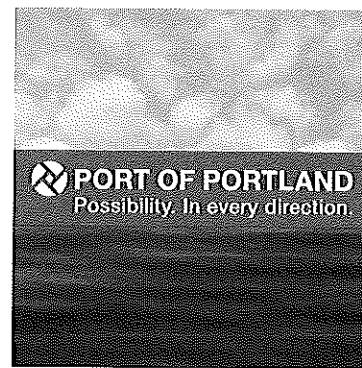
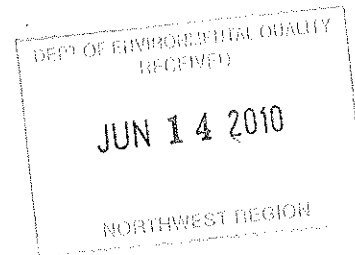


Mission: To enhance the region's economy and quality of life by providing efficient cargo and air passenger access to national and global markets.



June 11, 2010

Audrey O'Brien  
Oregon Department of Environmental Quality  
Solid Waste Programs  
2020 SW Fourth Ste. 400  
Portland, OR. 97201



Ms. O'Brien,

The Port of Portland is requesting approval to place approximately 30,000 cubic yards of fine-grained sediments from the Terminal 5 Deepening Project at the West Hayden Island Placement Facility. Enclosed is a beneficial use application with the required documentation and \$2000 fee. The application was submitted electronically to Tom Roick on June 10, 2010.

We appreciate your efforts in working with us on this project. Please contact me should you have any questions.

Sincerely,

A handwritten signature in black ink that reads 'Michelle Hollis'.

Michelle Hollis  
503-415-6832

7200 NE Airport Way Portland OR 97218  
Box 3529 Portland OR 97208  
503.415.6000

Printed on 100% recycled stock



State of Oregon  
Department of  
Environmental  
Quality

Application for a

# Solid Waste Beneficial Use Determination



DEQ USE ONLY – BUSINESS OFFICE

Date Received: \_\_\_\_\_

Amount Received: \_\_\_\_\_

Check No.: \_\_\_\_\_

Deposit No.: \_\_\_\_\_

Forward confirmation of fee payment for:  
Eastern Region to DEQ, The Dalles  
Northwestern Region to DEQ-NWR, Portland  
Western Region to DEQ, Salem

**A. REFERENCE INFORMATION** (Please type or print clearly.)

Nathaniel Ruda		_____	
Legal name of applicant		Business name of applicant if different	
7200 NE Airport Way, PO Box 3529		Portland	OR 97218
Mailing address		City	State Zip
503-415-6220		sam.ruda@portofportland.com	
Phone	Mobile	E-mail	Fax

Same as applicant			
Generator of solid waste (may be same as applicant)			
Mailing address		City	State Zip
Phone	Mobile	E-mail	Fax


**B. TYPE OF BENEFICIAL USE DETERMINATION REQUESTED** Beneficial Use Determination applications are categorized based on the type of information and potential amount of work required by DEQ staff to review application materials and render a decision. A tiered review and fee system has been established in rule. The tiers are:

- Tier 1 For a beneficial use of a solid waste that does not contain hazardous substances significantly exceeding the concentration in a comparable raw material or commercial product and that will be used in a manufactured product;
- Tier 2 For a beneficial use of a solid waste that contains hazardous substances significantly exceeding the concentration in a comparable raw material or commercial product, or involves application on the land;
- Tier 3 For a beneficial use of a solid waste that requires research, such as a literature review or risk assessment, or for a demonstration project to demonstrate compliance with this rule.

I am applying for a  Tier 1  Tier 2  Tier 3 determination.

**C. DOES THIS PROPOSED BENEFICIAL USE INVOLVE LAND APPLICATION OF ANY MATERIAL?**  
 Yes  No

**D. SIGNATURE** I hereby certify by my signature below that the information contained in this application, and the documents I have attached, are true and correct to the best of my knowledge and belief.

 \_\_\_\_\_  
Signature of legally authorized representative      Print name      Title      Date

NATHANIEL RUDA      DIRECTOR      6.10.10



**E. REQUIRED ATTACHMENTS TO THIS APPLICATION** *(For an application to be complete, it must provide the required information for each listed item of the tier which is being applied for.)*

**Tier 1**

- A description of the material, manner of generation, and estimated quantity to be used each year;
- A description of the proposed use;
- A comparison of the chemical and physical characteristics of the material proposed for use with the material it will replace;
- A demonstration of compliance 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; and
- Any other information that DEQ may require to evaluate the proposal.

**Tier 2**

- The information required for a Tier 1 application;
- Sampling and analysis that provides chemical, physical, and biological characterization of the material and that identifies potential contaminants in the material or the end product, as applicable;
- A risk screening comparing the concentration of hazardous substances in the material to existing, DEQ approved, risk-based screening level values, and demonstrating compliance with acceptable risk levels;
- Location or type of land use where the material will be applied, consistent with the risk scenarios used to evaluate risk;
- 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); and
- A description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment.

**Tier 3**

- The information required for a Tier 1 & 2 application;
- A discussion of the justification for the proposal;
- An estimate of the expected length of time that would be required to complete the project, if it is a demonstration; and
- If it is a demonstration project, the methods proposed to ensure safe and proper management of the material.

**F. PERFORMANCE CRITERIA** *(For all tiers - An application for a beneficial use determination must demonstrate satisfactory compliance with the following performance criteria.)*

**The use is productive, including:**

- ◆ There is an identified or reasonably likely use for the material that is not speculative;
- ◆ The use is a valuable part of a manufacturing process, an effective substitute for a valuable raw material or commercial product, or otherwise authorized by DEQ, and does not constitute disposal; and
- ◆ The use is in accordance with applicable engineering standards, commercial standards, and agricultural or horticultural practices.

**The use will not create an adverse impact to public health, safety, welfare, or the environment, including:**

- ◆ The material is not a hazardous waste under ORS 466.005;
- ◆ Until the time the material is used in accordance with a beneficial use determination, the material will be managed, including any storage, transportation, or processing, to prevent releases to the environment or nuisance conditions;
- ◆ Hazardous substances in the material do not significantly exceed the concentration in a comparable raw material or commercial product, or do not exceed naturally occurring background concentrations, or do not exceed acceptable risk levels, including evaluation of persistence and potential bioaccumulation, when the material is managed according to a beneficial use determination.

**The use will not result in the increase of a hazardous substance in a sensitive environment.**

**The use will not create objectionable odors, dust, unsightliness, fire, or other nuisance conditions.**

**The use will comply with all applicable federal, state, and local regulations.**

**G. FEES** (Must accompany the application for it to be considered complete)

<input type="checkbox"/>	Tier 1 beneficial use determination	\$1,000
<input checked="" type="checkbox"/>	Tier 2 beneficial use determination	\$2,000
<input type="checkbox"/>	Tier 3 beneficial use determination	\$5,000

Make checks out to: **Oregon DEQ**

Total fees included:     \$2000    

**H. APPLICATION PROCEDURE**

Step 1

Contact a DEQ staff person for assistance with the preparation of the application. DEQ staff will help with: 1) Determination of the eligibility for a beneficial use determination of a particular waste or process; and, 2) If eligible, establish the tier of beneficial use determination review required and associated fee to submit with the application.

Step 2

Mail the original signed application, all attachments, including the fee payment plus one extra copy to the appropriate regional office (see listing below.) Note that DEQ review work will not begin until a complete application packet is received. Incomplete applications may be returned. DEQ recommends the applicant keep a full copy of all application materials to guard against possible loss in transit.

Step 3

DEQ will contact the applicant, acknowledging receipt of the application, and will identify the staff person assigned to carryout the review. This staff person will contact the applicant if any additional information is needed.

Region	Counties Served	Address & Phone
Eastern Region	Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler	Eastern Region Department of Environmental Quality 400 E Scenic Drive, Ste 2.307 The Dalles, OR 97058 (541) 298-7255 ext. 221
Northwest Region	Clatsop, Clackamas, Columbia, Multnomah, Tillamook, and Washington	Northwest Region <i>Attn. Audrey O'Brien</i> DEQ Solid Waste Programs 2020 SW Fourth Ave. Ste 400 Portland, OR 97201 (503) 229-5353
Western Region	Benton, Coos, Curry, Douglas, Jackson, Josephine, Lane, Lincoln, Linn, Marion, Polk, and Yamhill	Western Region DEQ Solid Waste Programs 750 Front St. NE Suite 120 Salem, OR 97301 (503) 378-5047

## Tier 1 and 2

1. *A description of the material, manner of generation, and estimated quantity to be used each year.*

Approximately 30,000 cubic yards of fine-grained sediments (mix of clay, silt, and fine-grained sand) that will be dredged from the Willamette River at Port of Portland Marine Terminal 5, Berths 501-Face and 503.

2. *A description of the proposed use.*

Fill material to increase site grade elevation prior to future development at West Hayden Island.

3. *A comparison of the chemical and physical characteristics of the material proposed for use with the material it will replace.*

This material (dredged material) has similar characteristics to soil fill, except for relatively low concentrations of detected chemical constituents (see attached Table 1).

4. *A demonstration of compliance 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.*

The Oregon Department of Environmental Quality (DEQ) previously agreed with the Port of Portland for the placement of dredged material quality at the West Hayden Island facility in a May 21, 2009, letter (DEQ, 2009). This letter specified conditions, similar to the performance criteria in OAR 340-093-0280, to protect human health and the environment from possible adverse impacts from dredge material placement. The material has been tested, is of a productive use, and will not create an adverse impact to public health, safety, welfare, or the environment (as demonstrated in comparison to fill screening levels specified in the Criteria 2 as set forth in the May 21, 2009, letter – screening levels are included in the right-hand column of Table 1).

5. *Any other information that DEQ may require to evaluate the proposal.*

No additional information is necessary.

6. *Sampling and analysis that provides chemical, physical, and biological characterization of the material and that identifies potential contaminants in the material or the end product, as applicable.*

Tables 1, 2, and 3 provide the chemical, physical, and biological data on the dredged material. Relatively low concentrations of detected chemical constituents have been identified.

7. *A risk screening comparing the concentration of hazardous substances in the material to existing, DEQ approved, risk-based screening level values, and demonstrating compliance with acceptable risk levels.*

Table 1 provides the screening levels from the May 2, 2009, DEQ letter, which were based on evaluation that chemical concentrations do not significantly exceed human occupational screening values and ecological screening values for non-threatened and endangered species. The dredged material meets these screening levels.

8. *Location or type of land use where the material will be applied, consistent with the risk scenarios used to evaluate risk.*

The land use is zoned MUF19 (Multiple Use Forrest, 19 Acre Minimum). This is a low density land use designation within Multnomah County. The dredge material placement facility is used exclusively for dredged material placement and has not other land use associated with the site. This land use has less potential for exposure than the exposures assumed under an occupational use scenario as presented in the May 21, 2009, letter.

9. *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).*

Mr. Nathaniel (Sam) Ruda  
Port of Portland  
7200 NE Airport Way, PO Box 3529  
Portland, Oregon 97218  
[sam.ruda@portofportland.com](mailto:sam.ruda@portofportland.com)  
503-415-6220

Site Address: West Hayden Island Placement Facility  
Approximate Coordinates: 45° 37' 25" N, 122° 42' 9" W

10. *A description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment.*

Upland placement involves pumping dredge material directly from the transport barge to a diked area created on West Hayden Island. The dikes are constructed to contain and direct the slurry of dredge material as it is pumped from the barge. Return water is held in settling ponds controlled by one or more weirs; no surface water would be released back into the adjacent Columbia River. After dewatering, the dredged sediment will be graded. The West

Hayden Island Placement Facility is not readily accessible to the general public. The material meets screening levels that are protective of human health and the environment. Upon development of the area, the fill will likely be covered with landscaping or hardscape, further preventing any potential exposures.

**References:**

DEQ, 2009. Placement of Dredged Material / West Hayden Island. Letter from Wendy Wiles of the DEQ to Sam Ruda of the Port of Portland. May 21, 2009

U.S. Army Corps of Engineers, Seattle District, Portland District, Walla Walla District, and Northwestern Division; U.S. EPA, Region 10; Washington Departments of Ecology and Natural Resource; Oregon Department of Environmental Quality; Idaho Department of Environmental Quality; National Marine Fisheries Service; and U.S. Fish and Wildlife Service, 2009. *Sediment Evaluation Framework for the Pacific Northwest*. May 2009.



**Table 1 - Sediment Chemical Analyses Results**  
**Terminal 5 Deepening Dredge Material**  
**Portland, Oregon**

Berth Sediment Horizon Lab ID Sample ID	501-Face				503				Fill Screening Levels
	Upper Prism <sup>s</sup>		Main Prism <sup>s</sup>		Upper Prism <sup>s</sup>		Main Prism <sup>s</sup>		
	LU32A T501F-C1-4-5	LU32B T501F-C2-4-5	MQ83A T501-C6-DP	MQ83C T501-C7-DP	LU32D T503F-C4-4-5	LU32E T503F-C5-4-5	MQ84A T503-DP		
<b>Conventional Parameters</b>									
Total Solids (%)	86.5	77.2	61.5	66.4	65.3	49.9	64.5		
Total Organic Carbon (%)	0.244	0.275	1.62	1.12	1.19	1.22	1.6		
Ammonia (mg/kg)	77.5	92.6	329 J	178 J	166	165	228 J		
Total Sulfides (mg/kg)	1.15 U	1.25 U	77.2	1.89 U	15.1	19.5	32.3 J		
<b>Metals in mg/kg</b>									
Antimony	5 UJ	6 UJ	0.3 UJ	0.3 UJ	8 UJ	9 UJ	0.3 UJ		125
Arsenic	5 U	6 U	5	4	11	9 U	5		14
Cadmium	0.2 U	0.2 U	2.2	0.8	1.5	0.4	1		100
Chromium	18.6	15.3	28.9	22.5	24.0	30.3	27.8		84
Copper	16.7 J	13.6 J	40.6	28.2	31.0 J	38.3 J	37.8		1,250
Lead	3	3	37	16	22	12	21		150
Mercury	0.05 U	0.04 U	0.23	0.09	0.12	0.10	0.13		2.5
Nickel	19	16	23	21	20	22	25		750
Silver	0.3 U	0.4 U	0.5 U	0.4 U	0.5 U	0.5 U	0.4 U		50
Zinc	74	64	268	126	177	120	146		1,250
<b>Butyltins in µg/kg</b>									
Tributyltin (TBT) Dry Weight	54	43	3.8 U	3.6 U	3.7 U	10	5.3		
<b>SVOCs in µg/kg</b>									
<u>LPAHs</u>									
Naphthalene	4.9 U	4.9 U	6.9	6.9	37	8.6	34		2,050
Acenaphthylene	4.9 U	4.9 U	27	5.9	17	12	7.4		
Acenaphthene	4.9 U	14	30	21	36	11	80		500,000
Fluorene	4.9 U	13	15	6.4	11	9.1	5.9		750,000
Phenanthrene	45	56	120	92	180	71	200		
Anthracene	4.7 U	7.8	31	23	30	33	31		
2-Methylnaphthalene	4.9 U	4.9 U	5.4	4.9 U	20	4.8	22		
Total LPAHs	21	91	235	155	331	150	380		
<u>HPAHs</u>									
Fluoranthene	63	120	280	120	240	160	240		145,000,000
Pyrene	58	86	260	120	310	160	260		105,000,000
Benzo(a)anthracene	28	18	130	50	86	62	72		13,500
Chrysene	29	21	190	75	120	110	110		1,350,000
Benzo(b)fluoranthene	26	17	150	69	150	130	93		
Benzo(k)fluoranthene	7.8	7.8	130	45	80	93	77		
Benzo(b+k)fluoranthenes	34	25	280	114	230	223	170		13,500
Benzo(a)pyrene	25	12	180	75	150	100	120		1,350
Indeno(1,2,3-cd)pyrene	8.3	6.9	120	49	91	38	82		13,500
Dibenz(a,h)anthracene	4.9 U	4.9 U	21	9.3	15	6.7	9.8		1,350
Benzo(g,h,i)perylene	9.3	9.3	180	76	140	43	130		
Total HPAHs	254	298	1,641	688	1,382	903	1,194		
<u>Chlorinated Hydrocarbons</u>									
1,4-Dichlorobenzene	20 U	20 U	20 U	20 U	20 U	20 U	19 U		2,050
1,2-Dichlorobenzene	20 U	20 U	20 U	20 U	20 U	20 U	19 U		190,000
1,2,4-Trichlorobenzene	20 U	20 U	20 U	20 U	20 U	20 U	19 U		
Hexachlorobenzene	20 U	20 U	20 U	20 U	20 U	20 U	19 U		9,000
<u>Phthalates</u>									
Dimethyl Phthalate	20 U	20 U	20 U	20 U	20 U	20 U	19 U		
Diethyl Phthalate	20 U	20 U	20 U	20 U	20 U	20 U	19 U		
Di-n-butyl Phthalate	20 U	20 U	20 U	20 U	20 U	20 U	19 U		11,250
Butyl Benzyl Phthalate	20 U	20 U	20 U	20 U	20 U	20 U	19 U		
Bis(2-ethylhexyl) Phthalate	20 U	31 UB	66	49	20 U	200 B	56		112,500
Di-n-octyl Phthalate	20 U	20 U	20 U	20 U	20 U	20	19 U		

Please refer to notes on the last page of this table.

**Table 1 - Sediment Chemical Analyses Results  
Terminal 5 Deepening Dredge Material  
Portland, Oregon**

Berth Sediment Horizon Lab ID Sample ID	501-Face				503			Fill Screening Levels
	Upper Prism <sup>§</sup>		Main Prism <sup>§</sup>		Upper Prism <sup>§</sup>		Main Prism <sup>§</sup>	
	LU32A	LU32B	MQ83A	MQ83C	LU32D	LU32E	MQ84A	
	T501F-C1-4-5	T501F-C2-4-5	T501-C6-DP	T501-C7-DP	T503F-C4-4-5	T503F-C5-4-5	T503-DP	
<b>SVOCs in µg/kg (cont.)</b>								
<i>Phenols</i>								
Phenol	20 U	20 U	93	22	20 U	20	29	17,500
2-Methylphenol	20 U	20 U	20 U	20 U	20 U	20 U	19 U	
4-Methylphenol	20 U	20 U	20 U	20 U	150	800	260	
2,4-Dimethylphenol	20 U	20 U	20 U	20 U	20 U	20 U	19 U	
Pentachlorophenol (PCP)	98 U	99 U	100 U	100 U	98 U	99 U	97 U	
<i>Miscellaneous Extractables</i>								
Benzyl Alcohol	20 U	20 U	20 U	20 U	20 U	20 U	19 U	50
Benzoic Acid	200 U	200 U	590	230	200 U	200 U	440	
Dibenzofuran	4.9 U	6.4	5.9	4.9 U	4.9 U	4.8 U	4.9 U	
Hexachlorobutadiene	8.0* / 20 U	8.1* / 20 U	8.1*/20 U	8.1*/20 U	7.9* / 20 U	8.*0 / 20 U	7.9*/19 U	
n-Nitrosodiphenylamine	20 U	20 U	20 U	20 U	20 U	20 U	19 U	
<b>Pesticides in µg/kg</b>								
4,4'-DDE	1.9 U	2.0 U	4.0 Y	3.5	2.7 J	2.2 J	4.7	250
4,4'-DDD	1.9 U	2.0 U	6.9	2.3	3.5	3.9 U	4.9	250
4,4'-DDT	1.9 U	2.0 U	5.4 Y	2.0 U	1.9 U	3.9 U	2.0 U	250
Total DDx	1.9 U	2.0 U	6.9	5.8	6.2 J	2.2 J	9.6	
Aldrin	0.96 U	0.99 U	1.0 U	1.0 U	0.96 U	2.0 U	0.97 U	36,000
alpha-Chlordane	0.96 U	0.99 U	1.0 U	1.0 U	0.96 U	2.0 U	0.97 U	
Dieldrin	1.9 U	0.51* / 2.0 U	0.84*/2.0 U	0.84*/2.0 U	1.9 U	1.0*/3.9 U	0.82*/2.0 U	
Heptachlor	0.96 U	0.99 U	3.1 Y	1.0 U	0.96 U	0.65*/2.0 U	0.97 U	
gamma-BHC (Lindane)	0.96 U	0.99 U	1.0 U	1.0 U	0.96 U	3.5 Y	0.97 U	
<b>PCBs in µg/kg</b>								
Aroclor 1016	3.9 U	3.9 U	40 U	9.8 U	3.9 U	3.9 U	9.8 U	4,900
Aroclor 1221	3.9 U	3.9 U	40 U	9.8 U	3.9 U	3.9 U	9.8 U	
Aroclor 1232	3.9 U	3.9 U	40 U	9.8 U	3.9 U	3.9 U	9.8 U	
Aroclor 1242	3.9 U	3.9 U	40 U	9.8 U	3.9 U	3.9 U	9.8 U	
Aroclor 1248	3.9 U	7.8 Y	240	18	3.9 U	5.9 Y	9.8 U	
Aroclor 1254	3.9 U	7.8 Y	170	16	9.7 Y	6.7	9.8 U	
Aroclor 1260	3.9 U	12 Y	13*/79 Y	20 Y	10	4.5	21	
Aroclor 1262	--	--	--	--	--	--	9.8 U	
Aroclor 1268	--	--	--	--	--	--	9.8 U	
Total PCBs	3.9 U	12 Y	410	34	10	11.2	21	

**Notes:**

1. PAH concentrations are the higher of the EPA Method 8270D-SIM and EPA Method 8270D analyses.
2. Bolded values are detected concentrations.
3. Fill Screening Level from May 21, 2009, DEQ letter, Criteria 2.
4. For undetected compounds, method reporting limits are shown unless otherwise indicated.
5. \*Method detection limit (MDL).
6. <sup>§</sup>Prism refers to the sediment volume currently in place and which is going to be dredged (i.e., the dredge prism). The upper prism is the current sediment surface which will be removed during deepening.
7. -- = Not analyzed or not available.
8. J = Estimated concentration between MDL and method reporting limit (MRL).
9. U = Not detected at the indicated MDL or MRL.
10. UJ = Estimated MRL.
11. Y = Not detected at a MRL that was raised due to chromatographic interference.



State of Oregon  
Department of  
Environmental  
Quality

# Memo

**To:** Audrey O'Brien, Manager, Northwest Region Solid Waste

**From:** Tom Roick, LQ Senior Policy Analyst *TR*

**CC:** The File  
Port of Portland, Terminal 5 Beneficial Use Determination

**Date:** 24 June, 2010

**Re:** BUD Evaluation Report

---

1. Applicant

Port of Portland  
7200 NE Airport Way  
PO Box 3529  
Portland, OR 97218

In addition to the original application, at DEQ's request the Port has submitted a corrected Table 1 of sediment chemical analyses results, a figure showing the West Hayden Island Placement Facility, and a supporting Sediment Characterization Report, January 15, 2009.

2. Proposal

The Port of Portland proposes to use approximately 30,000 cubic yards of sediments dredged from the Willamette River at Port of Portland Marine Terminal 5, Berths 501 and 503 as fill material at their established West Hayden Island Placement Facility.

The proposal requires risk screening and involves land application, and therefore meets the conditions for a Tier 2 application.

3. Performance Criteria

The use is productive. The sediments are a suitable substitute for fill material. The Port of Portland has indicated to DEQ in the application and in past meetings that a large volume of fill material is necessary to meet the future development objectives for this location at West Hayden Island. The location is an existing dredge sediment placement facility.

The use will not create an adverse impact to public health, safety, welfare, or the environment. The material is not a hazardous waste, and will be dewatered and otherwise managed consistent with other dredge materials at the facility. Dewatering and placement of sediments must be done to prevent discharges to waters in accordance with the DEQ 401 water quality certification letter dated 6/15/2010 from Sally Puent, DEQ Water Quality Manager, to

Thomas Taylor, U.S. Army Corps of Engineers. Hazardous substance concentrations in the sediments are below screening values for commercial or industrial use of the property. The detections in some samples of lead and zinc exceed screening levels for threatened or endangered birds. These exceedances are only a concern for long-term exposure if the property were not to be used for commercial or industrial purposes. Some pesticides were also detected, but below screening levels. The Port has stated that these dredge materials will be covered by other dredged materials placed at the facility.

4. Recommendation

I recommend issuance of a Beneficial Use Determination with the condition that if the property is not developed for commercial or industrial use within four years, the material be covered in order to limit potential long-term ecological exposure to metals and low concentrations of pesticides in the sediments.

Attachments:

- Application for a Solid Waste Beneficial Use Determination, 6/10/2010
- Updated Table 1, 6/17/2010
- West Hayden Island Placement Facility site figure
- Sediment Characterization Report, January 15, 2009 [hard copy of text and CD of full report]
- DEQ May 21, 2009 letter to the Port of Portland



# Oregon

Theodore R. Kulongoski, Governor

Department of Environmental Quality

Northwest Region  
2020 SW 4th Ave, Suite 400  
Portland, OR 97201  
(503) 229-5263  
FAX (503) 229-6945  
OTRS 1-800-735-2900

June 24, 2010

Nathaniel Ruda  
Port of Portland  
PO Box 3529  
7200 NE Airport Way  
Portland, OR 97218

Re: Beneficial Use Determination  
Use of Terminal 5 Dredged Sediments as Fill Material at West Hayden Island

Dear Mr. Ruda:

The Department of Environmental Quality reviewed the Port of Portland's June 10, 2010 Application for a Solid Waste Beneficial Use Determination. The application is for the Port of Portland to use dredged sediments from Terminal 5 as fill material at the West Hayden Island Placement Facility consistent with plans for future development of that property.

In a letter to the Port of Portland on May 21, 2009, DEQ agreed that a solid waste permit would not be required for the placement of dredged material at the West Hayden Island facility in accordance with specified conditions. Because West Hayden Island was previously designated to receive dredged material, DEQ agreed to a site-specific evaluation of the protective steps needed for upland placement. That agreement remained in effect until the Environmental Quality Commission adopted the beneficial use of solid waste rules on May 30, 2010.

DEQ has determined that the Port of Portland's beneficial use proposal meets the requirements for a case-specific beneficial use determination under the recently adopted Oregon Administrative Rules 340-093-0260 through -0290. The BUD is limited to the materials, approved uses, conditions and reporting specified below. The conditions of the BUD are intended to prevent adverse impacts to human health and the environment.

### Material

The material consists of approximately 30,000 cubic yards of sediments that the Port of Portland will dredge from the Willamette River at Port of Portland Marine Terminal 5, Berths 501 and 503. The application includes laboratory chemical analytical results of sediments from the areas that the Port of Portland will dredge. This approval applies to these Terminal 5 sediments. Dredged materials from other locations will need to be evaluated through separate beneficial use determinations.

Following DEQ's initial review of the application, the Port of Portland revised the "fill screening levels" identified in Table 1 of the original application and provided the supporting laboratory analytical reports. The analytical results shown in Table 1 of the application are below human health occupational risk-based concentrations or default metals soil background values for most chemicals. The zinc concentration in one sample slightly exceeds the DEQ ecological screening level value for non threatened or endangered species, and lead in three samples exceeds the ecological screening level value for the protection of threatened or endangered birds, but is below the screening level for non threatened or endangered species. Bald eagles have been observed at West Hayden Island and are still considered threatened by the State of Oregon. DDT, DDD, and DDE and a number of other chemicals were also detected, but at concentrations below screening levels.

#### Approved Uses

DEQ approves placement of the dredged material at the existing West Hayden Island Placement Facility, located at approximately 45° 37' 25" N, 122° 42' 9" W. The use is as fill material to increase site grade prior to future development of the property. The material characterization and risk screening indicate that contaminant concentrations in the sediment are below levels protective of human health and the environment for future commercial or industrial use of the property.

#### Conditions on Use

To limit ecological exposure, principally bird exposure to lead and zinc, within four years of placement the Port of Portland must cover the material with two feet of fill or a permanent cap, or resample the surface materials and demonstrate that hazardous substance concentrations are below screening levels.

DEQ understands that the property is currently zoned multi-use forest and the Port of Portland intends to develop the property for commercial or industrial use. If land use changes from the proposed commercial or industrial use to another use, the Port of Portland must reevaluate the risk screening of the material to ensure the use is protective of human health and the environment.

If the material is proposed to be moved from the West Hayden Island Placement Facility to some other location, the Port of Portland must manage the material as solid waste.

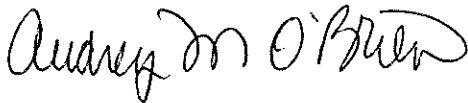
Annual Reporting

The Port of Portland must report to DEQ annually on the status of the work until the dredging and placement of the material is completed or otherwise discontinued. Reports must include the status of proposed dredging, volume of material under this BUD placed at the West Hayden Island facility, and any characterization information if changed from that in the application. Annual reports must be submitted to DEQ with a \$250.00 fee payment by June 23 of each year. Submit reports to:

Audrey O'Brien, Manager  
Northwest Region Environmental Partnerships Section  
Oregon Department of Environmental Quality  
2020 SW 4th Avenue, Suite 400  
Portland OR 97201

If you have any questions about this BUD, please contact me at 503-229-5072 or Tom Roick at 503-229-5502. We look forward to working cooperatively with the Port of Portland on future beneficial uses of dredged materials.

Sincerely,



Audrey O'Brien, Manager  
Northwest Region Environmental Partnerships

Cc: Annette Price, Port of Portland  
Michelle Hollis, Port of Portland  
Palmer Mason, DEQ LQ  
Tom Roick, DEQ LQ  
Sally Puent, DEQ WQ