RESPONSIVENESS SUMMARY

Pacific Wood Treating Corporation

July 25 – August 23, 2013 Public Comment Period

Remedial Investigation/Feasibility Study Report,
Draft Cleanup Action Plan and Draft Consent Decree

Prepared by
Washington State Department of Ecology
Southwest Regional Office
Toxics Cleanup Program
Lacey, Washington

November 2013

Contents

Site Information

Address: 111 West Division Street, Ridgefield
Site Manager: Craig Rankine
Public Involvement Coordinator: Diana Smith

From July 25 to August 23, 2013 the Department of Ecology (Ecology) held a public comment period on a remedial investigation/feasibility study (RI/FS) report, a draft cleanup action plan (CAP), and a draft consent decree (CD) for the Pacific Wood Treating (PWT) cleanup site. Comments received from the public are included in Appendix A. Ecology's responses are addressed in this document and in a response letter included in Appendix B.

Site Background

From 1964 to 1993 PWT operated a wood-treating facility on the Lake River Industrial Site (LRIS), which was leased from the Port of Ridgefield. PWT filed for bankruptcy in 1993 and abandoned the LRIS, which is approximately 40-acres in size. The company pressure-treated wood products with oil-based treatment solutions containing creosote, pentachlorophenol (PCP) and water based mixtures of copper, chromium, arsenic and/or zinc.

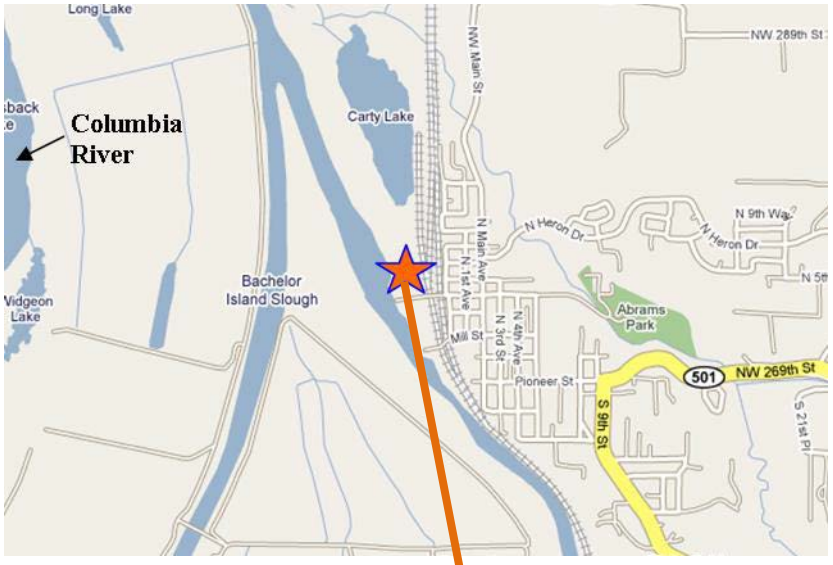
Treated-wood storage, spills and releases of wood-treating chemicals to the ground and stormwater resulted in releases of petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), dioxins, and metals to shallow soil, sediment, and groundwater. Contamination extends beyond the LRIS into Lake River and Carty Lake sediment, a residential upland area, and marina properties.

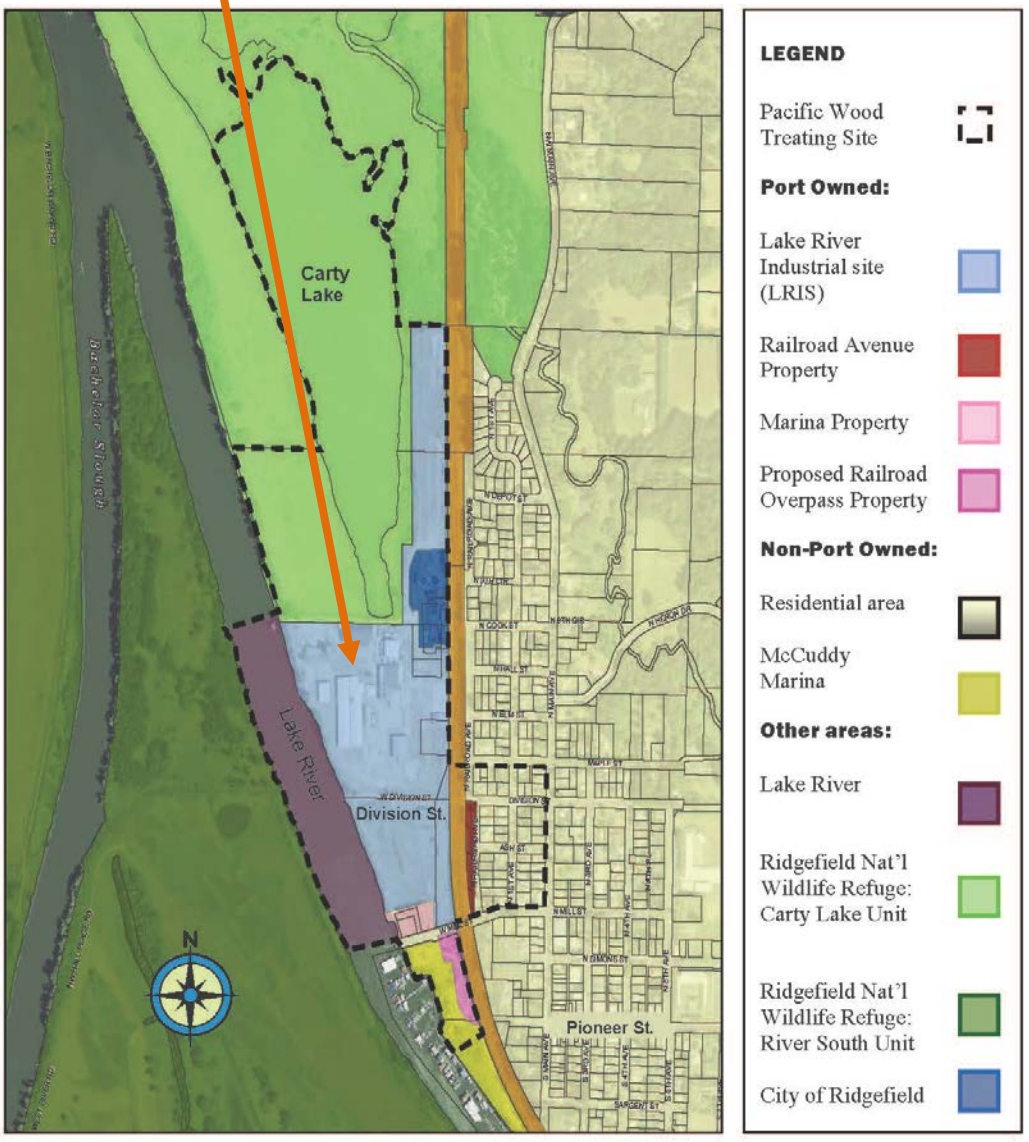
Several historic investigations including geologic and hydrogeologic evaluations have been conducted by multiple parties on behalf of PWT since the mid-1980s.

Site Location

The PWT site is located at 111 West Division Street in Ridgefield, Washington within Ridgefield city limits. The LRIS is bordered by Lake River to the west, the Ridgefield National Wildlife Refuge and Carty Lake to the north and west, Burlington Northern Santa Fe Railroad tracks and the residential upland area soil to the east and McCuddy's Marina and the Port marina to the south.

Pacific Wood Treating Cleanup Site Location





Responses to Comments

Site Definition Includes Off-Property Areas

Comment:

Ecology received comments from Union Pacific Railroad (UPRR), which used to own 2.08 acres within the LRIS. UPRR expressed concern that off-property areas with soil containing dioxin contamination are included in the site definition in the RI/FS, CD, and CAP.

Ecology Response:

Under state cleanup law, a site is anywhere a hazardous substance has come to be located. Soil samples collected in the residential area between Maple and Mill Streets and on part of McCuddy's Marina show dioxin concentrations above the state cleanup level. Enough data is available to show that dioxin contamination came to be located in this area as a result of PWT's activities. Ecology will continue including these off-property areas in the site definition.

Remedial Investigation and Feasibility Study

Based on comments received, Ecology is not making changes to the RI/FS. The version dated July 1, 2013 is considered the final.

Cleanup Action Plan

Ecology made changes to the CAP text based on comments, corrections, and rule clarifications from UPRR, the Port of Ridgefield, City of Ridgefield, Ecology, and the port's consultant and legal counsel as well as the city's and Ecology's legal counsels. We changed:

- **Section 2.1.3** (second bullet and paragraph) to clarify that MTCA Method B soil cleanup levels exist for contaminants found in off-property areas but final cleanup levels (CULs) have not been established for these areas in the CAP. Final CULs will be established in a separate CAP for those areas.
- **Sections 3.1, 3.1.1** (last bullet and footnote), **3.1.2** (first and second paragraphs), **3.1.3** (first and second paragraphs and footnote), **3.1.4** (first and second paragraphs) and **4.4** (fifth bullet) to document risk-based human health or ecological numeric criteria (factors) in establishing sediment CULs.
- **Section 3.1.3** to clarify sediment areas requiring cleanup are based on surface-weighted average of dioxin toxicity equivalent quotient (TEQ).
- **Section 3.2.2** subtitle was changed from "Water Quality Standards" to "Water Pollution Control Act".
- **Section 4.2** (under first subtitle) to correct the Railroad Avenue parcels and right-of-way are 0.94 not 0.5 acres and (under third subtitle) removed "Soil is marginally above the dioxin TEQ protective of Ecological receptors (i.e., EIC)".
- **Sections 4.2.1, 6.2, and 8.2.7.1** to change "ecological CULs" to "CULs".
- **Sections 4.3.1** (second paragraph) and **4.4.1** (first paragraph) to add language about using remediation levels (REL) in addition to CULs.

- **Sections 4.4** (second paragraph) and **4.4.1** (second paragraph) to replace "ecological cleanup" with "REL".
- **Section 4.4** (fifth bullet) to state that fishing in Carty Lake will be prohibited.
- **Section 7.3.8** (first bullet) to replace "CULs" with the term "concentration".
- **Sections 8.2.2** (fourth paragraph) and **8.3.2** (second paragraph) to strike "human health" to leave "CUL".
- **Section 8.3.8** (second bullet) to strike the term "CUL".
- **Section 9.3** (sixth and seventh paragraphs) is to strike specific vendors' names and keep language general.
- **Section 9.4** (second bullet) to replace "CULs protective of ecological receptors" with "RELs".
- **Section 9.7** (second paragraph) to replace "Table 9-1" with "Exhibit C of the Consent Decree".

Consent Decree

Ecology made changes to the CD based on comments, corrections, and rule clarifications from the public, the Port of Ridgefield, City of Ridgefield, Ecology and the port's consultant and legal counsel as well as the city's and Ecology's legal counsels. We changed:

- **Section V. A.** to clarify that Ecology has enough information to include off-property areas within the PWT site definition.
- **Section V. C. 2** to correct Railroad Avenue size from 0.85 to 0.62 acres.
- **Section V. J. 3** to say that an evaluation of remedial alternatives was not provided for the off-property areas.
- **Section XVIII. A.** to clarify that Ecology approved the RI/FS.
- **Section XIX** to clarify that the CD addresses areas within the property designation.
- **Section XXIV, third paragraph** to correct Port to Defendants.

Appendix A: Public Comment Letter

Gary L. Honeyman
Manager Environmental Site Remediation

August 23, 2013

WA Department of Ecology
Vancouver Field Office
2108 Grand Blvd.
Vancouver, WA 98661

Attn: Craig Rankine
Site Manager

SUBJECT: Ridgefield, WA – Pacific Wood Treating: Comments for the Consent Decree and Associated Documents

Mr. Rankine:

Union Pacific Railroad (UPRR) has reviewed the following documents related to the former Pacific Wood Treating site located in Ridgefield, Washington: Final Former PWT Site Remedial Investigation and Feasibility Study (RI/FS), Cleanup Action Plan (CAP), Consent Decree, and State Environmental Policy Act (SEPA) review. UPRR has worked cooperatively with the Port of Ridgefield to complete the RI/FS and implement associated interim actions at Cell 3. UPRR requests that the following comments be incorporated into the final documents.

1. Comments Regarding the Off Property Study Area

The current draft CAP and Consent Decree proposes to include the off property areas not owned by the Port in the Site definition. However, the source of contamination in these areas has not been resolved, cleanup levels (CULs) have not been determined, and no final cleanup action has been selected. As stated in Section 2.1 of the CAP, "the sources of chemicals in surface soil in the off property are not well established and further characterization of surface soil is needed." The RI/FS specifically states (see Section 6.1.2.2) that "CULs for non-Port-owned properties are not being developed at this time". The RI/FS does not evaluate cleanup alternatives, and the CAP does not propose a cleanup action. For all of these reasons, it is premature for the off property area to be incorporated into the "Site" as defined in the CAP and Consent Decree. Until the source of this contamination has been resolved and cleanup levels applicable to this area have been determined, the area should instead remain defined as the "Off Property Study Area." Once the source of the contamination, the cleanup levels and the final cleanup approach have been resolved for this area, then an appropriate administrative agreement can be developed with the appropriate potentially liable persons and the owners of affected properties within the study area.

Consistent with this comment, the following revisions to the CAP should be incorporated at this time:

- Acronyms and abbreviations: Delete the words "off property area" from the definition of the word "Site"
- Acronyms and abbreviations: Add a definition for the "Off Property Study Area" stating: "the Off Property Study Area is located on properties not owned by the Port and located immediately south and east of the Site"
- Section 1, first paragraph: Delete the words "the adjacent upland off property area". Add a sentence that states that "The Off Property Study Area is subject to ongoing study by the Port and Ecology and is not included in the Site at this time." Revise the last sentence to clarify that the CAP describes the proposed cleanup for four areas within the Site (not four of five areas).

UNION PACIFIC RAILROAD 221 Hodgeman Laramie, WY 82072 (402) 233-1007 fx. (307) 745-3042 c. (307) 760-0117 glhoneym@up.com

- Section 2.1, first paragraph: Delete the words "the upland off property area"
- Section 2.1, third bullet: Move the text that currently comprises the third bullet to the bottom of the paragraph below the list of bullets.
- Section 2.1.3. first sentence: Revise the first sentence to read "The upland Off-Property Study Area is adjacent to the Site and features…"
- Section 2.1.3, second bullet: Delete the third sentence, as cleanup levels for the non-Port-owned upland properties are not being defined in the RI/FS (e.g., Section 6.1.2.2 of the RI/FS specifically states that "CULs for non-Port-owned properties are not being developed at this time") or in the Consent Decree (e.g., paragraph VI.E. in the public review draft).
- Figure 1-1: The site boundary should be revised to exclude the Off Property Study Area. The Off Property Study Area should be labeled as such.
- Figure 1-2: The site boundary should be revised to exclude the Off Property Study Area. The Off Property Study Area should be labeled as such.
- Table 3-1 (cleanup levels for LRIS) should include a footnote that these cleanup levels apply to the Site, and not necessarily to the Off Property Study Area for which a final cleanup decision has not been determined.

The following revisions to the Consent Decree should also be incorporated at this time:

- Definitions: "Cleanup Action Plan". This should be revised to state "Refers to the Cleanup Action Plan (CAP) (Exhibit A) issued by Ecology relating to the Site and all attachments to the CAP."
- Findings of fact – Paragraph V.A.: Delete the words "and residential properties to the east"
- Findings of fact – Paragraph V.C.7: A reference should be added that DNR leased aquatic lands to PWT during PWT's time of operation.
- Findings of fact – Paragraph V.C.8: Revise this paragraph as follows: "The Off-Property Study Area east of the LRIS is zoned low-density residential. The residential off-property area includes approximately six blocks spanning 10.6 acres. Sources of contamination in this area are subject to ongoing study. This Off-Property Study Area is not considered "Property" under Section IV.G (Definitions).
- Findings of fact – Paragraph V.J.3: The final RI/FS no longer includes a definition of preferred remedial alternative for properties not owned by the Port. This paragraph should be revised to reference the final RI/FS rather than the draft.
- Covenant Not To Sue – Paragraph XVIII.A: This paragraph should be revised to state "A Final RI/FS Report has been completed defining a preferred cleanup alternative with respect to the Property, which is a source area of contamination. Similar documents have not yet been completed with respect to the Off Property Study Area. Given this, Ecology has determined that cleanup of the Site will occur in the most expeditious manner if remedy selection for, and cleanup of, the Property moves forward now, rather than waiting until documentation is completed and further characterization can be conducted for the Off Property Study Area. So that the Defendants may proceed with Remedial Action on the Property as soon as possible, this Decree provides the following Covenant Not to Sue to the Defendants only for the Property .. "
- Contribution Protection. Paragraph XIX. This section should be clarified to state that the "matters addressed" are limited to remedial actions required within the Property. The sentence should be revised to state "…are entitled to protection against claims for matters addressed within this Decree within the Property as provided…"
- Exhibit B – Site and Property Diagram: The Site boundary should be revised to exclude the Off Property Study Area. The Off Property Study Area should be labeled as such.

The RI/FS should be revised to ensure consistency with the CAP. Most notably the use of the terms "Site" and "Upland Off-Property" should be revised. The "Site" definition should be revised to state "the Site includes the LRIS, Port-owned properties, and nearby surface water bodies Lake River and Carty Lake". The term "Upland Off Property" should be replaced with the terms "Port-Owned Properties" and "Off Property Study Area" as appropriate. Attachment 1 to this letter provides more detailed comments with respect to implementing these changes.

2. Additional Comments Regarding the Cleanup Action Plan

- Section 3.1.3 – First Paragraph: Add a sentence to the end of the paragraph stating "Compliance with the dioxin cleanup level is measured based on the surface-weighted average concentration of dioxin within the Lake River sediments within the Site."
- Section 7.3.1 – Third Paragraph, Fourth Sentence: After the words "…below the CUL of 5 ng/kg" insert a parenthetical stating "(surface-weighted average concentration)".
- Section 9.1: Add a sentence to the end of the paragraph just prior to Section 9.1.1 clarifying that construction methods are subject to change during the engineering design and permitting process. The following language is suggested: "The following description of the cleanup action is subject to minor modifications during development of the engineering design report and completion of project permitting. If substantial changes are required, these will be documented in an amendment to the Cleanup Action Plan."
- Section 9.3: References to specific commercial waste disposal vendors should not be included in the Cleanup Action Plan (e.g., the specification of individual vendors or contractors in paragraph 4 on page 58 should be reserved until the Port's design and contracting process has been completed).

3. Additional Comments Regarding the RI/FS

- Section 6.3.1, Page 77, First Paragraph: Add a parenthetical to the second-to-last sentence clarifying that the CUL is measured as the surface-weighted average concentration within the Lake River sediments within the Site: "…CUL is 5 ng/kg dioxin TEQ (surface weighted average concentration)"

If you have any questions regarding these comments please contact me at (307) 760-0117 or glhoneym@up.com.

Sincerely,

Gary L. Honeyman

Gary L. Honeyman
Manager Environmental Site Remediation

Cc: Mr. Robert Bylsma/UPRR
Mr. William Joyce/ Joyce Ziker Parkinson PLLC
Mr. Mark Larsen/Anchor QEA
Ms. Cynthia Donnerberg/CH2M HILL

Attachment 1: Detailed RI/FS Comments

Attachment 1
Detailed RI/FS Comments

- Acronyms and Abbreviations: Revise definition of the Site to "the LRIS, Port-owned properties, and nearby surface water bodies Lake River and Carty Lake."
- Acronyms and abbreviations: Add a definition for the "Off Property Study Area" stating: "the Off Property Study Area including properties not owned by the Port located immediately south and east of the Site."
- Summary, second paragraph: Replace the words "upland off property area" with "Port-owned properties." Add a sentence that states that "The Off Property Study Area is subject to ongoing study by the Port and Ecology and is not included in the Site at this time." Revise the last sentence to clarify that the RI/FS report addresses the "adjacent Port-owned properties" rather than "adjacent upland off-property areas."
- Summary, seventh paragraph: Change "non-Port-owned properties" to "Off Property Study Area."
- Summary, eighth paragraph: Change "non-Port-owned properties" to "Off Property Study Area."
- Summary, tenth paragraph: Change "non-Port-owned properties" to "Off Property Study Area."
- Figure ES-1: The site boundary should be revised to exclude the Off Property Study Area. The Off Property Study Area should be labeled as such.
- Section 1.1 Definition of Site, second bullet: Upland off property area should be removed from the definition of "Site" and replaced with "Port-owned properties." Add a sentence that states that "The Off Property Study Area is subject to ongoing study by the Port and Ecology and is not included in the Site at this time."
- Section 1.3 Report Organization: Change first bullet to indicate Section 2 provides background information for the "Site" and the "Off Property Study Area."
- Section 1.3 Report Organization: Change fourth bullet to indicate Section 5 provides site conceptual model for the "Site" and the "Off Property Study Area."
- Figure 1-1: The site boundary should be revised to exclude the "Off Property Study Area." The "Off Property Study Area" should be labeled as such.
- Section 2.2.2 Upland Off Property, heading and first sentence: Revise to state "Port-owned properties". Change bullets to indicate McCuddy's and residential properties are part of the "Off Property Study Area."
- Section 2.3.2 Upland Off Property, heading and text: Revise to distinguish between "Port-owned properties" from "Off Property Study Area."
- Section 2.8 Current and Future Land Use, first sentence: Clarify that the section provides land use information for the "Site" and the "Off Property Study Area."
- Section 2.8.2 Upland Off Property, heading and first sentence: Revise to state "Port-owned properties." Change bullets to indicate McCuddy's and residential properties are part of the "Off Property Study Area."
- Figure 2-21: Clarify the "off property area" is the "Port-owned properties" and the "Off Property Study Area."
- Section 3 Nature and Extent, last sentence of introduction: Clarify to state "Off Property Study Area."
- Section 3.2 Soil, first sentence: Clarify to state the section presents data from the "Site" and "Off Property Study Area."
- Section 3.2.2 Off Property, heading and text: Revise to distinguish between "Port-owned properties" from "Off Property Study Area."
- Figure 3-3: Clarify the figure presents data from the "Port-owned properties" and the "Off Property Study Area."

- Section 5 Site Conceptual Model, first sentence: Clarify to distinguish between “Port-owned properties” and “Off Property Study Area”.
- Section 5 Site Conceptual Model, second paragraph, second sentence: Clarify to distinguish between “Port-owned properties” and “Off Property Study Area”.
- Section 5.4 Upland Off Property Exposure Scenarios: Clarify to distinguish between “Port-owned properties” and “Off Property Study Area”.
- Section 6 Preliminary Cleanup Levels and Points of Compliance, second paragraph, first sentence: Clarify to state “Site” and “Off Property Study Area”.
- Section 6.1.2 Off Property. For consistency with the area designations and separate treatments in the Cleanup Action Plan, Section 6.1.2.1 and 6.1.2.2 should be separated and renumbered as Sections 6.1.2 and 6.1.3. Retitle Section 6.1.3 as the “Off Property Study Area”.

Appendix B: Response to Public Comment Letter

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
2108 Grand Boulevard ▪ Vancouver, Washington 98661-4622 ▪ (360) 690-7171

November 15, 2013

Mr. Gary L. Honeyman
Manager of Environmental Site Remediation
Union Pacific Railroad
221 Hodgeman
Laramie, WY 82072

Re: Ecology Response to Union Pacific Railroad August 23, 2013 letter: Ridgefield, WA – Pacific Wood Treating: Comments for the Consent Decree and Associated Documents

Ecology Facility Site Identification #1019

Dear Mr. Honeyman:

Thank you for your comments for the July 23 – August 25 public comment period for the Pacific Wood Treating (PWT) site (Site) in Ridgefield, Washington. You expressed concern that the draft Cleanup Action Plan (CAP) and Consent Decree (CD) include the off-property area as part of the Site.

Ecology has determined that enough data is available to conclude that dioxins from PWT contaminated these areas. As such, they are part of the Site.

PWT Off-Property Dioxin Contamination

Under Washington's state cleanup law, MTCA, a site is anywhere a hazardous substance has come to be located. Soil samples collected in the residential area between Maple and Mill Streets and on part of McCuddy's Marina show dioxin concentrations above the MTCA Method B direct contact soil cleanup level of 11 nanograms per kilogram.

Soil sampling results show elevated levels of dioxins are co-located with wood treating compounds on PWT's Lake River Industrial Site (LRIS). PWT allowed treated wood products containing dioxins to drip onto LRIS soil. Wind-borne dust, dust tracked on vehicle tires, and trucks transporting still-dripping wood products likely spread dioxins from LRIS. Dioxin concentrations in off-property soil are highest in samples closest to the LRIS and decrease with distance from LRIS (see attached Figure 3-3 and Table 3-5 from the RI/FS report; also see Appendix B of the RI/FS report).

There is no other evident source for the off-property dioxin. If there were a source other than LRIS, such as an upwind burning source, we would expect to see dioxin concentrations at similar levels area-wide in the off-property area. This is not the case. Dioxin concentrations to the north of Maple Street and east of Cells 2 and 4 are much lower than south of Maple Street and at McCuddy's Marina.

As you can see, data shows that the off-property dioxin contamination is part of the release of dioxin from LRIS. Ecology has added more text to the CD and CAP to explain our rationale for including off-

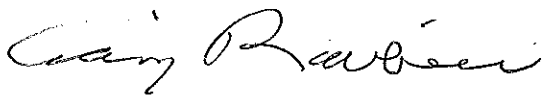
property areas in the Site. You can read more about these edits in the enclosed responsiveness summary, which is also available at https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=3020.

Next Steps

More soil sampling is required to evaluate the need for cleaning up dioxin contamination in resident yards and at McCuddy's Marina. Ecology expects this work to be performed under an agreed order, which will require extensive public outreach efforts to educate Ridgefield residents and obtain property access for sampling. Also, at a minimum a work plan for soil sampling will need to be developed, approved and implemented and results documented in a RI/FS report. A cleanup action plan will also be needed. Ecology anticipates engaging the PLPs for the remaining Site work and amending the CD to add the off-property area when we have made cleanup action decisions for that area.

If you have any questions or would like to discuss items in this letter, please contact me at (360) 690-4795 or Craig.Rankine@ecy.wa.gov.

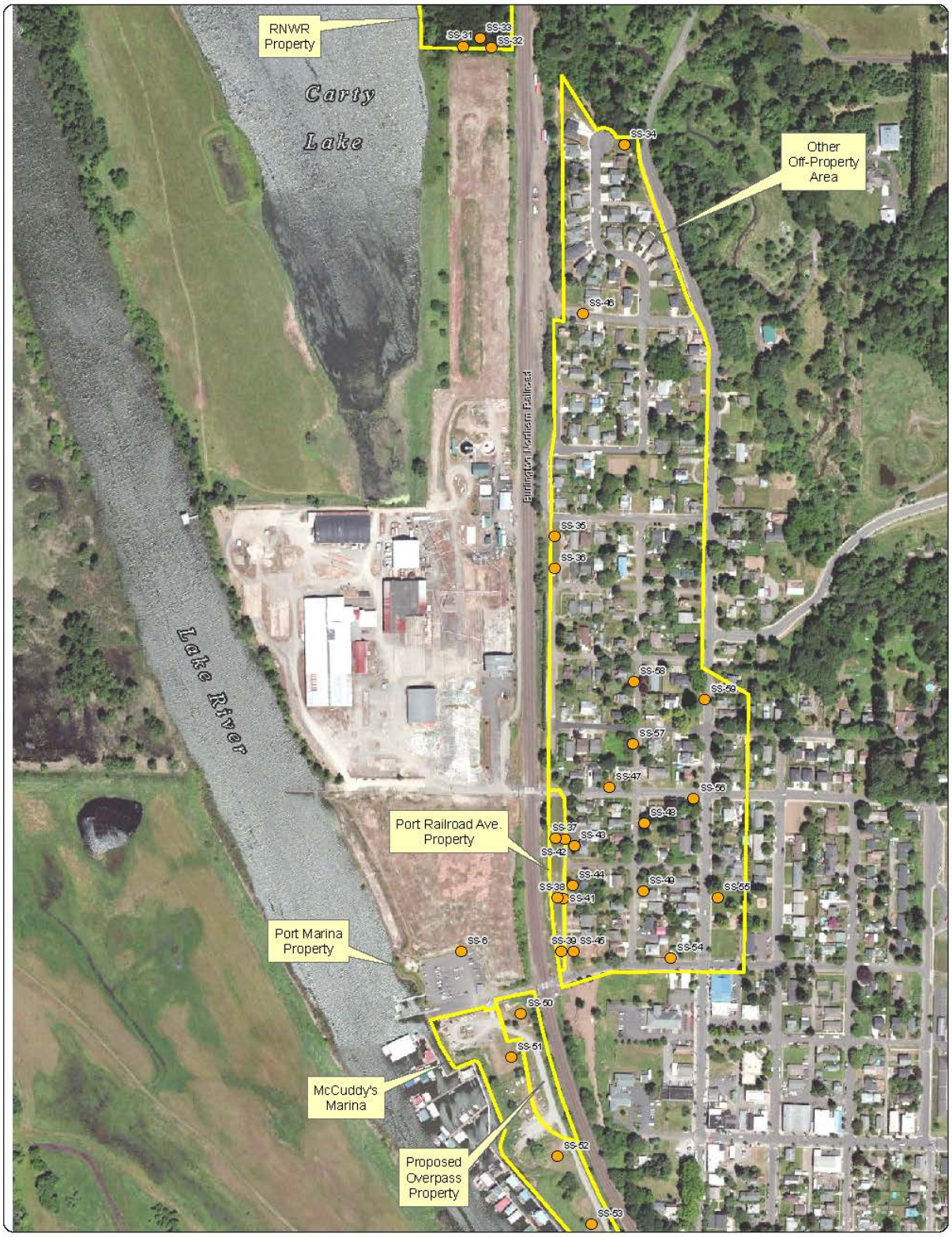
Sincerely,



Craig Rankine, RG, LHG
Site Manager/Hydrogeologist
Toxic Cleanup Program
Vancouver Field Office

ds/CR

cc: Brent Grening and Laurie Olin, Port of Ridgefield, Ridgefield, WA
Steven Taylor and Alan Hughes Maul Foster & Alongi Inc., Vancouver, WA
Madi Novak, Maul Foster & Alongi Inc., Portland, OR
Cindy Donnerberg, CH2MHill, Portland, OR
Rebecca Lawson and Scott Rose, Ecology Southwest Regional Office, Lacey, WA
Ivy Anderson, Office of the Attorney General, Olympia, WA
Ecology Southwest Regional Office Records Center, Lacey, WA



Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online/Bing Maps

Figure 3-3
Off-Property
Surface Soil Sample Locations
Former PWT Site RI/FS
Ridgefield, Washington

Legend

- Soil Sample Location
- Off-Property Area Designations
- Tax Lots

0 200 400
Feet

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Table 3-5
Off-Property Soil Screening Results
Former PWT Site RI/FS

Location ID	MTCA Method B Soil CULs	SS-6	SS-37	SS-38	SS-39	SS-41	SS-41	SS-42	SS-50	SS-31	SS-32
Sample ID		SS-6	SS-37	SS-38	SS-39	SS-41	SS-41-Dup	SS-42	SS-50	SS-31-S-0.5	SS-32-S-0.5
Sample Date		07/17/2008	06/17/2010	06/17/2010	06/17/2010	08/09/2010	08/09/2010	08/10/2010	05/24/2011	02/26/2009	02/26/2009
Sample Depth (feet bgs)		0.3	0	0	0	0	0	0	0	0.5	0.5
Area		Port Marina	Port Railroad	Port Railroad	Port Railroad	Port Railroad	Port Railroad	Port Railroad	Port Overpass	RNWR	RNWR
Phenols (µg/kg)											
Pentachlorophenol	8,300	53.2	19.9 U	19.8 U	18.4 U	NV	NV	NV	NV	447 U	431 U
Metals (mg/kg)											
Arsenic	20[a]	2.78	7.20	8.32	9.81	NV	NV	NV	NV	5.08	4.49
Chromium	120,000	18.2	14.5	19.7	14.7	NV	NV	NV	NV	17.7	13.9
Copper	3,000	19.5	14.1	38.9	10.6	NV	NV	NV	NV	8.46	6.18
Zinc	24,000	67.6	161	153	93.9	NV	NV	NV	NV	74.9	76.5
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/kg)											
Total PAH	NV	266	ND	127	181	NV	NV	NV	NV	114	ND
Naphthalene	1,600,000	6.95 U	8.86 U	8.81 U	8.19 U	NV	NV	NV	NV	8.95 U	8.63 U
Acenaphthylene	NV	6.95 U	8.86 U	8.81 U	8.19 U	NV	NV	NV	NV	8.95 U	8.63 U
Acenaphthene	4,800,000	6.95 U	8.86 U	8.81 U	8.19 U	NV	NV	NV	NV	8.95 U	8.63 U
Fluorene	3,200,000	6.95 U	8.86 U	8.81 U	8.19 U	NV	NV	NV	NV	8.95 U	8.63 U
Phenanthrene	NV	13.9	8.86 U	8.81 U	18.0	NV	NV	NV	NV	8.95 U	8.63 U
Anthracene	24,000,000	12.5	8.86 U	8.81 U	8.19 U	NV	NV	NV	NV	8.95 U	8.63 U
2-Methylnapthalene	320,000	6.95 U	NV	NV	NV	NV	NV	NV	NV	NV	NV
Fluoranthene	3,200,000	32.7	8.86 U	10.6	39.3	NV	NV	NV	NV	11.6	8.63 U
Pyrene	2,400,000	26.4	8.86 U	11.4	27.0	NV	NV	NV	NV	11.6	8.63 U
Benzo(a) anthracene	NV	13.2	8.86 U	8.81 U	8.19	NV	NV	NV	NV	8.95 U	8.63 U
Chrysene	NV	26.4	8.86 U	8.81 U	12.3	NV	NV	NV	NV	11.6	8.63 U
Benzo(a) pyrene	140	18.1	8.86 U	13.2	9.83	NV	NV	NV	NV	8.95 U	8.63 U
Indeno (1,2,3-c,d)-pyrene	NV	14.6	8.86 U	13.2	9.01	NV	NV	NV	NV	9.84	8.63 U
Dibenzo(a,h) anthracene	NV	6.95	8.86 U	8.81 U	8.19 U	NV	NV	NV	NV	8.95 U	8.63 U
Benzo(ghi) perylene	NV	20.9	8.86 U	20.3	12.3	NV	NV	NV	NV	14.3	8.63 U
Benzo(b) fluoranthene	NV	47.3	8.86 U	14.1	16.4	NV	NV	NV	NV	10.7	8.63 U
Benzo(k) fluoranthene	NV	11.8	8.86 U	8.81 U	8.19 U	NV	NV	NV	NV	8.95 U	8.63 U
1-Methyl naphthalene	24,000	6.95 U	NV	NV	NV	NV	NV	NV	NV	NV	NV
cPAH TEQ	140	26.6	ND	17.3	14.1	NV	NV	NV	NV	7.99	ND
Dioxins (ng/kg)											
Total Dioxin TEQ (Mammal)	11	**37**	**41**	**50**	5.3	**19**	**21**	**110**	**34**	9.5	6.5
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NV	410	200	230	40	84	90	330	190	36	32
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NV	7,800	6200 J	8900 J	700	3300	3600	15000	7900 J	1,600	1,000
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	NV	160	140	150	22	76	87	370	130	23	18
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	NV	970	1000	1400	110	460	550	2400	1100	230	160
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	NV	15	10	14	1.4 J	5.8	5.8	26	9.1	1.5 J	1.2 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	NV	43	23	28	2.7 J	16 U	17 U	86 U	23	2.6 J	2.1 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NV	7.1	10	15	1.3 J	6.3	6.5	37	11	3.2 J	2.8 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	NV	17 U	14	15	1.9 J	7.3	7.6	44	17 U	1.5 U	2.1 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NV	45	56	62	5.5	25	29	150	57	14	9.3
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	NV	13	6.1	6.6	0.95 J	3.8 J	4.8 J	19	8.4	1.1 U	1.1 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	NV	25	30	36	3.2 J	15	13	74	20	6.5	6.1
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	NV	3.9	3.9 J	5	0.75 J	2.5 J	2.7 J	12	5.4	1.1 U	1.1 U

Table 3-5
Off-Property Soil Screening Results
Former PWT Site RI/FS

Location ID	MTCA Method B Soil CULs	SS-6	SS-37	SS-38	SS-39	SS-41	SS-41	SS-42	SS-50	SS-31	SS-32
Sample ID		SS-6	SS-37	SS-38	SS-39	SS-41	SS-41-Dup	SS-42	SS-50	SS-31-S-0.5	SS-32-S-0.5
Sample Date		07/17/2008	06/17/2010	06/17/2010	06/17/2010	08/09/2010	08/09/2010	08/10/2010	05/24/2011	02/26/2009	02/26/2009
Sample Depth (feet bgs)		0.3	0	0	0	0	0	0	0	0.5	0.5
Area		Port Marina	Port Railroad	Port Railroad	Port Railroad	Port Railroad	Port Railroad	Port Railroad	Port Overpass	RNWR	RNWR
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	NV	3.9	7.1	8.3	0.95 J	2.9 J	3.2 J	20	0.35 U	2.4 J	1.5 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	NV	15	13	20	2.7 J	7.4	9.4	44	15	2.3 J	1.8 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	NV	9.6	14	13	3 J	5.8	6.5	35	14	1.7 J	1.3 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	NV	1.4 U	2.3	2.3	0.35 U	0.7 U	0.95 J	4.1	2.2	1.3	0.83 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	11	0.65 U	0.67 J	0.55 J	0.13 U	0.23 U	0.28 U	1.1	0.21 U	0.46 J	0.39 U
Total Heptachlorodibenzofuran (HpCDF)	NV	170	150	160	60	190	210	860	440	60	45
Total Heptachlorodibenzo-p-dioxin (HpCDD)	NV	1800	1700	2500	180	860	1000	4400	1800	440	300
Total Hexachlorodibenzofuran (HxCDF)	NV	270	220	210	33	180	200	970	390	28	32
Total Hexachlorodibenzo-p-dioxin (HxCDD)	NV	210	280	370	30	140	150	950	240	80	62
Total Pentachlorodibenzofuran (PeCDF)	NV	63	110	120	29	70	84	430	120	17	11
Total Pentachlorodibenzo-p-dioxin (PeCDD)	NV	14	34	42	4 J	12	14	120	22	9.2	4.1 J
Total Tetrachlorodibenzofuran (TCDF)	NV	5.6	30	35	9.1	4.2	10	57	21	9.9	7.9
Total Tetrachlorodibenzo-p-dioxin (TCDD)	NV	2.1	8.9	12	0.13 U	1.1	1.7	13	3.5	2.4	0.28 U
Total Dioxins	NV	10,745	8,933	12,579	1,085	4841	5360	23130	11127	2,283	1,494

Table 3-5
Off-Property Soil Screening Results
Former PWT Site RI/FS

Location ID	MTCA Method B Soil CULs	SS-33	SS-51	SS-52	SS-53	SS-34	SS-35	SS-36	SS-43	SS-44	SS-45
Sample ID		SS-33-S-0.5	SS-51	SS-52	SS-53	SS-34	SS-35	SS-36	SS-43	SS-44	SS-45
Sample Date		02/26/2009	05/24/2011	05/24/2011	05/24/2011	06/17/2010	06/17/2010	06/17/2010	09/21/2010	09/21/2010	09/21/2010
Sample Depth (feet bgs)		0.5	0	0	0	0	0	0	0	0	0
Area		RNWR	McCuddy's	McCuddy's	McCuddy's	Residential	Residential	Residential	Residential	Residential	Residential
Phenols (µg/kg)											
Pentachlorophenol	8,300	438 U	NV	NV	NV	19.9 U	18.3 U	18.7 U	23.2	17.8 U	18 U
Metals (mg/kg)											
Arsenic	20[a]	4.19	NV	NV	NV	9.52	8.90	6.89	7.99	6.58	7.17
Chromium	120,000	14.4	NV	NV	NV	15.6	18.2	12.5	15.9	17.3	18.1
Copper	3,000	5.80	NV	NV	NV	9.56	15.3	11.7	12.0	16.5	8.10
Zinc	24,000	60.4	NV	NV	NV	99.7	97.4	82.5	119	160	76.2
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/kg)											
Total PAH	NV	ND	NV	NV	NV	ND	110	ND	251	143	ND
Naphthalene	1,600,000	8.76 U	NV	NV	NV	8.83 U	8.12 U	8.32 U	7.49 U	7.89 U	8 U
Acenaphthylene	NV	8.76 U	NV	NV	NV	8.83 U	8.12 U	8.32 U	7.49 U	7.89 U	8 U
Acenaphthene	4,800,000	8.76 U	NV	NV	NV	8.83 U	8.12 U	8.32 U	7.49 U	7.89 U	8 U
Fluorene	3,200,000	8.76 U	NV	NV	NV	8.83 U	8.12 U	8.32 U	7.49 U	7.89 U	8 U
Phenanthrene	NV	8.76 U	NV	NV	NV	8.83 U	8.12	8.32 U	14.2	11.8	8 U
Anthracene	24,000,000	8.76 U	NV	NV	NV	8.83 U	8.12 U	8.32 U	7.49 U	7.89 U	8 U
2-Methylnapthalene	320,000	NV	NV	NV	NV	NV	NV	NV	7.49 U	7.89 U	8 U
Fluoranthene	3,200,000	8.76	NV	NV	NV	8.83 U	9.74	8.32 U	37.4	18.9	8 U
Pyrene	2,400,000	8.76 U	NV	NV	NV	8.83 U	9.74	8.32 U	24.7	14.2	8 U
Benzo(a) anthracene	NV	8.76 U	NV	NV	NV	8.83 U	8.12 U	8.32 U	12.7	7.89 U	8 U
Chrysene	NV	8.76 U	NV	NV	NV	8.83 U	8.12 U	8.32 U	27.7	13.4	8 U
Benzo(a) pyrene	140	8.76 U	NV	NV	NV	8.83 U	11.4	8.32 U	15.7	8.68	8 U
Indeno (1,2,3-c,d)-pyrene	NV	8.76 U	NV	NV	NV	8.83 U	9.74	8.32 U	18.7	11.0	8 U
Dibenzo(a,h) anthracene	NV	8.76 U	NV	NV	NV	8.83 U	8.12 U	8.32 U	11.2	7.89 U	8 U
Benzo(ghi) perylene	NV	8.76 U	NV	NV	NV	8.83 U	12.2	8.32 U	21.0	11.8	8 U
Benzo(b) fluoranthene	NV	8.76 U	NV	NV	NV	8.83 U	12.2	8.32 U	30.7	13.4	8 U
Benzo(k) fluoranthene	NV	8.76 U	NV	NV	NV	8.83 U	8.12 U	8.32 U	10.5	7.89 U	8 U
1-Methyl naphthalene	24,000	NV	NV	NV	NV	NV	NV	NV	7.49 U	7.89 U	8 U
cPAH TEQ	140	ND	NV	NV	NV	ND	14.9	ND	24.4	12.4	ND
Dioxins (ng/kg)											
Total Dioxin TEQ (Mammal)	11	7.0	**13**	3.2	2.3	0.49	2.3	2.8	**48**	**23**	6.6
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NV	28	110	32	27	4.3 J	17	10	210	150	79
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NV	940	3700	1100	820	69	370	500	6500 J	3500	1400
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	NV	17	59	20	15	1.5 J	7.8	8.2	170	110	25
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	NV	150	410	150	110	9.7	59	68	1100	550	160
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	NV	1.2 J	0.31 U	0.24 U	0.18 U	0.33 U	0.63 J	0.61 J	11	6.1	2.1 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	NV	1.9 J	11	0.18 U	0.1 U	0.35 J	1.4 J	2.1 J	25	12	2.3 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NV	2.8 J	0.24 U	0.17 U	0.13 U	0.17 J	0.61 J	0.33 U	14	7.5	2.5 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	NV	1.5 U	8.5 U	0.11 U	0.19 U	0.15 U	0.74 J	0.99 J	16	4.9	1.3 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NV	10	21	9.5	6.4	0.54 J	3.1 J	3.3 J	72	32	9
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	NV	1.1 U	0.26 U	0.093 U	0.11 U	0.18 U	0.39 J	0.66 J	6.6	3.4 J	0.7 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	NV	6	8.2	0.14 U	0.15 U	0.25 J	1.3 J	1.4 J	34	16	4.9
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	NV	1.1 U	0.13 U	0.088 U	0.094 U	0.088 U	0.18 U	0.41 J	4.6	3.1 J	0.53 J

Table 3-5
Off-Property Soil Screening Results
Former PWT Site RI/FS

Location ID	MTCA Method B Soil CULs	SS-33	SS-51	SS-52	SS-53	SS-34	SS-35	SS-36	SS-43	SS-44	SS-45
Sample ID		SS-33-S-0.5	SS-51	SS-52	SS-53	SS-34	SS-35	SS-36	SS-43	SS-44	SS-45
Sample Date		02/26/2009	05/24/2011	05/24/2011	05/24/2011	06/17/2010	06/17/2010	06/17/2010	09/21/2010	09/21/2010	09/21/2010
Sample Depth (feet bgs)		0.5	0	0	0	0	0	0	0	0	0
Area		RNWR	McCuddy's	McCuddy's	McCuddy's	Residential	Residential	Residential	Residential	Residential	Residential
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	NV	2 J	0.13 U	0.13 U	0.14 U	0.15 J	0.37 J	0.35 J	8.2	3.9 J	1.3 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	NV	1.6 J	6	0.078 U	0.1 U	0.21 J	0.81 J	1.2 J	17	8.6	2 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	NV	1.3 U	6	0.16 U	0.06 U	0.13 J	0.8 J	1.4 J	11	6	1.2 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	NV	0.73 U	1.4	0.12 U	0.18 U	0.24 J	0.25 J	0.3 J	1.9 U	1.7 U	1 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	11	0.45 J	0.18 U	0.11 U	0.11 U	0.13 U	0.12 U	0.2 U	3.1	0.76 J	0.28 J
Total Heptachlorodibenzofuran (HpCDF)	NV	42	190	64	46	4.3 J	8.4	24	460	270	76
Total Heptachlorodibenzo-p-dioxin (HpCDD)	NV	280	710	270	200	19	100	140	2000	960	270
Total Hexachlorodibenzofuran (HxCDF)	NV	35	160	54	36	1.8 J	12	17	350	190	40
Total Hexachlorodibenzo-p-dioxin (HxCDD)	NV	68	93	40	30	3.4 J	14	15	330	170	51
Total Pentachlorodibenzofuran (PeCDF)	NV	12	52	26	16	1.3 J	6.8	9.7	79	56	14
Total Pentachlorodibenzo-p-dioxin (PeCDD)	NV	12	8	3 J	1.8 J	0.24 J	1.4 J	0.88 J	31	24	7.8
Total Tetrachlorodibenzofuran (TCDF)	NV	12	9.1	7.3	4.3	1.2	1.6	1.3	15	16	5.8
Total Tetrachlorodibenzo-p-dioxin (TCDD)	NV	2.4	4.3	0.52 J	0.29 J	0.37 J	0.12 U	0.23 J	8.7	7.4	4.3
Total Dioxins	NV	1,431	5036	1597	1181	105	531	718	9984	5343	1948

Table 3-5
Off-Property Soil Screening Results
Former PWT Site RI/FS

Location ID	MTCA Method B Soil CULs	SS-46	SS-47	SS-48	SS-49	SS-54	SS-55	SS-56	SS-57	SS-58	SS-59
Sample ID		SS-46	SS-47	SS-48	SS-49	SS-54	SS-55	SS-56	SS-57	SS-58	SS-59
Sample Date		05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011
Sample Depth (feet bgs)		0	0	0	0	0	0	0	0	0	0
Area		Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
Phenols (µg/kg)											
Pentachlorophenol	8,300	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Metals (mg/kg)											
Arsenic	20[c]	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Chromium	120,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Copper	3,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Zinc	24,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/kg)											
Total PAH	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Naphthalene	1,600,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Acenaphthylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Acenaphthene	4,800,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Fluorene	3,200,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Phenanthrene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Anthracene	24,000,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
2-Methylnapthalene	320,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Fluoranthene	3,200,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Pyrene	2,400,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Benzo(a) anthracene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Chrysene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Benzo(a) pyrene	140	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Indeno (1,2,3-c,d)-pyrene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Dibenzo(a,h) anthracene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Benzo(ghi) perylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Benzo(b) fluoranthene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Benzo(k) fluoranthene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
1-Methyl naphthalene	24,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
cPAH TEQ	140	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Dioxins (ng/kg)											
Total Dioxin TEQ (Mammal)	11	0.57	**57**	**27**	**20**	0.64	5.2	1.7	**23**	1.6	1.0
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NV	18	230	510	160	0.13 U	36	0.15 U	110	13	16
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NV	150	11000 J	5200	3500	130	770	460	3500	360	330
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	NV	5.3	190	160	93	12	26	12	100	11	9.6
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	NV	21	1400	670	590	21	140	82	670	63	54
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	NV	0.22 U	13	10	5.5	0.12 U	0.24 U	0.69	6.5	0.3 U	0.52
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	NV	0.072 U	50	16	13	0.09 U	0.24 U	0.12 U	21 U	2.9 U	0.24 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NV	0.091 U	14	8.8	9.5	0.38	0.18 U	0.22 U	9.7	0.15 U	0.15 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	NV	1.1 U	31 U	28 U	16 U	0.14 U	0.09 U	0.097 U	11	0.17 U	0.24 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NV	0.11 U	71	30	33	0.11 U	7.5	0.14 U	40	0.15 U	0.15 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	NV	0.081 U	13	0.17 U	0.15 U	0.13 U	0.17 U	0.15 U	0.18 U	0.15 U	0.12 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	NV	0.077 U	32	15	19	0.14 U	0.13 U	0.13 U	18	0.15 U	0.13 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	NV	0.14 U	7.6	3.3 U	0.2 U	0.14 U	0.12 U	0.14 U	0.11 U	0.28 U	0.22 U

Table 3-5
Off-Property Soil Screening Results
Former PWT Site RI/FS

Location ID	MTCA Method B Soil CULs	SS-46	SS-47	SS-48	SS-49	SS-54	SS-55	SS-56	SS-57	SS-58	SS-59
Sample ID		SS-46	SS-47	SS-48	SS-49	SS-54	SS-55	SS-56	SS-57	SS-58	SS-59
Sample Date		05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011	05/24/2011
Sample Depth (feet bgs)		0	0	0	0	0	0	0	0	0	0
Area		Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	NV	0.077 U	5.6	0.27 U	0.17 U	0.18 U	0.12 U	0.42	0.16 U	0.48	0.2 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	NV	0.068 U	27	11	11	0.11 U	0.12 U	0.1 U	13	0.074 U	0.11 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	NV	0.19 U	23	7.3	9.5	0.13 U	8	0.11 U	13	0.12 U	0.16 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	NV	0.51	3.1	3	1.3	0.16 U	0.28 U	0.23 U	1.4	0.12 U	0.24 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	11	0.11 U	2.3	4.5	0.12 U	0.16 U	0.12 U	0.26 U	0.19 U	0.12 U	0.12 U
Total Heptachlorodibenzofuran (HpCDF)	NV	18	410	520	250	34	73	28	260	31	25
Total Heptachlorodibenzo-p-dioxin (HpCDD)	NV	38	2200	1100	980	34	230	140	1200	110	97
Total Hexachlorodibenzofuran (HxCDF)	NV	6.8	540	230	200	22	99	28	270	24	24
Total Hexachlorodibenzo-p-dioxin (HxCDD)	NV	5.8	310	170	190	6.2	35	18	190	20	16
Total Pentachlorodibenzofuran (PeCDF)	NV	1.1 J	180	76	95	5 J	120	11	150	14	13
Total Pentachlorodibenzo-p-dioxin (PeCDD)	NV	0.77 J	30	30	25	0.11 U	5.7 J	1.4 J	23	1.3 J	1.5 J
Total Tetrachlorodibenzofuran (TCDF)	NV	0.088 U	29	47	22	0.45 J	20	0.48 J	26	3.6	1.7
Total Tetrachlorodibenzo-p-dioxin (TCDD)	NV	0.86 J	9.1	19	4.6	0.16 U	0.36 J	0.098 U	4.7	0.12 U	0.56 J
Total Dioxins	NV	239	14938	7902	5427	242	1389	696	5734	577	525

Table 3-5
Off-Property Soil Screening Results
Former PWT Site RI/FS

NOTES:

Bold indicates values that exceed MTCA Method B Soil CUL; if values were non-detects ("U"), 1/2 the reported concentration was compared with the MTCA Method B Soil CUL. Estimated values were compared with MTCA Method B Soil CUL.

Total PAH includes the following PAHs: naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, 2-methylnaphthalene 1-methylnaphthalene (if available), fluoranthene, pyrene, benzo(a)anthracene, chrysene, total benzofluoranthenes, benzo(e)pyrene, indeno(1,2,3-c,d)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.

Total SMS HPAH (High PAH) is the total of fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzofluoranthenes, benzo(e)pyrene, indeno(1,2,3-c,d)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene (2-methylnaphthalene is not included).

Total Dioxins is the sum of the homologues—OCDF, OCDD, HpCDF, HpCDD, HxCDF, HxCDD, PeCDF, PeCDD, TCDF, and TCDD.

bgs = below ground surface.

cPAH = carcinogenic PAH.

CUL = cleanup level.

Dup = duplicate sample.

J = Estimated value. Value used in calculations.

mg/kg = milligrams per kilogram.

MTCA = Model Toxics Control Act.

µg/kg = micrograms per kilogram.

ng/kg = nanograms per kilogram.

NV = no value.

Port = Port of Ridgefield.

RNWR = Ridgefield National Wildlife Refuge.

TEQ = toxicity equivalent.

U = Not detected. 1/2 the reported concentration used in dioxin TEQ and Total PAH calculations.

[a]MTCA Method A level adjusted for background