

STATE OF DELAWARE

Guidance for Soil / Material Reuse at and from Sites/ Facilities Regulated by the Hazardous Substance Cleanup Act (HSCA)



**State of Delaware
Department on Natural Resources and Environmental Control (DNREC)
Division of Waste & Hazardous Substances
Remediation Section
391 Lukens Drive
New Castle, DE 19720
(302) 395-2600
(302) 395-2601 FAX**

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1.0 Introduction

This Guidance describes the reuse of soil/material on or originating from sites/facilities regulated by the DNREC through the implementation of the Hazardous Substances Cleanup Act (HSCA) and additionally, the reuse of soil/material originating from a HSCA-regulated site/facility onto any other real property. The intent of this Guidance is to provide a framework for the safe and efficient reuse of suitable soils/materials that do not create an unacceptable risk to human health or the environment through its reuse (surface and/or subsurface applications). Soil/material may be considered for reuse, provided it is consistent with this Guidance. The prior written approval of DNREC should be obtained before deviating from this Guidance.

This Guidance applies to soil/material, including, but not limited to, soil, crushed concrete, etc., proposed for transport from any real property for reuse on a site/facility within any remediation program governed by the HSCA. This includes:

- Sites/facilities for which a Certification of Completion of Remedy (COCR) has been issued, but the site has yet to be fully developed for the intended use as stated in the Final Plan of Remedial Action, e.g., constructed residential or commercial facilities, and
- Sites for which there are Long-Term Stewardship requirements. This Guidance also applies to soil/material from a site/facility within a remediation program governed by the HSCA proposed for reuse on any real property that is not governed by the HSCA.

This Guidance specifically *excludes* soil/material excavated at a HSCA-site that is proposed for reuse at the *same* HSCA site. In this case, soil reuse should be addressed in accordance with a DNREC-approved Final Plan of Remedial Action.

DNREC will not approve the following reuse options:

- 1) Soil/material that contains Persistent, Bio-accumulative, and Toxic (PBT) contaminants, at any detectable concentrations, to be moved and used as surface soil in watersheds that have 303d listings¹ for those specific PBT contaminants, e.g., PCBs, mercury, PFAS [PFOA, PFOS], DDT, chlordane, and dieldrin; or
- 2) Soil/material with observable free product in it.

It is critical that destination sites/facilities are adequately characterized prior to any import of soil/material in accordance with this Guidance. Determination of acceptability of reuse of any

• ¹ State of Delaware Integrated Report: 305(b) Report and 303(d) List

soil/material is predicated upon the risk compatibility with the intended use of the destination site/facility and extent of placement on the site/facility. In the absence of a defined reuse scenario at the destination site/facility, this Guidance establishes residential reuse as the default standard that the soil/material should meet.

With respect to this Guidance, each Operable Unit at a site with individual Final Plans of Remedial Action will be considered separate sites.

2.0 Soil/Material Data Criteria

DNREC will accept and review supporting data specifically representative of the soil/material proposed for reuse, e.g., same stockpile to which no additional soil/material will be added prior to reuse, exact depth interval(s) if soil/material remains in-situ, provided: 1) data was generated within one year of the written request for reuse, and 2) there have not been any releases of a hazardous substance onto the soil/material since the data was collected. Data collected in excess of one year and/or generated by a non-HSCA approved laboratory may also be considered for use in the evaluation, provided the requesting party is able to provide the complete data package, including all raw data and a case narrative, to DNREC for review, as well as information about the source property's use/operational history and condition, preceding and subsequent to sample collection.

For HSCA-regulated sites/facilities, by default, the proposed sampling plan should follow the guidance provided below. However, data obtained during a Remedial Investigation (or DNREC-approved equivalent) may be utilized for the reuse evaluation and deemed sufficient or it may need to be supplemented with additional sample data for a complete evaluation of the reuse proposal. For soil proposed for reuse at real property not regulated by the HSCA, the sampling plan should, at a minimum, be executed in accordance with the frequency listed in the table below.

3.0 Soil/Material Sampling Plan

Sampling of native rock material is unnecessary provided all of the following:

- Comprised of less than 10% fines
- Generated and directly coming from a commercial quarry; and
- Not visibly impacted by a hazardous substance release

Otherwise, DNREC will consider soil/material for reuse provided that it is adequately characterized. Adequate characterization includes analysis for Target Analyte List and Target Compound List (TAL and TCL) parameters. All analytical methods and data quality objectives proposed shall satisfy the current Standard Operating Procedures for Chemical Analytical

Programs (SOPCAP), the Human Health Risk Assessment (HHRA) Guidance, Ecological Risk Guidance, and any other applicable guidance or policy documents. **Samples may be chemically screened at the DNREC-RS laboratory or a HSCA-approved laboratory.** Based on the results, DNREC will determine whether all or a subset of the samples shall undergo confirmatory analysis by a HSCA-approved laboratory. In accordance with the HHRA Guidance, a sufficient number of samples shall be collected and analyzed in order to perform a HHRA for the intended reuse of the soil/material. All of this information supports the need to conduct appropriate risk assessment for placement at the destination site/facility.

For soil/material on sites/facilities that have previously been characterized as part of a recent investigation, DNREC may approve a reduction in the default sampling frequency below. Ultimately DNREC will determine if the soil/material is sufficiently characterized and meets the criteria for reuse on the destination site/facility.

3.1 Default Discrete Sampling

The minimum number of discrete samples to be taken for volumes of soil/material proposed for reuse should follow the table below:

Proposed Volume (cubic yards)	Default Sampling (# of samples)	Proposed Volume (cubic yards)	Default Sampling (# of samples)
0 to 20	1	900.1 to 1,000	14
20.1 to 40	2	1,000.1 to 2,000	15
40.1 to 60	3	2,000.1 to 3,000	16
60.1 to 80	4	3,000.1 to 4,000	17
80.1 to 100	5	4,000.1 to 5,000	18
100.1 to 200	6	5,000.1 to 6,000	19
200.1 to 300	7	6,000.1 to 7,000	20
300.1 to 400	8	7,000.1 to 8,000	21
400.1 to 500	9	8,000.1 to 9,000	22
500.1 to 600	10	9,000.1 to 10,000	23
600.1 to 700	11	10,000.1 to 11,000	24

700.1 to 800	12	Volumes greater than 11,000	24 + 1 per 1,000 cubic yards
800.1 to 900	13		

3.2 Site-Specific Sampling Plan

In lieu of the default sampling plan above, the HSCA consultant for the party (or parties) proposing the reuse may elect to propose a site-specific sampling plan to DNREC for review. Any site-specific sampling plan shall be submitted to the DNREC project officer for the proposed destination site/facility, in writing, at least two weeks prior to conducting site-specific sampling. If the source property is also a site/facility, the project officer for that site/facility must also be copied on the correspondence. Prior to sampling soil/material proposed for reuse in accordance with a site-specific sampling plan, one written approval signed by both the project officer from the source and the project officer from the destination site/facility must be obtained. This approval will be separate from the one issued for the ultimate soil/material reuse proposal.

4.0 Soil/Material Reuse Evaluation Criteria

4.1 HSCA Site/Facility Destination

For reuse proposals of soil/material on a site/facility regulated under the HSCA, all of the following criteria must be met in order to obtain DNREC approval:

- 1) ***Consistent with Final Plan(s) of Remedial Action:*** The reuse of the soil/material from the source property on the destination site shall be consistent with any Final Plan of Remedial Action (or Interim Action Work Plan) that may exist for each site;
- 2) ***No Hazardous Waste:*** The soil/material shall not be a Hazardous Waste as defined by the Delaware Regulations Governing Hazardous Waste (DRGHW), Part 261;
- 3) ***No Solid Waste:*** The soil/material shall not contain solid waste, including, but not limited to, asphalt, trash, or yard-type waste as defined by Delaware Regulations Governing Solid Waste (DRGSW);
- 4) ***Evaluation of Analytical Results:*** The evaluation of the results should be performed using the following steps:

Step 1: Compare the contaminant concentrations of the soil/material (95% upper confidence limit (UCL) or maximum as appropriate) to the applicable HSCA Screening Levels.

- a. If the 95% UCL or maximum concentrations do not exceed the Screening Levels, further evaluation is not necessary, and the soil may be proposed for reuse
- b. If any of the 95% UCL or maximum concentrations do exceed the Screening Level, then proceed to Step 2.

Step 2: Perform a quantitative risk assessment, using the contaminant concentrations of the source soil/material comprehensively with the soil/material at the destination site, in a manner consistent with the current risk guidance under HSCA. The risk assessment must demonstrate that reuse of the proposed soil/material at the destination site does not create an unacceptable risk, i.e., cancer risk greater than 1×10^{-5} and/or Hazard Index greater than 1.

- 5) ***Evaluation of Potential for Soil to Groundwater Migration:*** Perform an evaluation documenting that the placement of this material will not cause unacceptable contaminant migration and impact to groundwater. For example, samples may be analyzed by Synthetic Precipitation Leaching Procedure (SPLP), or there can be a comparison of soil sample results to the current EPA Regional Screening Levels for Soil to Groundwater.
- 6) ***Owners' Acknowledgement:*** The owners of both properties/sites will acknowledge in writing to DNREC-RS that they are aware of the quality of the soil/material proposed for reuse based on the available data. The documentation is not considered to be an admission of liability associated with the acceptance and placement of the material on the destination property. If the soil/material is coming from a commercial rock quarry or commercial borrow pit, documentation of the material composition and specifications on the business letterhead may be submitted in lieu of the signature of the property owner.

4.2 Non-HSCA Site/Facility Destination

For reuse of soil/material from a HSCA site/facility on a real property not regulated under the HSCA the consultant should independently confirm that the sample results are below the current HSCA Screening Levels.

5.0 Soil/Material Reuse Proposal Submission

5.1 HSCA Site/Facility Destination

For soil/material proposed for reuse at a HSCA site/facility, the party proposing the soil/material reuse is responsible for presenting a complete submission that shows that the reuse meets all of the appropriate criteria **prior to transport**. The reuse proposal will be submitted to the DNREC- RS project officer for the proposed destination site **at least two weeks prior to the intended date of transport**. A complete submission shall include a site location map, a map of the sampling locations, Phase II Environmental Site Assessment, or equivalent investigation (if previously conducted), the date samples were collected, associated laboratory data, comprehensive risk calculation (as needed), and a map of the intended final placement on the destination site, including if the soil/material will be placed on the surface or subsurface. If the source property is also a site/facility, the project officer for that site/facility should also be copied on the submission. **The requesting party must have a written approval from DNREC prior to the transport of the soil/material**. Complete submissions along with respective DNREC approvals shall be included within the final Remedial Action Completion Report, or equivalent, for the destination site/facility.

5.2 Non-HSCA Site/Facility Destination

For reuse of soil/material from a HSCA site/facility considered for reuse on a real property not regulated under the HSCA, DNREC will not require a written reuse proposal. The reuse will be at the consultant and both property owner's discretion.

6.0 "Other" Soil/Material Reuse Determinations

DNREC-RS will evaluate on a case-by-case basis, any soil/material that does not fit into the above criteria.

An approval granted by DNREC for soil/material reuse is not to be construed as a substitute for any other permit or permission required by other DNREC programs or agencies for the activity. Soil/material reuse approval applies directly and only to the environmental (contaminants') suitability of the proposed soil/material. After soil/material from a source property has been approved for reuse, at the discretion of DNREC, on a case-by-case basis, it may not need to be re-sampled in the future to determine if the source property can be used as a continued source, provided there has not been a release of a hazardous substance at the source property subsequent to its characterization under HSCA.

7.0 Transportation Requirement for Soil/Material from a HSCA Site to a Licensed Solid Waste Disposal Facility

Consistent with the Delaware Regulations Governing Solid Waste, solid waste that is removed from a property must be transported to a permitted solid waste facility by a hauler holding a valid solid waste transporter permit. If soil/material is deemed unsuitable or unusable on a HSCA Site and requires disposal at a permitted solid waste facility, a permitted solid waste transporter is to be used.

*For additional information, contact the DNREC Compliance and Permitting Section.

<https://dnrec.alpha.delaware.gov/waste-hazardous/management/solid/transporter/>

This Guidance replaces “Policy for Presumptive Soil Re-use” dated September 21, 2004, and May 4, 2006 and the Policy for Soil/ Material Re-use at HSCA Regulated Sites from May 19, 2010.

8.0 References

- State of Delaware Integrated Report: 305(b) Report and 303(d) List
<https://dnrec.alpha.delaware.gov/watershed-stewardship/assessment/reports/>
- Standard Operating Procedures for Chemical Analytical Programs under the Hazardous Substance Cleanup Act
<https://documents.dnrec.delaware.gov/dwhs/SIRB/Documents/HSCA%20SOPCAP.pdf>
- Guidance for the Human Health Risk Assessments under the Hazardous Substance Cleanup Act
<https://documents.dnrec.delaware.gov/dwhs/SIRB/Documents/Human%20Health%20Risk%20Assessment%20Guidance.0720.pdf>
- Hazardous Substance Cleanup Act Screening Level Table Guidance
<https://documents.dnrec.delaware.gov/dwhs/remediation/HSCA-Screening-Level-Table-Guidance.pdf>
- EPA Regional Screening Levels
<https://semspub.epa.gov/work/HQ/403652.pdf>
- Solid and Hazardous Waste Transporter Permits
<https://documents.dnrec.delaware.gov/dwhs/remediation/HSCA-Screening-Level-Table-Guidance.pdf>