/2024

Audrey O'Brien

DEQ Cleanup Program Manager: Paul Seidel Date: 1/5/2024

Paul Seidel

State of Oregon
Department of Environmental Quality Memorandum

January 5, 2024 *sent via email*

To: Cindy Bartlett, Lucas Henry, Geosyntec Consultants

From: Kenneth Thiessen, NWR Cleanup Program

Through: Michelle Olson, HW Inspector, Northwest Region HW Program

Approved: Audrey O'Brien, Manager, Environmental Partnerships

Paul Seidel, Manager, Northwest Region Cleanup Program

Subject: No Longer Contained-In Determination for Investigation Derived Waste, East Multnomah County, Troutdale Sandstone Aquifer Remedy, 2525 NE 201st Ave. Gresham, Oregon (ECSI #1479)

Dear Ms. Bartlett and Mr. Henry

At your request, the DEQ's Northwest Region Environmental Cleanup and Hazardous and Solid Waste Programs have prepared this No Longer Contained-In Determination for soil generated as drill cuttings at the East Multnomah County Troutdale Sandstone Aquifer Remedy site. This material is investigation derived waste (IDW) on an active remediation project. This site is located near 2525 NE 201st Ave. in Gresham, Oregon. DEQ's No Longer Contained-In Determination was funded pursuant to a Cleanup Program cost recovery agreement, and with hazardous waste program funds.

This No Longer Contained-In Determination letter is prepared in response to your July 20, 2023, request to DEQ for assistance with disposal of soil cuttings from well abandonments, specifically:

- A No Longer Contained-In Determination is required for this waste stream as the East Multnomah County, Troutdale Sandstone Aquifer Remedy is focused on used trichloroethylene, (TCE) an F002 waste in accordance with the Resource Conservation and Recovery Act (RCRA) requirements. Reductive dechlorination is occurring at this site which may result in other volatile organic breakdown products being present in groundwater.
- Seventeen 55-gallon drums of IDW were filled with soil, water and well construction materials from the decommissioning of wells EW-8 and EW-15. The wells were decommissioned by over drilling in accordance with Oregon of Water Resources Department rules.
- The two wells decommissioned are sufficiently far from TCE source areas that metals concentrations found in soil IDW from these wells are not expected to be influenced by site contaminant releases or remediation methods.

- A six-aliquot composite sample was collected by Geosyntec personnel to characterize the contents of the 17 drums. The six soil samples were further composited into a single sample by the project analytical laboratory for analysis.
- The number of soil samples collected was based on the volume of soil to be characterized for disposal (about 2.5 cubic yards).
- The composite sample was reported by the lab to contain only 41% solids. Upon inquiry, the sampled IDW was a slurry at the time of sample collection. Subsequently, the water was decanted from the IDW drums and disposed of on site in the groundwater treatment system. All laboratory results are reported as mg/kg, indicating solid samples.
- Geosyntec provided waste stream acceptance documentation from Chemical Waste Management for disposal at their Arlington Landfill.
- Geosyntec provided a waste stream laboratory report from Pace Analytical dated July 6, 2023, presenting results of IDW analysis.
- A Sampling and Analysis Plan was not prepared for this waste stream characterization work.

Background Information

Site discovery activities, which included the East Multnomah County Troutdale Sandstone Aquifer Project, were initiated in 1986. Remediation of chlorinated volatile organic compounds was initiated in 1989 using groundwater pump and treat methods and hydraulic control in a removal action. In 1990, DEQ installed monitoring wells which initiated the site investigation phase of work. The site was added to the National Priority List by the Environmental Protection Agency in 1991 following a soil vapor investigation and sampling of 60 area wells.

On December 27, 2018, DEQ prepared and approved a previous *No Longer Contain-In Determination* for IDW soil from ECSI site #1479. This earlier IDW was also derived as drill cuttings and well decommissioning materials. The contamination profile of the IDW currently under consideration is substantially like that considered in December 2018.

Trichloroethene (TCE) is the risk-driver for the East Multnomah County Troutdale Sandstone Aquifer Remedy project. Potentially applicable waste codes that could apply to this listed waste would be F001 or F002, for waste related to historical parts cleaning by vapor degreasing using TCE. The IDW being considered in this No Longer Contained-In Determination did not contain TCE at greater than the laboratory reporting limit of 0.00969 mg/Kg.

DEQ made this No Longer Contained-In Determination for investigation-derived waste (IDW) produced as drill cuttings from the decommissioning of project groundwater extraction wells EW-8 and EW-15. These extraction wells were previously approved for decommissioning by DEQ. The IDW drill cuttings are currently stored in 17 drums located at 2525 NE 201st Ave. Gresham, Oregon.

Laboratory Testing Results

A representative composite soil sample of the drummed IDW(IDW-SS-062223) was analysed for total solids by Method 2540 G-2011, volatile organic compounds (GC/MS) by Method 8260D, volatile organic compounds by (GC) by Method NWTPHGX, Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT, metals (ICP) by Method 6010D, and mercury by Method 7471B.

No individual analyte results indicated hazardous concentrations when screened against *DEQ Risk-Based Concentrations for Individual Chemicals* (rev. May 2018) for the Occupational Soil Ingestion, Dermal Contact, and Inhalation Pathway. The samples were collected in laboratory-provided containers and submitted to Pace Analytical under proper chain-of-custody procedures.

Table A below, provides concentrations for all detected analytes in this waste stream screened against applicable DEQ risk-based concentrations (RBCs).

Lead in the drummed soil composite sample was detected at 15.6 mg/Kg. This concentration for lead was determined to be non-hazardous waste under Oregon state waste code X004. Further, DEQ has determined that the background concentration for lead in Portland Basin soil is 79 mg/Kg (DEQ 2018).

Table A. Analytes in this waste stream screened against DEQ Risk Based Concentrations (RBC) for Occupational soil ingestion, contact, and inhalation, and DEQ background metals concentrations.

Analyte (IDW soil)	Concentration in IDW sample	DEQ RBC	Background Metals in Portland Basin soil
VOCs	All ND	Various NA	N/A
Trichloroethene (TCE)	ND<0.00387 mg/Kg	51 mg/Kg	N/A
GRO NWTPHGX	ND	20,000 mg/Kg	N/A
DRO NWTPHX-SGT	ND	14,000 mg/Kg	N/A
RRO NWTPHX-SGT	ND	36,000 mg/Kg	N/A
Mercury	ND<0.0975 mg/Kg	350 mg/Kg	0.23 mg/Kg
Arsenic	ND< 4.87 mg/Kg	1.9 mg/Kg	8.8 mg/Kg
Barium	51.6 mg/Kg	220,000 mg/Kg	790 mg/Kg
Cadmium	ND< 1.22 mg/Kg	1,100 mg/Kg	0.63 mg/Kg
Chromium	16.5 mg/Kg	>max	76 mg/Kg
Lead	15.6 mg/Kg	800 mg/Kg	79 mg/Kg
Selenium	ND< 4.87 mg/Kg	No RBC Data	0.71 mg/Kg
Silver	ND< 2.44 mg/Kg	5800 mg/Kg	0.82 mg/Kg

No Longer Contained-In Determination

This project IDW as drill cuttings is hazardous waste but the No Longer Contained-In Determination allows it to be disposed of using non-hazardous waste disposal standards. The No Longer Contained-In Determination is used to determine whether contaminated environmental media that contains listed hazardous waste poses no, or clearly defined acceptable risk, and if so, can be disposed of as non-hazardous waste at a subtitle C or D equivalent landfill. Otherwise, the waste must be disposed of as hazardous waste.

This No Longer Contained-In Determination is needed to show that this project IDW as drill cuttings is not characteristic hazardous waste, and that concentrations of solvent chemicals, petroleum, and metals are below protective levels, and if applicable, Land Disposal Requirements (LDRs).

To demonstrate that the soil no longer "contains" hazardous waste, the following conditions must be met:

1. The soil (a solid) must not exhibit a characteristic of hazardous waste (must not be reactive or toxic).
2. The potential for soil containing a waste to exhibit a toxicity characteristic is evaluated through comparison of constituent concentrations in leachate, extracted from the waste using the Toxicity Characteristic Leaching Procedure (TCLP), with the limits specified at Title 40 Part 261.24 of the Code of Federal Regulations. Representative (total) chemical concentrations for the soil are compared to a value of 20 times the TCLP limit (to account for the 20 to 1 dilution inherent in the TCLP analysis method) to determine if the limits could potentially be exceeded. If the 20 times TCLP limit for any chemical is exceeded, then the waste may be a characteristic waste.

   The 20 times TCLP limit for TCE is 10 mg/kg and further analysis using the TCLP method was not required as TCE was not detected at greater than the Method Detection Limit of 0.00387 mg/Kg. Thus, the IDW soil sample is not indicative of a characteristic hazardous waste and was not analyzed by TCLP analysis.
3. TCE contamination in environmental media from this site would be considered by DEQ to contain a listed hazardous waste (F002). Concentrations of hazardous constituents from listed waste must be below health-based levels to support a no longer contained in determination. Currently, it is DEQ policy that if No Longer Contained In-approved soil is to be taken to a lined Subtitle C or D facility then concentrations of hazardous constituents should be below the DEQ Occupational Risk Based Concentration (RBC) for direct contact. Currently this RBC for TCE is 51 mg/kg. The concentration of project IDW for TCE is non-detected and therefore is below the RBC for direct contact with soil under an occupational exposure scenario. Based on these results the soil would be acceptable for disposal at a regulated Subtitle C or D landfill, or subtitle D equivalent landfill as a nonhazardous waste.
4. The lead and chromium concentrations in this IDW, both have a federal regulatory level of 5 mg/kg, making it a hazardous waste. This IDW waste however, will be acceptable for disposal at a regulated Subtitle C or D landfill, or subtitle D equivalent landfill with this No Longer Contained-In Determination. Because it is hazardous waste, it may be disposed of as non-hazardous waste with the No Longer Contained-In Determination in conjunction with the Background Metals Concentrations for Soil in the Portland Basin.

5. RCRA Land Disposal Restrictions (LDR) do not apply because the waste was not removed from the Area of Contamination prior to this determination. The LDR limits for TCE is 6.0 mg/kg. The observed solvent concentrations fall well below the LDR risk-based concentration levels, and 10x further below the LDR concentration limits allowed for disposal of environmental media under the alternate LDR standards for disposal of contaminated media found at 40 Code of Federal Regulations 268.49.

   TCE might be present in the IDW soil at concentrations below the minimum reporting levels (MRLs) shown in the laboratory data. Using the MRL concentrations and our knowledge of process, we can assume the following about the soil and water:

   - It is not ignitable, corrosive, nor reactive;
   - Concentrations of underlying constituents are below Toxicity Characteristic levels;
   - Concentrations of underlying constituents are below DEQ protective levels (Occupational RBCs).

6. The metals concentrations detected in this waste stream are consistent with background metals concentrations determined by DEQ for soil in the Portland Basin (see Table A).

A waste profile for this waste stream has been accepted by Waste Management for disposal at the Chemical Waste Management Arlington Landfill, Oregon, under RCRA and TSCA EPA ID Permit ORD089452353. This profile shall be used if No Longer Contained-In disposal is not followed. Based on our review of the data and the above findings, DEQ has determined that the IDW, as filter pack sand and soil cuttings, the metals, TCE, and related VOC concentrations are below the DEQ's generic occupational risk-based standards. The soil does not pose an unacceptable risk under an occupational scenario, and thus meets the criteria for no longer containing listed waste. If the soil is disposed of at a permitted Subtitle C or Subtitle D-or-equivalent landfill accepting this cleanup waste, DEQ approves management and disposal as non-hazardous waste.

DEQ approves this IDW soil for disposal at the Chemical Waste Management Arlington Landfill, Oregon, a DEQ-permitted, Hazardous Waste, Subtitle C, and Subtitle D-equivalent disposal facility.

If the IDW is not managed and disposed of following these conditions of approval, this No Longer Contained-In Determination does not apply, the waste remains hazardous waste, and must be managed and disposed of in compliance with applicable hazardous waste laws.

References:

July 13, 2023. Waste Management Arlington Landfill Requested Certificate of Hazardous Waste Disposal, EZ Profile OR 355614.

July 14, 2023. Waste Management. Hazardous WAM Approval. Profile OR 355614. CWM Arlington, Oregon.

June 23, 2023. Pace Analytical Laboratory Report. Project Number PNG0564S23/03

May 2018. DEQ Risk-Based Concentrations for Individual Chemicals. (revised May 2018)

January 2018. DEQ. Background Levels of Metals in Soils for Cleanups. DEQ Fact Sheet.

December 1996. DEQ Remedial Action Record of Decision for the East Multnomah County Groundwater Contamination Site, Troutdale Sandstone Aquifer.