



Conducting Contained-In Determinations for Environmental Media

Internal Management Directive

July 2024



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State of Oregon
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State of Oregon
Department of
Environmental
Quality

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1. Purpose

This directive provides guidance to Oregon Department of Environmental Quality staff in assessing whether environmentally contaminated materials containing listed hazardous waste can be safely disposed of as non-hazardous waste. Once determined to no longer contain hazardous waste, these materials may be disposed of at a hazardous waste permitted Subtitle C landfill, a solid waste permitted Subtitle D lined landfill, or a wastewater treatment facility permitted under the Clean Water Act.¹ This includes facilities such as wastewater treatment plants with a National Pollutant Discharge Elimination System, or NPDES, permit or those with a permitted pre-treatment discharge. DEQ staff can make a 'No Longer Contained-In' determination once all the specified management conditions outlined in the approval memo have been satisfied. If the conditions are met, the waste can be managed as non-hazardous; otherwise, it must be managed as hazardous waste.

To encourage remediation at contaminated cleanup sites, the U.S. Environmental Protection Agency developed regulations and policies for hazardous waste in environmental media, meaning soil, sediment, water, etc. Examples of such regulations and policies are the Area of Contamination policy, the contained-in policies, and temporary unit regulations.² EPA determined environmental media containing listed hazardous wastes or exhibiting a hazardous waste characteristic must be managed as hazardous waste.³

EPA regions and authorized states may apply the contained-in policy to determine if the concentration of hazardous constituents in the environmental media falls below site-, media- and contaminant-specific levels EPA or the states determine are protective of human health and the environment. Environmental media with contaminant concentrations below these levels may be disposed of at a hazardous waste permitted Subtitle C or a solid waste permitted Subtitle D

¹ A Subtitle D equivalent landfill may adequately protect human health and the environment in specific situations. The discretion to approve the use of such a landfill for disposal of waste deemed to 'no longer contain' hazardous waste lies with the Regional Hazardous Waste Manager.

² 63 FR 65877 (November 30, 1998), "How Has EPA Tried to Solve These Problems in the Past?", 61 FR 18780, 18782 (April 29, 1996), memorandum from Michael Shapiro, Director, Office of Solid Waste, Stephan D. Luftig, Director, Office of Emergency and Remedial Response, and Jerry Clifford, Director, Office of Site Remediation Enforcement, EPA to RCRA Branch Chiefs and CERCLA Regional Managers, (March 13, 1996); 55 FR 8666, 8758-8760 (March 8, 1990); and 58 FR 8658 (February 16, 1993).

³ 63 FR 28621 (May 25, 1998), "The Contained-In Policy". EPA requires that "soil (and other environmental media), although not wastes themselves, be managed as if they were hazardous waste if they contain hazardous waste or exhibit a characteristic of hazardous waste."

lined landfill, or a wastewater treatment facility permitted under the Clean Water Act, if determined to no longer contain listed hazardous waste.

The No Longer Contained-In Determination, or NLCI, for contaminated media can be made irrespective of treatment status. It is important to clarify that the decision on whether the media is considered NLCI is not dependent on the completion of treatment processes. This determination can be made before or after any treatment activities; the assessment cannot require the media to be treated as a precondition for approval.

Once DEQ determines environmental media no longer contains listed hazardous waste, the generator/cleanup site must manage and dispose of the contaminated environmental media following DEQ conditions of approval, either at a hazardous waste permitted Subtitle C or a solid waste permitted Subtitle D lined landfill or at a wastewater treatment facility permitted under the Clean Water Act. Because the NLCI determination is approved after determining that contaminants are below risk levels, the generator/cleanup site has more options to manage and dispose of the contaminated environmental media. The NLCI determination offers the generator/cleanup site an alternate pathway of protective management because permitting requirements and minimum technology requirements do not apply to media that does not contain listed hazardous waste. The generator/cleanup site will still need to manage the environmental media according to Oregon's solid waste, water quality, and any other applicable requirements.

2. Applicability

DEQ Hazardous Waste and Cleanup program staff will use this IMD when evaluating whether contaminated environmental media containing a listed hazardous waste must be disposed of as hazardous waste. Sites that may generate contaminated environmental media include, but are not limited to:

- Regulated hazardous waste generators with releases to the environment.
- Environmental cleanup sites under DEQ oversight.
- Emergency response sites under DEQ oversight.
- Resource Conservation and Recovery Act corrective action sites under DEQ oversight.
- Out-of-state waste that DEQ considers hazardous waste-contaminated environmental media, including waste from hazardous waste generators, cleanup sites, or RCRA corrective action sites.

Regarding media generated during cleanup from a registered underground storage tank, 40 Code of Federal Regulations §261.4(b)(10) states: "Petroleum-contaminated media and debris that fail the test for the toxicity characteristic of §261.24 (hazardous waste codes D018 through D043 only) and are subject to the corrective action regulations under part 280 of this chapter." This exemption includes benzene and some solvents. It does not apply to RCRA metals and solvent-bearing wastes that are not listed. Cleanups from underground storage tank waste oil tanks, often legacy sites, may generate waste characterizing for F-listed solvents which are not exempt from hazardous waste determination. Such wastes are eligible for review under this IMD.

This IMD does not address contaminated debris. Examples of contaminated debris include, but are not limited to, manufactured objects, plant or animal matter, and natural geologic material over 60 millimeters in diameter. This IMD recommends that Cleanup Program staff consult with DEQ Hazardous Waste Program staff for assistance with contaminated debris.⁴

⁴ Traditionally, the same contained-in policy for environmental media governed hazardous waste-contaminated debris. In 1992, the EPA codified certain aspects of the contained-in policy for debris in the definition of hazardous waste regulations in §261.3. In particular, the EPA included a regulatory passage explaining the process by which handlers of debris contaminated with listed hazardous waste can demonstrate the debris is non-hazardous. This passage also references certain treatment technologies for decontaminating listed debris so that it no longer contains a listed waste.

This IMD applies only to contaminated environmental media. This IMD does not apply to waste streams generated during normal industrial or manufacturing operations (i.e., "as-generated" wastes), such as:

- Concentrated spent chemicals.
- Discarded, unused commercial chemical products and formulations.
- Industrial wastewaters.
- Pollution control/treatment residues such as sludge, as defined in 40 CFR 260.10.

3. Summary

For each individual case, DEQ may determine that contaminated environmental media no longer contains hazardous waste when: 1) it no longer exhibits a characteristic of hazardous waste; and 2) concentrations of hazardous constituents from listed hazardous waste are below risk-based concentration levels when managed as approved by DEQ.

When cleaning up soils contaminated with hazardous waste, adhere to the specific risk-based concentrations established for construction workers. In exceptional cases, particularly for locations with high levels of naturally occurring background metals like arsenic, DEQ staff may recommend an alternative RBC. This recommendation applies to soils with high concentrations of naturally occurring metals that do not exceed the background levels outlined in DEQ's [Background Levels of Metals in Soils for Cleanup](#) fact sheet. In such cases, DEQ staff will align with the current DEQ [Risk-Based Concentrations for Individual Chemicals](#) table and may consult the EPA's Regional Screening Levels-Generic Tables for further guidance. The regional background metal concentrations provided in these resources can be used for soil removal and disposal instead of the standard RBC. This alternative approach must be thoroughly documented and is subject to approval by the Hazardous Waste Program Management Team or Regional Manager.

DEQ cleanup project managers will consult with DEQ Hazardous Waste Program staff on determinations by routing a memo (reference Appendix A) to the regional Hazardous Waste Program through the appropriate hazardous waste staff person and their manager. Hazardous waste staff will consider land disposal restriction issues and coordinate with the cleanup project manager who drafted the memo. Once hazardous waste staff, and materials management staff if input from the landfill permit writer is required, approve the memo, it will be routed to the appropriate cleanup and hazardous waste managers for signature and final approval.

The responsible party must manage the contaminated media in compliance with conditions prescribed in the approval memo for it to qualify as non-hazardous waste. In situations involving long-term disposal or disposal of large volume material, cleanup or hazardous waste staff may consult with the solid waste or hazardous waste permit writer to make sure that the landfill being considered for disposal can safely manage the waste, has sufficient capacity for this waste and its contaminant concentrations, and is approved to accept the environmental media either as an authorized waste or through a special waste management plan.

4. Background

EPA's contained-in policy is not codified in rule. However, it is a long-standing policy for applying RCRA Subtitle C requirements to mixtures of environmental media (e.g., soils, groundwater, sediments) and listed hazardous wastes. Two rules subject environmental media to Subtitle C requirements:

- Under 40 CFR 261.3(c)(1), a "hazardous waste will remain a hazardous waste" unless and until the generator meets the conditions specified by the authorized agency. DEQ sets out these conditions in an approval memo.
- Under 40 CFR 261.3(d)(2), a "waste which contains" a listed hazardous waste remains a listed waste until it is delisted.

Together, these regulations provide for continued regulation of hazardous wastes even after they are released to the environment and commingle with environmental media.

EPA has discussed the contained-in concept in several directives, RCRA rulemakings (e.g., 58 FR 48092, 48127 [September 1993]), and letters.⁵ In addition, EPA describes the policy on page 9 of [Management of Remediation Waste Under RCRA](#), EC-G-2002-096.

EPA has not issued guidance or regulations for determining appropriate contained-in levels; however, EPA regions and states have been advised that risk-based levels derived from direct exposure pathways or site-specific risk assessments are acceptable as "contained-in" levels. EPA's practice is that waste managed under a specific management method approved as protective no longer contains listed hazardous waste. EPA's practice anticipates that authorized states such as Oregon might hold in abeyance no longer contained-in approvals conditioned on final management of the waste under the approved management method. If DEQ issues a NLCI determination for a waste that contains listed hazardous waste unless protectively managed and that waste is mismanaged, then that waste remains hazardous and subject to hazardous waste management and disposal requirements.

⁵ The EPA has explained the policy and its regulatory basis in numerous preambles and letters, including 53 FR 31138, 31142, 31148 (August 17, 1988); 57 FR 21450, 21453 (May 20, 1992); memorandum from Marcia E. Williams, Director, the EPA Office of Solid Waste to Patrick Tobin, EPA Region IV (Nov 15, 1986); letter from Jonathan Z. Cannon, the EPA Acting Assistant Administrator, Office of Solid Waste and Emergency Response, to Thomas Jorling, Commissioner, New York Department of Environmental Conservation (June 19, 1989); letter from Sylvia K. Lowrance, Director, the EPA Office of Solid Waste, to John Ely, Enforcement Director, Virginia Department of Waste Management (March 26, 1991); and a detailed discussion in HWIR-Media proposal preamble, 61 FR 18795 (April 29, 1996).

5. Definitions

Administratively Complete: This definition refers to the responsible party's formal request. The request must have the following information: requester's name and address; site name, location, and ECSI, YDO, UST/LUST or RCRA Site ID number, if issued; a list of applicable waste codes; an explanation of the type of environmental media (sediment, water, soil, etc.); an estimate of quantities the request applies to; and sufficient laboratory analytical results that characterize each material to support a determination.

Area of Contamination Policy: EPA interprets RCRA to allow certain discrete areas of generally dispersed contamination to be considered RCRA units - typically landfills. Because an area of concern, or AOC, is equated to a RCRA land-based unit, consolidation and in situ treatment of hazardous waste within the AOC does not create a new point of hazardous waste generation for the purposes of RCRA. This interpretation allows wastes to be consolidated or treated in situ within an AOC without triggering land disposal restrictions or minimum technology requirements. The AOC interpretation may be applied to any hazardous remediation waste (including non-media wastes) in or on the land. Note that the AOC policy only covers consolidation and other in situ waste management techniques carried out within an AOC.⁶

DEQ highly recommends the AOC be clearly defined and determined before submitting a request for a NLCI determination. Establishing the AOC upfront ensures that all subsequent waste management activities are conducted within the established boundaries, thereby maintaining compliance with RCRA, and facilitating a more streamlined and effective remediation process. This proactive approach helps avoid potential regulatory complications and ensures that all waste management activities within the AOC are carried out in accordance with the regulations.

Environmental Media: Soil, sediment, and water (surface water, stormwater, groundwater) in the environment.

Debris: Solid material exceeding a 60 millimeter diameter particle size intended for disposal and that is: a manufactured object, plant or animal matter, or natural geologic material. Materials that are not debris include any material for which a specific treatment standard is provided in 40 CFR Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead

⁶ The AOC policy was first articulated in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Reference 53 FR 51444 for detailed discussion in proposed NCP preamble; 55 FR 8758-8760 (March 8, 1990) for final NCP preamble discussion. Reference also the most recent guidance from the EPA, "Use of the Area of Contamination Concept During RCRA Cleanups" (March 13, 1996).

solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by §268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

6. Acronyms or abbreviations

AOC: Area of Contamination

CERCLA: Comprehensive Environmental Response Compensation and Liability Act

CFR: Code of Federal Regulations (§ denotes a subsection of 40 CFR)

CWA: Clean Water Act

DEQ: Department of Environmental Quality

EPA: Environmental Protection Agency

ECSI: Environmental Cleanup Site Information system

IDW: Investigative Derived Waste

IMD: Internal Management Directive

LDR: Land Disposal Restriction(s)

LUST: Leaking Underground Storage Tank

MRL: Minimum Reporting Levels

NLCI: No Longer Contained-In

NPDES: National Pollution Discharge Elimination System

PCE: Perchloroethylene or Tetrachloroethylene, i.e., dry cleaning fluid

POTW: Publicly Owned Treatment Works

TCLP: Toxicity Characteristic Leaching Procedure (EPA test method 1311 for HW)

RBC: Risk Based Concentration

RCRA: Resource Conservation and Recovery Act

UST: Underground Storage Tank

WWTP: Wastewater Treatment Plant

Internal Management Directive: Conducting Contained-In Determinations for Environmental Media

7. Directive

7.1 Applicability

This IMD applies only to environmental media: soil, sediment, and water. Hazardous waste-contaminated debris management is found under 40 CFR 261.3(f)(2) and 40 CFR 268.45(a).

7.2 Steps for making the No Longer Contained-In Determination

7.2.1. Verification

DEQ must receive a formal request for a No Longer Contained-In determination to initiate the process. DEQ staff's initial review should verify:

- 1) Whether the site is a current DEQ cleanup site. This includes sites currently participating in one of the following programs: Voluntary Cleanup Program, Independent Cleanup Pathway, Site Response Program, or Orphan Site Program.
- 2) Whether the site is another independent cleanup site without cost recovery, and not one of the programs listed in 7.2.1.1. Any site that requests an NLCI determination from DEQ must volunteer for or be willing to enter a cleanup cost recovery program for the determination process or actual cleanup process.
- 3) Whether DEQ Hazardous Waste Program staff will charge to the QCat number for hazardous waste generators or to the responsible party. For more complicated determinations, Hazardous Waste Program staff maintain the ability to charge to the responsible party, and such charges will be preceded by a discussion with the involved parties. DEQ Cleanup Program staff will charge the responsible party through the cleanup agreement.
- 4) That the request includes sufficient analytical information to demonstrate that the environmental media no longer contains hazardous waste. Sample results must be representative of the media in its current state, whether treated or untreated, and obtained following established protocols, such as SW-846, or through site sampling conducted per a DEQ-approved sampling and analysis plan or quality assurance project plan.
- 5) That the request is administratively complete, as defined above.

7.2.2. Applying RBCs

After meeting the prerequisites outlined in Section 7.2.1, DEQ's completion of the NLCI determination for environmental media, particularly soils contaminated by listed hazardous wastes, will adhere to the construction worker risk-based concentrations, ensuring these soils are managed below the specified risk-based levels. Contaminated media should be sampled in situ or within the area of contamination, targeting removal and disposal at authorized hazardous waste permitted Subtitle C or a solid waste permitted Subtitle D lined landfill. In certain scenarios, a DEQ toxicologist may approve an alternative RBC that guarantees sufficient protection, with a comprehensive justification for such an alternative required in the NLCI determination. The Hazardous Waste Program reserves the final approval on the use of alternative RBCs, which should be cautiously considered and documented as exceptions rather than standard protocol.

Such an exception applies to soils with high concentrations of naturally occurring metals that do not exceed the background levels outlined in DEQ's [Background Levels of Metals in Soils for Cleanup](#) fact sheet. In these cases, DEQ staff will align with the current DEQ [Risk-Based Concentrations for Individual Chemicals](#) table and may consult the EPA's [Regional Screening Levels - Generic Tables](#) for additional guidance. The regional background metal concentrations provided in these resources can be used for soil removal and disposal instead of the standard RBC. This alternative approach must be thoroughly documented and is subject to approval by the Hazardous Waste Program Management Team or Regional Manager.

The determination that environmental media no longer contain hazardous waste will be based on whether:

- Water exhibits hazardous contaminant concentrations below the construction and excavation worker RBC.
- Soil or sediment shows hazardous constituent levels beneath the construction worker RBC.

Media that exhibit a hazardous waste characteristic, but are not listed as hazardous waste, are considered to "contain" hazardous waste until these characteristics are no longer present. This status is typically confirmed through straightforward analytical testing, and therefore, does not require a formal DEQ NLCI determination.

7.2.3. Land Disposal Restriction Considerations

LDRs apply to each of the following situations:

1. The waste is generated, removed from the land or AOC, prior to the NLCI determination and the media is contaminated by a listed hazardous waste.

2. The waste is hazardous waste and must be treated to meet the RBCs unless treatment is completed within the AOC.

If LDRs are applicable and must be met, use the alternative LDR treatment standards for contaminated soil found in 40 CFR 268.49.

Contaminated environmental media that does not contain any hazardous waste, as demonstrated by non-detect results at minimum reporting levels achieving the industry standard (recommended to be no less than 20% of both applicable RCRA and cleanup regulatory thresholds), is not considered hazardous waste and is not subject to any RCRA Subtitle C requirements, including LDRs. Once the hazardous waste determination is complete and meets these conditions, the responsible party is not required to consult with DEQ regarding the hazardous waste regulatory status and management of such waste. However, solid waste disposal requirements still apply.

7.2.4. Disposal Restrictions

If DEQ concludes environmental media no longer contains hazardous waste if managed in accordance with conditions in DEQ's approval memo (see Section 7.3), the media does remain subject to solid waste management standards and additional solid waste restrictions on reuse, placement, or disposal may apply as outlined in Section 7.3. DEQ's NLCI determination approval requires soil to be managed at a hazardous waste permitted Subtitle C or a solid waste permitted Subtitle D lined landfill and water to be disposed of at a Clean Water Act permitted wastewater treatment system.

7.3 Documenting the Approval

The cleanup project manager will provide the Hazardous Waste Program a draft approval memo and cover sheet (refer to Appendix A for the approval memo template). This memo provides the basis to support non-hazardous characterization and sets out prescribed disposal options, including soil managed at a hazardous waste permitted Subtitle C or a solid waste permitted Subtitle D lined landfill, and water disposed of at a wastewater treatment facility permitted under the Clean Water Act.

The cover sheet includes:

- Site name.
- Any identification numbers such as an ECSI number and/or RCRA site ID.
- Media types involved.
- Approved disposal method(s).
- Signature lines for:
 - Cleanup project manager.

- Cleanup toxicologist, where alternate RBC is recommended.
- Hazardous waste staff reviewing the request.
- Hazardous or solid waste permit writer (if applicable).
- Regional Hazardous Waste Program manager and regional Cleanup Program manager who will provide final approval.

The body of the memo must include:

- Brief description of site background.
- Discussion of why the NLCI determination is needed.
- Analytical results listed in a table.
- Discussion of the data review, including alternate RBC recommendations.
- Description of limitations and conditions and DEQ's conclusions.

The body of the memo will also state requirements and conditions for approved disposal of soil and/or water as indicated in Section 7.2.4, and a list of supporting documents, including the NLCI determination request submitted by the responsible party, if applicable.

The Regional Hazardous Waste Program manager has five business days to review and sign the memo once it has been routed to them. If this is not possible, the Regional Hazardous Waste Program manager may request an extension or delegate signatory authority. Once signed, the memo is returned to the cleanup project manager.

After the memo is approved and signed, ensure a copy is filed in both the Hazardous Waste and Cleanup program files for future reference. If a site has not been assigned a cleanup project manager to oversee the completion of waste management as approved, the responsible party must submit documentation confirming the completion of the requirements outlined in the approval memo. This includes submitting disposal receipts showing the tonnage managed at an approved facility or facilities.

8. Appendices

Appendix A – Template and Example: Contained-In Determination Approval Memo

Appendix B - Example Scenarios: Conducting Contained-In Determinations

Appendix C - Example Addendum: Extending a No Longer Contained-In Determination

Appendix A

Template and Example: Contained-In Determination Approval Memo

Note: Use the most recent memo template, available on QNet.

Oregon DEQ Contained-In Determination Approval Signoff Sheet

Site Name [include ESCI/LUST/RCRA #]:

Location:

Media:

Approved Disposal Location:

Signatures:

Cleanup project manager:

Date:

Hazardous Waste Program staff:

Date:

Solid waste or hazardous waste permit writer [if needed]:

Date:

Hazardous Waste or Solid Waste Program manager:

Date:

Cleanup toxicologist [if needed]:

Date:

DEQ Cleanup Program manager:

Date:

Memorandum

Date: 2/10/2024

To: Project File, ZY Mobility, ECSI 1234

From: Joe Brown, Project Manager, Western Region Cleanup Program

Subject: No Longer Contained-In Determination for ZY Mobility Site, Medford, Oregon (ECSI 1234)

DEQ's Western Region Environmental Cleanup and Hazardous Waste programs have prepared this No Longer Contained-In Determination for soil cuttings and groundwater investigation derived waste and soil generated during a sanitary sewer line replacement project at the ZY Mobility cleanup site. ZY Mobility provides vehicle retrofitting services for people with disabilities and has been in operation in Medford since 1982. Prior to this, the site was occupied by a dry cleaning facility between 1950 and 1981. Releases of Perchloroethylene, also called PCE, from past dry cleaning practices have contaminated soil and groundwater beneath the site. PCE contamination in environmental media from this site would be considered by DEQ to contain a listed hazardous waste (F002).

This determination is for approximately 8 cubic yards of soil that was excavated in August 2023 during replacement of the facility's onsite sanitary sewer line and for 26 drums (6.5 cubic yards) of soil and 17 drums of water (approximately 935 gallons) generated in September and December 2023 during drilling of soil borings and monitoring wells on the site. The 8 cubic yard soil pile generated from the sanitary sewer excavation is currently covered and stored on the property. The IDW generated during drilling activities is currently stored on-site in labeled drums. All the soil and water are and have been stored within the on-site area of contamination.

Representative samples were collected from the soil pile, the drummed IDW soil, and the drummed IDW water. Soil analysis was conducted as "totals", not TCLP. Low levels of PCE were detected in the soil pile, the IDW soil, and the IDW water samples. The results of the chemical analysis are tabulated below. Only chemicals detected by analysis are shown in the table.

Table I: Media Pollutant and Applicable Risk Based Concentrations

| Media | PCE Concentration | Assessment of Risk Based Concentration | | |
|-----------|-------------------|--|------------------|------------------------------------|
| | | PCE: Soil Direct Contact (ppm) | PCE: Water (ppb) | 20 x TCLP Limit PCE for Soil (ppm) |
| Soil Pile | 0.0004 ppm | 1,800 | N/A | 14 |
| IDW Soil | 0.00042 ppm | 1,800 | N/A | 14 |
| IDW Water | 0.89 ppb | N/A | 5,600 | N/A |

A No Longer Contained-In Determination is required to demonstrate that the soil and water do not qualify as characteristic hazardous waste, that concentrations of dry cleaning solvent-related chemicals are below protective levels, and, if applicable, that land disposal restrictions are met.

To demonstrate that the soil “no longer contains” hazardous waste, the following conditions need to be met:

1. The soil (a solid) must not exhibit a characteristic of hazardous waste (must not be reactive or toxic). The potential for soil containing a waste to exhibit the toxicity characteristic is evaluated through comparison of constituent concentrations in leachate, extracted from the waste, using the Toxicity Characteristic Leaching Procedure, also called TCLP, with the limits specified at 40 CFR, Part 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 waste. The 20 times TCLP limit for PCE is 14 parts per million or 14,000 parts per billion. The soil does not fail the toxicity characteristic for PCE. The soil is not a characteristic hazardous waste.
2. The water must not exhibit a characteristic of a hazardous waste (must not be ignitable or corrosive). Based on knowledge of process, DEQ has determined that the water is neither ignitable nor corrosive.
3. Concentrations of hazardous constituents from listed waste must be below health-based levels. Currently, it is DEQ policy that if soil is to be taken to a solid waste permitted Subtitle D lined landfill, then concentrations of hazardous constituents should be below the DEQ Construction Worker Risk Based Concentration for direct contact. Currently this

RBC for PCE is 1,800 ppm. The concentrations of PCE detected in the soil pile and the IDW soil are well below the construction worker direct contact RBC.

4. For water, DEQ's current policy is that if the water is to be taken to a Clean Water Act-permitted wastewater treatment facility, then concentrations of hazardous constituents must be below the Groundwater in Excavation RBC. Currently this RBC for PCE is 5,600 ppb. The concentration of PCE in the IDW water is well below this RBC.
5. RCRA land disposal restrictions do not apply because the waste was not removed from the area of contamination prior to this determination.

The table above illustrates the sample results compared to the applicable DEQ RBCs and TCLP.

Underlying constituents of PCE might be present in the soil at concentrations below the minimum reporting levels shown in the laboratory analytical data. Using the MRL concentrations and our knowledge of process, we can assume the following about the soil and water:

- It would not be ignitable, corrosive nor reactive;
- Concentrations of underlying constituents would be below toxicity characteristic levels;
- Concentrations of underlying constituents would be below DEQ protective levels.

Based on review of the data and the above findings, DEQ has determined that the soil pile from the excavated sewer line and the soil and groundwater IDW generated during drilling and sampling activities at the ZY Mobility site do not exhibit characteristics of a hazardous waste. The concentrations of detected dry cleaner solvents in the water and soil samples are below the DEQ's generic Construction and Excavation and Construction Worker RBCs, respectively. The soil does not pose an unacceptable risk to industrial worker exposure under the waste management scenario proposed. If this soil is disposed of at a hazardous waste permitted Subtitle C or a solid waste permitted Subtitle D lined landfill that DEQ has approved for this purpose, the waste will be considered to no longer contain hazardous waste. Similarly, if this water is discharged, with the approval of the sanitary sewer authority, to the collection system for its publicly owned treatment works [or "transported to (specified facility) and managed in its CWA permitted wastewater treatment unit"], DEQ agrees this wastewater will no longer contain hazardous waste. If the waste or wastewater is not managed and disposed of in accordance with 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 regulations.

Appendix B

Example Scenarios: Conducting Contained-In Determinations

Scenario #1: Contaminated soil excavated from a Cleanup site will be managed at a solid waste permitted Subtitle D lined landfill

A cleanup site at a former dry cleaner is under DEQ oversight in the Voluntary Cleanup Program. As part of the cleanup, the responsible party excavated 200 tons of soil contaminated with tetrachloroethylene, which is determined to be an F002 listed hazardous waste. The soil was stockpiled temporarily on the site and representative soil samples were collected to characterize the levels of contamination in the pile. The consultant for the site submitted a request to DEQ for a No Longer Contained-In Determination for the soil. Soil sample results indicated the soil contained up to 8,000 µg/Kg (8 mg/Kg) total PCE. The DEQ project manager first determined that the soil was not a characteristic hazardous waste because the total PCE concentration is less than 20 times the TCLP criterion of 0.7 mg/L **OR** because analysis of the samples using the TCLP did not exceed PCE criterion of 0.7 mg/L. The DEQ project manager compared the PCE results to the Construction Worker RBC to evaluate whether the material contained a listed hazardous waste. The concentrations of PCE in the soil were well below the applicable RBC. The Project Manager also determined that the LDRs were not applicable in this case because the soil has been managed on-site in the area of contamination (recall that the point of generation is when the soil leaves the AOC). Because the levels of contamination in the soil are below the applicable RBC and the material did not exhibit a hazardous waste characteristic, DEQ approved disposal of the soil at a hazardous waste permitted Subtitle C or a solid waste permitted Subtitle D lined landfill.

Scenario #2: IDW consisting of 4 drums of water will be managed at a wastewater treatment facility

At the dry cleaner site in Scenario #1, four drums of investigation derived wastewater were collected during the installation and sampling of monitoring wells. A representative sample of the water found it contained PCE at 200 µg/L, making it an F-listed hazardous waste. The DEQ project manager knew that disposal to the POTW on-site was not an option; therefore, off-site disposal at a licensed waste treatment facility was selected as the next best disposal option. The concentration of PCE in the water was well below the Construction and Excavation Worker RBC. Because the levels of contamination in the water were below the applicable RBC, DEQ approved transport and disposal of the wastewater to a Clean Water Act permitted wastewater treatment facility in Portland.

Appendix C

Example Addendum: Extending a No Longer Contained-In Determination

Note: Use the most recent memo template, available on QNet.

Memorandum

Date: 2/10/2024

To: Project File, ZY Mobility, ECSI 1234

From: Joe Brown, Project Manager, WR Cleanup Program

Subject: No Longer Contained-In Determination for ZY Mobility Site, Medford, Oregon (ECSI 1234)

The purpose of this Addendum is to extend the findings of the No Longer Contained-In Determination previously filed for this site. The request to include an additional quantity of contaminated media aims to account for waste generated during the removal process associated with utility work in the second phase of development on this property.

The levels of contamination are expected to be the same or less than those previously identified in the original determination. DEQ Cleanup Project Manager Joe Brown (or "Eliot Ness, DEQ HW Inspector") verified this during review of ["the existing analytical record in support of site characterization to date" - or - "new sample results on this waste" - and - "which adequately support this waste characterization"]. Therefore, DEQ finds that all the conditions of the previous No Longer Contained-In Determination are applicable.

Based on the proposed work and the size of the excavations, it is estimated that 50 to 100 tons of soil will be removed. The project requests approval to manage up to 150 tons under the conditions outlined in the previous approval. DEQ approves this NLCI determination under the following conditions. The soil must be disposed at a hazardous waste permitted Subtitle C or a solid waste permitted Subtitle D lined landfill with approval of the landfill operator. Copies of the disposal receipts must be submitted to DEQ. If the waste or wastewater is not managed and disposed of in accordance with DEQ's conditions of approval, the 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 regulations.

9. Record of revisions to directive

| Revision | Date | Changes | Editor(s) |
|-----------------|---------|--|---|
| Entire document | 12/2019 | Clarification of existing procedures. Updates to templates. Addition of an example memo evaluating whether an existing NLCI approval will be granted to additional wastes of the same type generated on the same site. | Jay Collins, Audrey O'Brien, et al. |
| Entire document | 06/2024 | <ul style="list-style-type: none"> • Risk-Based Concentration: For soils, the RBC of 'Occupational' was changed to 'Construction Worker'. This change provides increased flexibility which in turn may expedite No Longer Contained-In Determinations and subsequent removals while still being protective of human health and the environment. • Alternative RBSs: Introduction of the possibility for DEQ toxicologists to endorse alternative RBCs under certain circumstances, particularly for soils with naturally occurring metals within natural background ranges. HW staff have the final approval for any alternative RBC. • Treatment requirements: Emphasized that the No Longer Contained-In Determination can be made irrespective of the treatment status of the contaminated media, clarifying that media can be considered NLCI regardless of treatment completion. • Area of Contamination Policy: The provided definition of AOC was modified to make clear that defining and determining the AOC before requesting a NLCI Determination is crucial for ensuring that waste management activities remain compliant and effective within RCRA guidelines. • Addition of the descriptor 'lined' for Subtitle D landfills: It is important to explicitly state this requirement because Oregon has some older Subtitle D landfills without linings which do not meet the current protective standards required for NLCI waste disposal. This clarification is found throughout the document. | Bart Collinsworth, Killian Condon, Rich Duval, Alex Bertolucci, Ellie Brown |

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|-----------------------------------|--------|---|---------------|
| | | <ul style="list-style-type: none"> • General clarifications: Some sections were reworded to improve clarity and readability without altering the original meaning of the text. • Appendices updates: The examples and templates provided in the appendices were updated to reflect the above changes. | |
| All of document except appendices | 7/5/24 | Reviewed for clarity and consistency with DEQ style guide. Track changes turned on for proposed edits or comments used. | Lauren Wirtis |