	Applicant:		Portland Guild Loft Partner	rs, LLC		
	BUD#:	BU	BUD-20150306			
	Solid Waste:		Soil excavated from Riverscape Lot 1 (formerly Port of Portland Terminal One South, T1S)			
	Summary of a	Summary of approved beneficial uses requested by applicant:				
te of Oregon partment of vironmental ality	for a Solid 40,000 cub NW Portla	Fore Property Company on behalf of Portland Guild Loft Partners, LLC is applying for a Solid Waste Beneficial Use Determination (BUD) to relocate approximately 40,000 cubic yards of partially contaminated soil from the Riverscape Lot 1 site in NW Portland to the Port of Portland Troutdale Reynolds Industrial Park (TRIP) for beneficial use as industrial site development construction fill and/or surcharge material.				
	Reviewer:		Daniel Hough, DEQ Northwest Region	Date:	May 29, 2015	
	Tier:		One ⊠ Two □ Three			

В

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 Rule (OAR) 340-093-0280 through 340-093-0290 establishes 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. Once a beneficial use determination is issued, DEQ no longer regulates material used in accordance with the approved beneficial use(s) as a solid waste.

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	Identify if the applicant met the three performance criteria (OAR 340-093-0280, Case-Specific Beneficial Use Performance Criteria), or identify any deficiencies in the application and any DEQ recommendations for further action for the beneficial use application.

Applicant:	Portland Guild Loft Partners, LLC
BUD #:	BUD-20150306
Solid Waste:	Soil excavated from Riverscape Lot 1
Date:	May 29, 2015

DEQ received a beneficial use application from Portland Guild Loft Partners, LLC on March 06, 2015. Application materials were prepared by Golder Associates. DEQ has evaluated the application and sampling results provided and agrees that soil from Riverscape Lot 1 can be transferred and used as fill and/or surcharge material at the TRIP site. The soil to be placed at TRIP meets acceptable occupational exposure risk criteria and will not further impact surface or groundwater. The soil also meets the requirements of the TRIP site Contaminated Media Management Plan.

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

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

	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.)
	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?
	Fore Property Company (Fore) proposes to relocate approximately 40,000 cubic yards of partially contaminated soil from the Riverscape Lot 1 site in NW Portland to the Port of Portland Troutdale Reynolds Industrial Park (TRIP) for beneficial use as industrial site development construction fill and/or surcharge material. The source of soil is Lot 1 of the Riverscape property, approximately 1.49 acres of vacant land bordered by the Willamette River, the Shoreline Condominiums, the Fremont Bridge (Interstate 405) and NW Front Ave. This soil is from Terminal 1 South (DEQ Environmental Cleanup Site Information [ECSI] No. 2642) which was created by adding dredged material as fill to the shoreline of the Willamette River in the early 1900's. Residual soil contamination was discovered at T1S and suspected to be from surface spills and a former dry well. In 2002-2003 all structures were removed and areas of known soil contamination were removed to meet DEQ and Environmental Protection Agency (EPA) standards. All excavated soil was transported to a Subtitle D solid waste disposal facility.

Did the applicant characterize the solid waste and proposed beneficial use sufficiently to demonstrate

Recent sampling events indicate the soil is primarily gravel with trace silty sand, sometimes concrete debris, for the upper 1 to 5 feet below ground surface (bgs) and medium brown silty sand with trace gravel from 5 to 18 feet bgs. Thin layers with trace amounts of gravel, concrete debris or black charred material were occasionally encountered in some borings. Two large pieces of wood were encountered in one boring, GP-10, at 12 and 16 feet bgs.

Applicant:	Portland Guild Loft Partners, LLC
BUD#:	BUD-20150306
Solid Waste:	Soil excavated from Riverscape Lot 1
Date:	May 29, 2015

Fore plans to develop Lot 1 into a multi-unit residential building with both surface and underground parking. The underground parking structure will require excavation to a maximum of approximately 18 feet bgs. Piers will be installed around the perimeter to a maximum depth of 60 feet bgs. Utility corridors will primarily be adjacent to the building and will vary from 2 to 18 feet in depth. Excavation for underground parking will include approximately 25,800 cubic yards of soil, pier installation will remove approximately 700 cubic yards of soil and utility installation will remove approximately 1,500 cubic yards of soil for a total of 28,000 cubic yards in situ (SERA 2014). Allowing for an estimated 30% swelling of the soil during excavation, this will generate approximately 36,500 cubic yards of soil. A portion of this soil will most likely be reused on site as backfill, however, this BUD application requests placement of a full 40,000 cubic yards as a conservative estimate.

Fore anticipates initiating excavation in April 2015, and completing excavation, soil removal and soil placement and stockpiling at TRIP during the remainder of calendar year 2015.

Did the applicant provide an		of the proposed	beneficial	use and	justify	now the
proposed use is beneficial?	☐ No					

The soil from the Lot 1 site will be used at the 693 acre TRIP site for fill needed in Phase II development improvements to create shovel ready large industrial lots that are rough graded, stubbed with utilities and associated mitigation already in place. This fill may be used by developers for surcharging their site for many months prior to building. This is necessary when building sites contain soils that are compressible, often found in low lying areas such as TRIP.

Soils brought on-site may be used to fill jurisdictional waters; however, prior to placement of these materials in or near jurisdictional areas, all appropriate authorizations will be obtained. At this time, the state natural resource permit (Department of State Land for removal fill authorization) has been received and the Federal natural resources permit (Army Corps of Engineers for 404 authorization) is pending for development of TRIP Phases II and III.

Bringing in this fill is part of the initiative to ensure readily available industrial sites in East Multnomah County as soon as possible. This approach will provide more certainty for a prospective developer to select the site, purchase the property and subsequently develop the site with as little down time as possible.

The TRIP site formerly contained an aluminum reduction plant (Reynolds Metals Company Facility [DEQ ECSI No. 154]), which was demolished in 2006. Due to soil and groundwater contamination from plant operations, the EPA placed the site on the Superfund National Priorities List (NPL) in December 1994. Contaminants associated with most areas of the site included fluoride, cyanide, and polycyclic aromatic hydrocarbons (PAHs). Additional contaminants, including heavy metals (arsenic, beryllium, lead and mercury) volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), semivolatile organic compounds, and asbestos were present in areas where aluminum manufacturing related activities resulted in localized releases into the ground.

Between 1995 and 2006, TRIP soils were cleaned up to acceptable risk-based standards for industrial use under the oversight of the EPA and DEQ with the understanding that certain areas of soil with residual contaminated media would require additional management. Groundwater-contaminated media is present onsite and an ongoing groundwater contamination treatment remedy is being implemented. Consequently, areas of both soil and groundwater with residual hazardous materials contamination remain at the site subject to use and activity restrictions and specific management requirements.

Applicant:	Portland Guild Loft Partners, LLC
BUD #:	BUD-20150306
Solid Waste:	Soil excavated from Riverscape Lot 1
Date:	May 29, 2015

All TRIP redevelopment needs to meet the requirements of the following:

- 1. EPA's Record of Decision (ROD), dated September 29, 2006;
- 2. The United States/Reynolds Metals Company Consent Decree, dated September 10, 2008, and its attached Scope of Work and a State of Oregon/Reynolds Consent Judgment, dated October 10, 2008;
- 3. Port of Portland Prospective Purchaser Agreement (DEQ-Port Consent Judgment [Mult. Co. Case No. 0712-015146]) entered 12/18/07
- 4. DEQ-Reynolds/Alcoa Consent Judgment (Mult. Co. Case No. 0810-14363) entered 10/10/06.
- 5. The recorded DEQ Easement and Equitable Servitude (EES), dated December 19, 2007; and
- 6. The Contaminated Media Management Plan (CH2M Hill and Alcoa, 2007) approved by DEQ and EPA.

DEQ's solid waste and cleanup staff have reviewed the proposal and agree that, in general, the soil sampling analytical results related to the Riverscape Lot 1 soil appear acceptable for use at the TRIP site and will meet the requirements of the ROD, consent judgments, EES and Contaminated Media Management Plan. Fore states that suspect soils will be separated out and sampled in accordance with the Soil Management Plan (SMP) and will be disposed of at a landfill if they do not meet the Occupational Risk-Based Concentrations for use at TRIP.

• 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? X Yes X No

Chemical characteristics:

The Riverscape Lot 1 soil is similar to soil at the TRIP site which has been left in place following remedial activities at TRIP. Cleanup activities at Riverscape were designed to meet construction and excavation worker risk-based screening levels stipulated by the DEQ Environmental Cleanup and Tanks Program, Risk-Based Concentrations for Individual Chemicals (2012). Soil used at TRIP from offsite sources must not exceed occupational human health risk criteria for direct contact (i.e. soil ingestion, dermal contact, or inhalation). Regional background concentrations are substituted as screening levels for metals when the regional background level is higher than the occupational screening level or when no occupational screening level is provided. Regional background concentrations apply to antimony, arsenic, chromium, selenium, thallium, and zinc.

Golder Associates has collected historical and new data to characterize the material and compare it with regional background levels for selected metals and occupational screening levels for all other contaminants of concern. The data is presented in Table 1 of the application. Comparisons of the data to occupational screening levels and regional background levels are detailed in Section 7.0 of the application.

Based on the data, the soil sampled appears to meet the requirements set forth by DEQ and the Port of Portland for fill from offsite sources which can be used at the TRIP facility. Soil will be field screened during excavation to address any unexpected contamination in accordance with the Soil Management Plan for the Riverscape Property. Should Riverscape encounter soils which do not meet the constituent requirements for TRIP, these soils will not be taken to TRIP and will be disposed of at a DEQ landfill permitted to accept contaminated soils.

A total of 13 samples were analyzed for gasoline, diesel, and oil-range petroleum hydrocarbons. Gasoline-range hydrocarbons were not detected in any of the samples. Diesel-range petroleum hydrocarbons were detected in one sample and oil-range petroleum hydrocarbons were detected in six samples. None of these detections exceeded the occupational screening levels

Applicant:	Portland Guild Loft Partners, LLC
BUD #:	BUD-20150306
Solid Waste:	Soil excavated from Riverscape Lot 1
Date:	May 29, 2015

Twelve samples were analyzed for the presence of selected metals. All 2015 samples were analyzed for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. One 1998 sample was analyzed for metals including antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, and silver. There were no detections of antimony, beryllium, selenium, or silver. Other metals were detected in some or all samples; however, no metals were detected above the relevant screening levels (occupational or regional background).

Ten samples were analyzed for the presence of PAHs. PAHs were not detected above occupational screening levels with the exception of benzo(a)pyrene. Benzo(a)pyrene was detected above the occupational screening level in 3 of the 10 samples with a maximum detection of 0.832 mg/kg compared to the 0.27 mg/kg occupational screening level. This maximum detection was encountered in Comp9-12_12-18 which was a composite from borings GP-9, GP-10, GP-11, and GP-12 all taken from depth 12 to 18 feet bgs. All other benzo(a)pyrene detections were below 0.35 mg/kg. The average benzo(a)pyrene detection across Lot 1 was 0.192 mg/kg, below the occupational screening level.

Five samples were analyzed for the presence of the 7 most common PCB Aroclors. No PCB Aroclors were detected in the soil samples. Four samples were analyzed for a broad spectrum of common VOCs. No VOCs were detected in any of the soil samples.

Cyanide, fluoride, and OCs were analyzed in 4 randomly selected samples in 2014 because they are of concern at the TRIP site. Cyanide was detected in one of the samples at a concentration of 0.165 micrograms per kilogram (μ g/kg), well below the occupational screening level of 610 μ g/kg. Fluoride was not detected in any of the samples. OCs were typically not detected and were never detected above the occupational screening levels.

Based on these data, there are no significant exceedances of occupational screening levels or regional background levels within the planned extent of excavation for the Lot 1 project. Overall, the soil appears to meet the requirements for fill from offsite sources which can be used at the TRIP facility. Fore states that suspect soils will be separated out and sampled in accordance with the Soil Management Plan (SMP) and will be disposed of at a landfill if they do not meet the Occupational Risk-Based Concentrations for use at TRIP.

Physical characteristics:

Based on physical characteristics, the Lot 1 soil is similar to soil the at the TRIP site which has been left in place following remedial activities. As per the Port's requirements, Fore will segregate and manage separately any strippings, organic or other putrescible material; asphalt or asphalt debris, construction debris, and any concrete over four inches in diameter.

•	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? \square Yes \square No
	[See notes for Tier 2 below and Sections 2 and 3.]
•	Did the applicant provide any other DEQ-required information to evaluate the proposal? 🛛 N/A 🔲 No
	Tier 2 ⊠ Applicable □ Not applicable
•	Did the applicant submit all the information required for a Tier 1 application? ☐ Yes ☐ No

Did the applicant submit adequate sampling and analysis to make a determination of suitability for

Page 5 of 9

Beneficial Use	of Solid Waste
Determination	Evaluation Form

release to the environment.

Applicant:	Portland Guild Loft Partners, LLC
BUD #:	BUD-20150306
Solid Waste:	Soil excavated from Riverscape Lot 1
Date:	May 29, 2015

	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
•	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
	The application Tables 1 provides sampling data. As noted above, the soils from Riverscape generally meet the occupational risk screening values or background metal values and will meet the conditions of the contaminated media management plan for the TRIP site.
•	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? \boxtimes Yes \square No
	The TRIP site is located within the city of Troutdale in Multnomah County, just north of the Troutdale Airport and Interstate 84, south of the Columbia River levee, east of 223 rd, and west of the Sandy River (Approximate Coordinates: 45°33′ 13″ N, 122°23′ 56″ W). The Port of Portland verified with the City of Troutdale that there are no land use restrictions that would prohibit bringing offsite soil that is slightly contaminated to the TRIP site for use as industrial fill.
•	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, email, site address and site coordinates (latitude and longitude)?
	Stan Jones, Port of Portland, 7200 NE Airport Way Portland, OR 97208 Phone: 503-415-6679 Fax: 503-548-5575, Stan.Jones@portofportland.com
•	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? \(\subseteq \) Yes \(\subseteq \) No
	Riverscape Lot 1 material will be managed according to the DEQ-approved Soil Management Plan The construction zone will be fenced to prevent public access. Dust control measures, including misting with water, will be employed as necessary to prevent soil from moving offsite. Erosion control measures will be taken as needed in accordance with a stormwater construction permit, to

Once material arrives at the TRIP site, the soil will be managed in accordance with the contaminated media management plan as approved by DEQ and EPA and in accordance with the Stormwater General Permit 1200-CA. Stockpiles will be managed to properly contain soil and avoid erosion by wind or stormwater. The Port of Portland will follow standard operating procedures for preventing erosion, as described in the TRIP On-Call Services for Receiving and stockpiling Soil (Port of Portland 2010 and as updated periodically). When necessary to prevent soil from becoming airborne, the Port of Portland will employ best management practices such as covering stockpiles with tarps or misting water over the soil.

be obtained. Soil will be loaded directly from the excavation to the haul trucks on site. If stockpiling becomes necessary, stockpiles will be placed on plastic, covered, and bermed to avoid movement of soil offsite. The soil will be transported to TRIP in covered trucks to avoid

The TRIP placement site is not easily accessible to the public and residential use of the site is prohibited through the 2007 EES. As demonstrated above, the material does not pose an unacceptable risk to human health or the environment.

Beneficial Use of Solid Waste Determination Evaluation Form			BUD #:	BUD-20150306				
			Solid Waste:	Soil excavated from Riverscape Lot 1				
			Date:	May 29, 2015				
2.	Has the providingDid the material	ng information substantia applicant successfully in al that is not speculative?	d that the proposed beating the criteria lister dentify or demonstra	e a reasonably likely proposed beneficial use	for the			
for proposed development. The Port needs more soil than available on site. The soil transferred from Riverscape to TRIP and used as construction fill material to prepare plots at TRIP for industrial development. 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 compatible with that use and the proposed quantity is necessary?								
	Based on physical characteristics, the Riverscape Lot 1 soil is similar to soil at site. The soil is primarily gravel with trace silty sand, sometimes concrete debrupper 1 to 5 feet bgs and medium brown silty sand with trace gravel from 5 to There are also thin layers with trace amounts of gravel, concrete debris or blace material. The soil will be used as construction fill material to prepare industrial TRIP for industrial development. The 40,000 cubic yards proposed to be moved Riverscape Lot 1 to TRIP is less than the total amount needed to improve the T							
	2.		ified, with supporting	documentation, the timeframe within which the for development, letters from local jurisdiction				
			cavation and transfer of material from Riverscape Lot 1 to TRIP is planned to begi mediately upon approval.					
	3.		e at this site for this p	used at other sites for the same purpose, is tourpose, or has the applicant identified a know Yes No N/A				
		as primarily gravel wi feet bgs and medium meet the EPA and DE	th trace silty sand, brown silty sand w Q cleanup requiren s below occupations	ally soil. The Riverscape Lot 1 soils are des sometimes concrete debris, for the upper ith trace gravel from 5 to 18 feet bgs. Thes nents at the TRIP site that construction fill al human health risk criteria or background	1 to 5 e soils soils			
				ial been used in a product before, is the mate entified a known potential for use in this produ N/A				

Is the use a valuable part of a manufacturing process, an effective substitute for a valuable raw material

Applicant:

Portland Guild Loft Partners, LLC

	Applicant:	Portland Guild Loft Partners, LLC					
Beneficial Use of Solid Waste	BUD #:	BUD-20150306					
Determination Evaluation Form	Solid Waste:	Soil excavated from Riverscape Lot 1					
	Date:	May 29, 2015					
or commercial product, or otherwise authorized by the Department and does not constitute disposal?							
 The soil from Riverscape Lot 1 will be used as construction fill and surcharge at the TRIP site and is an effective substitute for clean fill at the TRIP site. The Riverscape soils meet the EPA and DEQ cleanup requirements at the TRIP site that construction fill soils must contain contaminants below 							

horticultural practices?

Is the use in accordance with applicable engineering standards, commercial standards, and agricultural or

occupational human health risk criteria or background concentrations for metals.

The soil will be used to bring lots to grade for future development. Soil is frequently transported for use as fill and surcharge.

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?

Has the applicant demonstrated that the material is not a hazardous waste under ORS 466.00?

All sample results are below hazardous waste thresholds.

Soil will be loaded directly from the Riverscape Lot 1excavation site to the haul trucks on site. If stockpiling becomes necessary, stockpiles will be placed on plastic, covered, and bermed to avoid movement of soil offsite. The soil will be transported to the TRIP site in covered trucks to avoid release to the environment. Once material arrives at the TRIP site, the soil will be managed in accordance with the contaminated media management plan as approved by DEQ and EPA and in accordance with the Stormwater General Permit 1200-CA. Stockpiles will be managed to properly contain soil and avoid erosion by wind or stormwater.

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;
- o Hazardous substances do not exceed naturally occurring background concentrations; or
- o Hazardous substances will not exceed acceptable risk levels, including persistence and potential bioaccumulation, when the material is managed according to a beneficial use determination.

The soil meets the EPA and DEQ criteria of not exceeding occupational risk based screening levels or background values for known contaminants tested for. The soil will be managed according to the contaminated media management plan for the TRIP site.

 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?

	Applicant:	Portland Guild Loft Partners, LLC					
Beneficial Use of Solid Waste	BUD#:	BUD-20150306					
Determination Evaluation Form	Solid Waste:	Soil excavated from Riverscape Lot 1					
	Date:	May 29, 2015					
⊠ Yes □ No							
The soil will be transferred to a site proposed for industrial development. The proposed site is not a sensitive environment. The soil may be used in part to fill a low value wetland that currently contains contaminants. EPA and DEQ cleanup staff have agreed that the wetlands may be filled.							
	 Has the applicant demonstrated that the proposed beneficial use will not create objectionable odors, dust unsightliness, fire, or other nuisance conditions?						
 Has the applicant indicated that state, and local regulations? 	The are approach that the proposed serious as the serious approach to actual						
The Department of State Lands fill removal authorization has been received and the Army Corps of Engineers 404 authorization is pending for development of TRIP Phases II and III. Appropriate DEQ stormwater construction permits are or will be obtained. DEQ is not aware of other permits needed to move soil from Riverscape to the TRIP site.							
4. Public Involvement Evaluation (Not	cial Use evaluation criterion)						
·	Determine a public involvement recommendation using the current Guidance to DEQ Solid Waste Program Staff and Managers on Public Notice & Participation.						

The proposed beneficial use of soil from Riverscape Lot 1 at the TRIP site is substantially similar to the approved beneficial use of soil from Riverscape Lot 8 at the TRIP site (BUD-20141202). Due to recent interest in management of soils in the Riverscape area, DEQ will issue a two week public notice indicating that DEQ intends to approve this beneficial use request in mid-June 2015.

Is public notice and participation being recommended for this application?

Yes

No