

Oregon DEQ No Longer Contained-In Determination Approval Signoff Sheet

Site Name: Gasco Operable Unit (ECSI #0084 and #0183)
Location: 7900 NW St. Helens Road, Portland, Oregon 97210
Media: Upland Soil Investigation Derived Waste
Approved Disposal: Soil: Permitted Subtitle C or Subtitle D Landfill

DEQ Project Manager: Wesley A. Thomas Date: 2/8/2023
Wesley A. Thomas

DEQ HW Staff: Zeb Bates Date: 2/9/2023
Zeb Bates

DEQ HSW Program Manager: Audrey O'Brien Date: 2/9/2023
Audrey O'Brien

DEQ Cleanup Program Manager: Paul Seidel Date: 2/9/2023
Paul Seidel

State of Oregon
Department of Environmental Quality

Memorandum

To: Gasco Former MGP Operable Unit File, ECSI #0084
Siltronic Corporation File, ECSI 0183

Date: 2/8/2023

From: Wesley Thomas, Project Manager, Northwest Region Cleanup Program

Through: Zeb Bates, HW Inspector, Northwest Region HW Program

Approved: Audrey O'Brien, Manager, Northwest Region HW Program
Paul Seidel, Manager, Northwest Region Cleanup Program

Subject: No Longer Contained-In Determination
Gasco Operable Unit
Portland, Oregon

The DEQ's Northwest Region Environmental Cleanup, Hazardous Waste and Solid Waste Programs have prepared this No Longer Contained-In Determination (NLCI) for excess soil sampling investigation derived waste (IDW) generated during the Upland Feasibility Study (FS) Dense Non Aqueous Phase Liquid (DNAPL) Data Gaps Investigation field activities at the Gasco Operable Unit, which includes a portion of the Siltronic Corporation (Siltronic) property, in accordance with the DEQ-approved Revised Upland Feasibility Study DNAPL Data Gaps Investigation Work Plan. The IDW subject to this no longer contained-in determination is currently staged in eight drums on the Gasco Site (ECSI #0084).

Background Information

The Portland Gas & Coke Company (PG&C) constructed an oil-manufactured gas plant (MGP), known as the Gasco facility, on the current NW Natural property in 1912 and 1913. The Gasco facility was operated as an MGP by from 1913 to 1956. The northern portion of the current Siltronic property (within the Gasco OU) was used for MGP residuals management during a portion of this time frame. PG&C sold the property now occupied by Siltronic in 1960. Siltronic constructed a silicon wafer manufacturing plant on the property in 1978 with plant operations commencing in March 1980 and formerly used trichloroethene (TCE) in its production of silicon wafers.

Based on the operational history of the Gasco OU, the following is the typical suite of contaminants as evaluated within the Gasco OU:

- **MGP/Hydrocarbon Wastes:** Cyanide; total petroleum hydrocarbons; polycyclic aromatic hydrocarbons (PAHs); volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, and xylenes (BTEX); and metals.
- **Siltronic Spent Trichloroethene Wastes:** TCE and TCE breakdown products: cis-1,2-dichloroethene (cis 1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), 1,1-dichloroethene (1,1-DCE), and vinyl chloride (VC).

Contamination classified as "MGP/Hydrocarbon Wastes" generally resulted from former MGP operations or hydrocarbon-related sources. Toxicity characteristic (TC) regulatory levels have been determined by the U.S. Environmental Protection Agency (EPA) and DEQ as not applicable to MGP wastes. As such, TC waste codes (D004 through D043) are not applied to environmental media assumed to be impacted solely by MGP-related contaminants. Although the toxicity characteristic leaching procedure (TCLP)

analytical method does not apply to the regulatory classification of MGP waste materials, NW Natural may still elect to use TCLP testing for characterization purposes. Alternatively, total concentrations reported by the laboratory may be screened against the TC concentrations multiplied by 20 to account for attenuation by leaching. Consistent with the Gasco OU draft Contaminated Media Management Plan (CMMP), if environmental media removed from the Gasco OU exceeds the TC criteria by TCLP methodology or the 20x TC criteria using total concentrations, NW Natural will dispose of the media at a Subtitle C facility as non-hazardous industrial waste. Non-hazardous wastes disposed at a Resource Conservation and Recovery Act (RCRA) Subtitle C facility will receive an Oregon “State-Only” waste code of X004 (non-hazardous industrial waste).

Per the draft CMMP, environmental media contaminated with “Siltronic Spent TCE Wastes” are laboratory-tested, and contaminant concentration data are screened to determine whether the material would require disposal as a RCRA spent halogenated solvent waste code F002 (F002)-listed hazardous waste (spent TCE halogenated solvent). For these materials, a “no longer contained-in” determination must be made based on a comparison to the DEQ risk-based concentrations (RBCs) for the Occupational Receptor Scenario of the Soil Ingestion, Dermal Contact, and Inhalation exposure pathway for the five TCE-related compounds (DEQ 2018a [or current version]). If soil impacted with Siltronic spent TCE wastes has concentrations of the TCE-related compounds greater than the threshold values provided in the table below, the soil or sediment requires management as F002-listed hazardous waste. If these materials have concentrations of TCE-related compounds equal to or less than the threshold values provided in the table below, DEQ can make a no-longer contained in determination, such that the waste will not require management as an F002-listed hazardous waste.

F002 Constituent	Contained-In Threshold Value (µg/kg)
TCE	51,000
Cis-1,2-DCE	2,300,000
Trans-1,2-DCE	23,000,000
1,1-DCE	29,000,000
VC	4,400

Gasco OU Soil IDW Characteristics

Excess soil IDW generated during the upland FS DNAPL Data Gaps Investigation field activities were containerized in 24 55-gallon drums and one 5-cubic yard drop box. On July 21 and 22, 2022, Anchor QEA, on behalf of NW Natural, collected three composite samples from the 55-gallon drums for laboratory analysis. Each composite sample comprises approximately equal aliquots of soil from 8 drums. In addition, one five-point composite sample was collected from the 5-cubic yard drop box.

The IDW soil samples were submitted for analytical testing for:

- Total cyanide (EPA 9013M/9012)
- Free liquids (EPA 9095B)
- Total solids (SM 2540G)
- Ignitability (EPA 1010M)
- Corrosivity (EPA 9045D)
- Total petroleum hydrocarbons: diesel range- and oil-range (NWTPH-Dx) and gasoline range (NWTPH-Gx)

- RCRA eight total metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver (EPA 6020B)
- Volatile organic compounds (EPA 5035A/8260D)
- Semivolatile organic compounds (EPA 8270E)

Based on the sampling results, the IDW does not exhibit a characteristic of hazardous waste. In general, the results contain detections of the typical suite of contaminants associated with “MGP/Hydrocarbon Wastes.” One composite sample representing eight 55-gallon drums contained trace concentrations of TCE and cis-1,2-DCE. Based on these results, NW Natural requested a no-longer contained in determination to classify the IDW containing trace concentrations of F002 constituents as non-hazardous waste.

No Longer Contained-In Determination

A No Longer Contained-In Determination is needed to show that concentrations of F002-listed hazardous waste constituents detected in one of the IDW waste characterization samples are below protective levels. The table below shows the relevant sample result compared to the applicable DEQ risk-based concentrations (RBCs).

Analyte	20-Times TCLP Limit	F002 Contained-In Threshold Screening Values	Sample Number: DG-IDW-072222-03	
			Result	Qualifier
TCE	10,000	51,000	30.5	J
cis-1,2-DCE	--	2,300,000	17.3	J

Notes:

Bold: detected analyte

J: estimated concentration

--: no 20x TCLP limit established

To demonstrate that the IDW no longer “contains” hazardous waste, the following conditions must be met:

1. The IDW must not exhibit a characteristic of hazardous waste (must not be reactive or toxic). The potential for soil containing waste to exhibit a toxicity characteristic is evaluated through a comparison of constituent concentrations in leachate, extracted from the waste using the Toxicity Characteristic Leaching Procedure (TCLP), with the limits specified in Title 40 Part 261.24 of the Code of Federal Regulations (40 CFR 261.24). 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 hazardous waste. As noted above, none of the IDW sample results exhibited a characteristic of hazardous waste.
2. Detected concentrations of TCE and TCE breakdown products 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 human health risk-based levels. Currently, it is DEQ policy that if no longer contained-in-approved media is to be taken to a lined permitted Subtitle C or D facility then concentrations of hazardous constituents should be below the DEQ “Occupational” Risk-Based Concentration (RBC) for direct contact. Applicable RBCs are provided in the table above. The concentrations of TCE and cis-1,2-DCE are several orders of magnitude below their respective RBCs for direct contact with soil under an occupational exposure scenario. Based on these results the soil would be acceptable for disposal at a permitted Subtitle C or D landfill.

3. RCRA Land Disposal Restrictions do not apply because the IDW was not removed from the Area of Contamination before this determination.

Underlying constituents of TCE or its breakdown products might be present in the IDW at concentrations below the minimum reporting levels (MRLs) shown in the laboratory data. Using the MRL concentrations and knowledge of process, we can assume the following about the IDW:

- It is not ignitable, corrosive, or reactive;
- Concentrations of underlying constituents would be below Toxicity Characteristic levels; and
- Concentrations of underlying constituents would be below DEQ Occupational RBCs.

Based on our review of the data and the above findings, DEQ has determined that the IDW does not exhibit characteristics of hazardous waste. Detected concentrations of TCE and TCE breakdown products are well below the DEQ's occupational RBCs. The IDW does not pose an unacceptable risk under an occupational scenario, and thus meets the criteria for no longer containing listed waste. MGP waste streams are not covered in this NLCI evaluation or approval.

IDW may be disposed of at a permitted Subtitle C or Subtitle D landfill. DEQ has previously allowed IDW to be disposed of at the Hillsboro landfill following chemical characterization, determination by the generator that the IDW is not a Hazardous Waste or a Special Waste, DEQ approval of the disposal, and acceptance of the material by the landfill and extends these provisions to the soil IDW generated during the upland FS DNAPL Data Gaps Investigation field activities. NW Natural should contact the applicable landfill facility(ies) to verify that they are willing to accept these wastes. 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.