

Beneficial Use of Solid Waste Determination Evaluation Form



State of Oregon
Department of
Environmental
Quality

Applicant: West Side Quarry LLC

BUD#: 20210727

Solid Waste: Asphalt roofing shingles used as a parking lot pad at Westside Quarry

Summary of Proposed Beneficial Use: Use shingle waste as feedstock for a hot asphalt batch plant. Asphalt manufactured from this feedstock will be used to construct roads and pads at Laurelwood Quarry.

Reviewer: Jeremy Fleming

Date: 7/27/2021

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: The applicant met the Case-Specific Beneficial Use Performance Criteria.

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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 effect 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

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 proposed material is asphalt shingles that have been shredded and deposited onto the ground for use as a parking pad for road construction equipment. The material has been used as a parking pad for several years. Inspection of the parking pad found evidence of small automotive fluid leaks from the equipment onto the pad. The pad is approximately six to eight inches thick and comprises a total volume of approximately 700 cubic yards.

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

Notes: The recovered parking pad material will be used exclusively as a feedstock for a hot asphalt batch plant under the control of West Side Quarry's owner. Asphalt manufactured from this feedstock will be used to construct roads and pads at Laurelwood Quarry. This material is similar to recycled asphalt shingles that are allowed to be used for a similar use under the Recycled Asphalt Shingles standing beneficial use determination.

- 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: Westside Quarry provided Safety Data Sheets that describe the composition of the asphalt shingles and the automotive fluids (engine oil and hydraulic fluid) that have been leaked onto the parking pad. The asphalt shingles are identical to asphalt shingles that are allowed to be used to manufacture asphalt under the standing BUD. The type and amount of automotive fluid contamination is substantially similar to recycled asphalt pavement that is allowed to be used to manufacture asphalt under the standing BUD.

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- 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

Notes: The waste satisfies all conditions in OAR 340-093-0280. The use of asphalt shingles previously used as a parking lot pad for production of new asphalt is productive with demonstrated benefits for hot asphalt batch plant operators as an effective feedstock substitute. The materials are not hazardous waste under ORS 466.005. The automotive fluid contamination on the parking pad is in low enough concentrations such that the risk of levels for persistence or bioaccumulation is minimal. The beneficial use of this waste will not create objectionable odors, dust or other nuisance conditions.

Westside Quarry proposes to use the used asphalt shingles at a percentage rate of no greater than 5-6% in the base course and 5% in the top course. Westside Quarry asserts that the use of the waste at this rate meets or exceeds the specifications provided by the engineer at Laurelwood Quarry responsible for the construction of on-site roads and pads.

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

Notes: NA

Tier 2 Applicable Not applicable

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

Notes: See Tier 1 summary 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: NA. The waste material does not contain hazardous substances significantly exceeding the concentration in a comparable commercial product (RAS and RAP). For this reason, DEQ is not requiring West Side Quarry to submit sampling results or laboratory analysis of this waste material.

- 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: NA. The waste material does not contain hazardous substances significantly exceeding the concentration in a comparable commercial product (RAS and RAP). For this reason, DEQ is not requiring West Side Quarry to submit sampling results or laboratory analysis of this waste material.

- 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

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Notes: The asphalt manufactured from the parking pad asphalt shingles will be used to build roads and parking pads at the Laurelwood Quarry exclusively.

- 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

Notes: Yes. The BUD applicant is the owner of both the West Side Quarry and the Laurelwood Quarry.

- 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: Yes. DEQ is requiring that the parking pad shingles be removed from West Side Quarry prior to October 15, 2021 in order to perform this work prior to the start of the rainy season. The waste materials will be transferred to Laurelwood Quarry and placed within the designated "Asphalt Shingle Storage Area". The use of the waste as feedstock in the hot asphalt batch plant must be done in accordance with the Air Contaminant Discharge Permit (AQGP-007) that is issued to the owner of both the Laurelwood Quarry and the West Side Quarry.

Tier 3 Applicable Not applicable

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:

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

This criterion consists of three parts.

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?

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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:

- 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 is an effective substitute for recycled asphalt shingles in the production of asphalt in a hot-asphalt batch plant.

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

Notes: West Side Quarry proposes to use the used asphalt shingles at a percentage rate of no greater than 5-6% in the base course and 5% in the top course. West Side Quarry asserts that the use of the waste at this rate meets or exceeds the specifications provided by the engineer at Laurelwood Quarry responsible for the construction of on-site roads and pads.

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

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

Notes:

- 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: Yes. DEQ is requiring that the parking pad shingles be removed from West Side Quarry prior to October 15, 2021 in order to perform this work prior to the start of the rainy season. Performing the removal and transfer of this waste material in the dry season will minimize potential trackout from West Side Quarry. The use of the waste as feedstock in the hot asphalt batch plant must be done in accordance with the Air Contaminant Discharge Permit (AQGP-007) that is issued to the owner of West Side Quarry.

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- Has the applicant demonstrated that hazardous substances in the material, if any, meet one of the criteria in the bulleted list below? Yes No
 - 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:

- 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:

- 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 use of the waste as feedstock in the hot asphalt batch plant must be done in accordance with the Air Contaminant Discharge Permit (AQGP-007) that is issued to the owner of West Side Quarry. The AQ permit contains conditions requiring the permittee to not cause or allow air contaminants from any source related to the operation of the hot asphalt batch plant to cause nuisance conditions.

- Has the applicant indicated that the proposed beneficial use will comply with any other applicable federal, state, and local regulations? Yes No

Notes: Any uses must be done in accordance with DEQ's Air Quality Program, Oregon Department of Geology and Mineral Industries and local zoning regulations.

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
DEQ anticipates public interest in the community surrounding Laurelwood Quarry to be low. Therefore, DEQ is not issuing a public notice for this proposed beneficial use approval.