

Beneficial Use of Solid Waste Determination Evaluation Form



State of Oregon
Department of
Environmental
Quality

Applicant: Port of Portland

BUD#:20150728

Solid Waste: Slightly contaminated soil

Summary of Proposed Beneficial Use: Structural or non-structural fill at a Business Park (construction material)

Reviewer: Heather Kuoppamaki

Date: 08/14/2015

Tier: One Two Three

Beneficial Use of Solid Waste

Beneficial use of solid waste is a sustainability practice that may involve using an industrial waste in a manufacturing process to make another product or using a waste as a substitute for construction materials.

The environmental benefits of substituting industrial waste materials for virgin materials includes conserving energy, reducing the need to extract natural resources and reducing demand for disposal facilities.

Oregon Administrative Rules (OAR) 340-093-0280 - 0290 establish standing beneficial uses and a process for DEQ review of case-specific beneficial use proposals. Under these rules, DEQ may issue a beneficial use determination as an alternative to a disposal permit for proposals that meet the rule criteria. If approved, once a beneficial use determination is issued, DEQ no longer regulates the waste as a solid waste as long as the waste is used in accordance with the approved beneficial use determination.

Beneficial Use Determination Evaluation Summary

Yes, the Beneficial Use of this solid waste meets all the case-specific performance criteria listed below and is approved.

No, the Beneficial Use of this solid waste does not meet all the case-specific performance criteria listed below and is not approved.

Notes: DEQ received a beneficial use application from Port of Portland on July 28, 2015 and additional information requested on August 14, 2015. Application materials were prepared by Apex Companies LLC and the Port of Portland. DEQ has evaluated the application and sampling results provided and agrees that soil from the NE Mt Hood extension and widening project can be transferred and used as fill material at the Gresham Vista Business Park. The soil to be placed at Gresham Vista Business Park meets acceptable occupational exposure risk criteria and will not further impact surface water, groundwater, or sensitive environments.

The Beneficial Use of the fill material meets all case-specific performance criteria listed as follows.

Beneficial Use of Solid Waste Determination Evaluation Form

Applicant: Port of Portland

BUD #:20150728
Solid Waste: Soil
Date: 08/14/2015

Case-Specific Beneficial Use Performance Criteria:

DEQ may approve an application for a case-specific beneficial use of solid waste only if all the following performance criteria are addressed: 1) Characterization of the Solid Waste; 2) Productive Beneficial Use of the Solid Waste; and, 3) The affect of the Proposed Beneficial Use on Public Health, Safety, Welfare and/or the Environment.

1) Characterization of the Solid Waste

Did the applicant characterize the solid waste and proposed beneficial use sufficiently to demonstrate compliance with the rules for case-specific beneficial use determinations (OAR 340-093-0280) by submitting required information for the appropriate tier? (See tier sections below for detailed characterization information.)

Yes No

Notes: The soil will be used as construction fill material at a nearby property. It is an effective substitute for fill material obtained from another location. With the general industrial land use, only occupational or construction worker exposure is anticipated.

Was the following information submitted for DEQ review and how adequate was it?

Tier 1 Applicable Not applicable

- Did the applicant provide an adequate description of the material proposed for beneficial use, the manner of generation and the estimated quantity to be used beneficially each year? Yes No

Notes: The material is excavated soil generated during the NE Hood Avenue extension in Gresham, Oregon. Site history provided in a Soil Characterization Report indicates the project area was historically used for single family residence and agriculture. The soil was analyzed for hydrocarbons, 17 Metals, and Organochlorine Pesticides (OCP). Six soil samples were obtained along the proposed excavation area. Four of the shallow soil samples (within 2 feet of the surface) contained OCP's (dieldrin, DDE and DDT) at concentrations above clean fill criteria but below DEQ Occupational and Construction Worker Risk Based Concentrations. Antimony and Selenium were not detected; however, the reporting limits were above the clean fill criteria but below the DEQ Occupational and Construction Worker RBCs. The remaining metals analyzed for were either not detected or detected below background concentrations. . Hydrocarbons were not detected. The estimated quantity of material is 2,000 cubic yards. This is a one time generation of soil.

- Did the applicant provide an adequate description of the proposed beneficial use and justify how the proposed use is beneficial? Yes No

Notes: The soil will be used as structural and non-structural fill within a business park development. Therefore the DEQ Occupational / Construction Worker RBCs are reasonable thresholds.

- Did the applicant provide a sufficient comparison of the chemical and physical characteristics of the material proposed for beneficial use with the material it will replace?

Yes No

Notes: The material will replace typical construction fill.

- Did the applicant successfully demonstrate compliance of the proposed beneficial use with the performance criteria in OAR 340-093-0280 based on knowledge of the process that generated the material, properties of the finished product, or testing? Yes No

Beneficial Use of Solid Waste Determination Evaluation Form

Applicant: Port of Portland

BUD #:20150728
Solid Waste: Soil
Date: 08/14/2015

Notes: Includes the three criteria listed in OAR 340-093-0280. The soil contains only trace levels of organic chemicals so is not ignitable, corrosive, or reactive.

- If required, did the applicant provide any other DEQ required information to evaluate the proposal?
 Yes No NA

Tier 2 Applicable Not applicable

- Did the applicant submit all the information required for a Tier 1 application? Yes No

Notes: See above

- Did the applicant submit adequate sampling and analysis to make a determination of suitability for beneficial use? (Note: The analysis must provide chemical, physical, and biological characterization of the material proposed for beneficial use and identify potential contaminants in the material or the end product, as applicable.) Yes No

Notes: An attached Soil Characterization Report provided this information.

- When applicable, did the applicant provide a risk screening comparing the concentration of hazardous substances in the material to existing, DEQ approved, risk-based screening level values, and demonstrate compliance with acceptable risk levels? Yes No

Notes: The material will only be placed on lots that are zoned for industrial use. The soil will not be placed on lots 7 or 11 which are not zoned for industrial use. The material meets both the RBC for Occupational and Construction Workers.

- When applicable, did the applicant supply the location or type of land use where the material will be applied, consistent with the risk scenarios used to evaluate risk? Yes No

Notes: The material will be applied to lots that are zoned for industrial use at the Gresham Business Park. The soil will not be placed on lots 7 or 11 which are not zoned for industrial use.

- When applicable, did the applicant supply contact information of property owner(s) if this is a site-specific land application proposal, including name, address, phone number, e-mail, site address and site coordinates (latitude and longitude)? Yes No NA

Notes: Property owners are the Port of Portland and the City of Gresham. Contact information for both owners (email) was provided. The proposed application site was provided.

- Did the applicant supply an adequate description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment? Yes No

Notes: Dust control and sedimentation control will be implemented. Erosion control BMPs will meet the City of Gresham Public Works Standards.

Tier 3 Applicable Not applicable

- Did the applicant submit all the information required for a Tier 1 & Tier 2 application? Yes No
- Did the applicant provide an adequate discussion of the justification for the proposal? Yes No
- Is there an estimated length of time that would be required to complete the project, if it is a demonstration? Yes No N/A

Beneficial Use of Solid Waste Determination Evaluation Form

Applicant: Port of Portland

BUD #:20150728
Solid Waste: Soil
Date: 08/14/2015

- If it is a demonstration project, are their methods proposed to ensure safe and proper management of the material? Yes No N/A

2) Productive Beneficial Use of the Solid Waste

Has the applicant demonstrated that the proposed beneficial use is a productive use of the material by providing information substantiating the criteria listed below?

Yes No

Notes: The soil will be used as construction fill material at a nearby property. It is an effective substitute for fill material obtained from another location. With the general industrial land use, only occupational or construction worker exposure is anticipated.

- Did the applicant successfully identify or demonstrate a reasonably likely proposed beneficial use for the material that is not speculative? Yes No

1. Identified Use:

Has the applicant clearly stated what the waste is going to be used for, that the waste is compatible with that use and the proposed quantity is necessary?

Yes No

2. Reasonably Likely Use:

Has the applicant identified, with supporting documentation, the timeframe within which this use is likely to occur (e.g., zoning info, master plan for development, letters from local jurisdictions, etc)?

Yes No

3. Not Speculative:

For Land application - has this material been used at other sites for the same purpose, is the material feasible for use at this site for this purpose, or has the applicant identified a known potential for this use at this site?

Yes No N/A

For uses other than land application - has the material been used in a product before, is the material feasible for use in a product, or has the applicant identified a known potential for use in this product?

Yes No N/A

Notes: The soil will be used as construction fill material at a nearby property. It is an effective substitute for fill material obtained from another location. With the general industrial land use, only occupational or construction worker exposure is anticipated.

- Is the use a valuable part of a manufacturing process, an effective substitute for a valuable raw material or commercial product, or otherwise authorized by the Department and does not constitute disposal? Yes No

Notes: The use of this material is an effective substitute for construction fill that would likely be imported from farther away.

- Is the use in accordance with applicable engineering standards, commercial standards, and agricultural or horticultural practices? Yes No

Notes: The soil will be used as fill in accordance with development permits from the appropriate regulating authorities.

**Beneficial Use of Solid Waste Determination
Evaluation Form**

Applicant: Port of Portland

BUD #:20150728
Solid Waste: Soil
Date: 08/14/2015

3) Effect of Proposed Beneficial Use on Public Health, Safety, Welfare and/or the Environment

Has the applicant demonstrated the proposed beneficial use will **not** create an adverse impact to public health, safety, welfare, or the environment, by providing information substantiating compliance with the criteria listed in the bullet list below?

Yes No

Notes: Concentrations of metals were all below background. Hydrocarbons were not detected. Organo Chlorine Pesticides in the soil were all below RBC thresholds for occupational or construction workers. The fill material will replace material that would have to be imported, likely from farther away. The material will be used as fill material in a business park so will not impact a sensitive environment.

- Has the applicant demonstrated that the material is not a hazardous waste under ORS 466.00?
 Yes No

Notes: Soil concentrations presented in the Soil Characterization Report indicate this material is not a hazardous waste.

- Has the applicant demonstrated that until the time this material is used according to a beneficial use determination, the material will be managed, including any storage, transportation, or processing, to prevent releases to the environment or nuisance conditions?

Yes No

Notes: The material will be managed according to the City of Gresham Public Work Standards, specifically the Erosion Prevention and Sediment Control Manual, which provides best management practices to reduce water quality impacts due to land-disturbing activities.

- Has the applicant demonstrated that hazardous substances in the material, if any, meet one of the criteria in the bulleted list below?
 Yes No NA
 - Hazardous substances do not significantly exceed the concentration in a comparable raw material or commercial product;
 - Hazardous substances do not exceed naturally occurring background concentrations; or
 - Hazardous substances will not exceed acceptable risk levels, including persistence and potential bioaccumulation, when the material is managed according to a beneficial use determination.

Notes: Soil Concentrations are not above RBC criteria for occupational or construction workers.

- Has the applicant demonstrated that the proposed beneficial use will not result in the increase of a hazardous substance in a sensitive environment, such as a park, wildlife refuge or wetland?

Yes No

Notes: Material will be used as fill beneath a business park.

- Has the applicant demonstrated that the proposed beneficial use will not create objectionable odors, dust, unsightliness, fire, or other nuisance conditions?

Yes No

Notes: The material will be used for construction fill material and will be managed in accordance with the City of Gresham Public Works Standards. No additional nuisance conditions are expected.

**Beneficial Use of Solid Waste Determination
Evaluation Form**

Applicant: Port of Portland

BUD #:20150728
Solid Waste: Soil
Date: 08/14/2015

- Has the applicant indicated that the proposed beneficial use will comply with any other applicable federal, state, and local regulations?

Yes No

Notes: DEQ stormwater construction permits are not required as the construction area is less than 1-acre. The project will be performed in accordance with the City of Gresham Public Works Standards. DEQ is not aware of other permits needed to move soil from the excavation area to the Gresham Vista Business Park site.

4) Public Involvement Evaluation (Note: this is not a Beneficial Use evaluation criterion)

Determine a public involvement recommendation using the current, **Guidance to DEQ Solid Waste Program Staff and Managers on Public Notice & Participation.**

- Is public notice and participation being recommended for this application? Yes No

Notes: This slightly contaminated soil will be beneficially used at an industrial business park. DEQ has not received questions or concerns from the public regarding this type of proposed use for similar projects. DEQ does not expect this proposed beneficial use to generate significant public interest.