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DEPARTMENT OF ECOLOGY
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May 19, 2021

Jake Lund, P.E.
Senior Engineer, Parks, Arts, and Recreation Department
City of Olympia
P.O. Box 1967
Olympia, WA 98507
jlund@ci.olympia.wa.us

Re: City of Olympia's Response to Ecology's Comments

- **Site Name:** Solid Wood Inc.
- **Site Address:** 700 W Bay Drive NW, Olympia, WA 98502-4838
- **Facility/Site No.:** 94656838
- **Cleanup Site ID:** 4228
- **Agreed Order No.:** DE-08-TCPSR-5415

Dear Jake Lund:

The Washington State Department of Ecology (Ecology) has reviewed your response¹ to Ecology's comment letter² on the draft Remedial Investigation/Feasibility Study (RI/FS) Report (report)³ for the Site. Attached is a table that provides Ecology's responses to your responses. Also, listed below are additional comments on the Report.

- A. Section 2.5.2.4, Area D: As stated in our response for Section 3.1.3 (comment #6, see attached table), Ecology does not agree that the Report should classify RI and/or Interim Action (IA) samples that were located below mean higher high water (MHHW) as soil samples. No matter what the sample name indicates, samples must be classified according to their proper media. Under the Sediment Management Standards (SMS) cleanup rule WAC 173-204-505(22), sediment is defined as "...settled particulate matter located at or below the ordinary high water mark, where the water is present for a minimum of six consecutive weeks, to which biota (including benthic infauna) or humans may potentially be exposed, including that exposed by human activity...."⁴ The report

¹ *Response to Ecology's Comments on the October 5, 2015 Remedial Investigation/Feasibility Study (RI/FS) Report – Solid Wood, Inc.* Prepared by Pioneer Technologies Corporation, dated September 11, 2020.

² *Comments on Remedial Investigation/Feasibility Study Report.* Letter from Steve Teel, Ecology to Kip Summers, City of Olympia, dated December 19, 2019.

³ *Remedial Investigation/Feasibility Study (RI/FS) Report – Solid Wood, Inc.* Prepared by Pioneer Technologies Corporation, dated October 5, 2015.

⁴ WAC 173-204-505(22).

does not include a discussion stating that Area D included both upland soil and sediments. Please re-classify Area D as sediment in the report including all relevant figures, tables, and EIM data submittals.

- B. Section 2.5.2.5, Area E: The report refers to Area E as a “shoreline” area. Please revise the report to indicate more specifically what this area consists of (soil, sediment, or both). Based on Figure 1 from Parametrix (2009),⁵ most, if not all, of Area E appears to lie below mean higher high water (MHHW) and thus would be classified as sediments. Therefore, this area would need to meet SMS standards for benthic criteria and human health. Please re-classify Area E as sediment in the report including all relevant figures, tables, and EIM data submittals.
- C. Inappropriate Sediment Screening Levels: Chemistry results were compared to the SMS benthic criteria, with the exception of dioxins/furans which were compared to MTCA soil values. The SMS requires that sediment chemistry be compared to the SMS benthic criteria and bioaccumulative chemicals be compared to sediment natural background or practical quantitation limit, whichever is higher (WAC 173-204-560).

Please revise Tables 3-6 and 3-7 to indicate exceedances of:

- a. The SMS benthic chemical criteria.
- b. Puget Sound natural background or practical quantitation limit (PQL) – whichever is higher – for dioxins/furans, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and bioaccumulative metals.
- c. Regional background for dioxins/furans and cPAHs.⁶

Since the site has been established, the sediment area would be considered a “sediment cleanup unit” under the SMS WAC 173-204-505(20). In this case, Section 3.3 the “initial and confirmatory designation” part does not apply so it should be removed.

- D. Inaccurate use of bioassays and interpretation of biological and chemical exceedances: Under the SMS, bioassay results can override chemistry exceedances of the benthic chemical criteria. However, there were a few inaccuracies on the use of bioassays as follows:
- a. The report states that bioassays were analyzed for a few stations that exceeded the screening level for dioxins/furans (which were based on a MTCA soil value). Since the SMS does not have benthic criteria for dioxins/furans, it was unnecessary to analyze bioassays specifically for dioxins/furans [(WAC 173-204-562)(2)]. These stations should be compared to natural background or PQL, whichever is greater [(WAC 173-204-560)(3)].
 - b. Sediment sample location SD29 exceeded biological criteria and the document states the exceedance is due to the “upland nature of the samples” and/or due to ammonia build up from decaying organisms. This area is sediment and a bioassay failure is an indication of impacts to sediment quality, regardless of the nature of the sediment. If the sediment area has unusual characteristics, such as high ammonia, it

⁵ *RI/FS and IA Work Plan Addendum No. 3 – Post-Removal Piling Sediment Sampling and Analysis Plan*. Prepared by Parametrix, dated July 28, 2009.

⁶ See Table 10-2 in: *Sediment Cleanup User's Manual (SCUM)*. Washington State Dept. of Ecology Publication No. 12-09-057, Second Revision December 2019.

- may be due to decaying wood waste which could be from previous log handling and in-water log storage at the site. In this case, these site-related sources should be identified and addressed if sediment quality is impacted as a result of site activities.
- c. Based on Figure 3-7, it appears that 28 stations exceeded SMS benthic chemical criteria. However, only 11 stations were analyzed for bioassays and it does not appear they were analyzed from synoptic samples [i.e., both chemistry and bioassays are analyzed from the same sample (preferably) or from at least the same station taken at the same sampling event [WAC 173-204-562(3); Sediment Cleanup User's Manual ((SCUM) chapter 8). For example, samples from stations SD06 and SD14 exceeded SMS benthic chemical criteria and bioassays were analyzed on samples taken from SD25 and SD27 stations – which were near the stations with chemistry exceedances. In this case, stations SD25 and SD27 passed biological criteria, but stations SD06 and SD14 still exceeded benthic chemical criteria. For bioassay results to override chemistry results, they must be analyzed from synoptic samples. If a sample exceeds benthic chemical criteria and bioassays were not analyzed from a synoptic sample, it is still considered an exceedance.
- d. In the report, it states that the bioassay results for sample SD14 can be a substitute for analyzing bioassays on sample SD19. This is not consistent with the SMS, where chemistry and bioassays are analyzed on a station by station approach [WAC 173-204-560(7)(c)].

Please revise Table 3-7 to correctly document which stations exceeded benthic chemical criteria based on the information above. Each station that exceeded the benthic chemical criteria -- but did not have bioassays analyzed on a synoptic sample -- should be documented as an exceedance of the benthic chemical criteria.

- E. Insufficient chemicals analyzed and/or evaluated: It appears that some chemicals were not analyzed, not evaluated in the report, or not compared to the correct criteria. Typically, the full suite of SMS chemicals should be analyzed along with other bioaccumulative chemicals (e.g., dioxins/furans and cPAHs). The absent chemicals include:
- Mercury, arsenic, cadmium, and silver
 - LPAHs and HPAHs
 - 2,4-Dimethylphenol, 2-Methylphenol, 4-Methylphenol, Benzoic acid, Benzyl alcohol, Dibenzofuran, N-nitrosodiphenylamine
 - Butylbenzyl phthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate
 - 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, Hexachlorobenzene, Hexachlorobutadiene, Pentachlorophenol
 - Carcinogenic PAHs
 - Dioxins/Furans
 - PCB congeners, reported as sum toxic equivalent quotient (TEQ)

Therefore, please make the following revisions:

- a. If the chemicals above were analyzed, evaluate the data by comparing results to the SMS benthic chemical criteria.
 - b. If mercury and arsenic were analyzed, also compare the results to Puget Sound natural background (as bioaccumulative metals).
 - c. Cadmium exceeded Puget Sound natural background and should be included as a contaminant of concern (CoC).
 - d. Compare cPAHs sum TEQ to Puget Sound natural background and document as a CoC.
 - e. Revise Table 3-2 to include the correct screening levels for cPAHs, dioxins/furans, mercury, cadmium, and arsenic to reflect Puget Sound natural background and/or PQL (SCUM, Tables 10-1 & 11-1).
 - f. Revise Table 3-6 to reflect any additional chemical exceedances.
- F. Section 2.5.2.7, Pilings Removal Area: Since 339 pilings were cut or broken off two-feet below the mudline, their locations will need to be documented because they can pose a hazard if future excavation (for example maintenance dredging) occurs in the area. For future information, SCUM chapter 16 now has piling removal guidance and we highly recommend full removal except in unusual cases.
- G. Insufficient sampling to define nature and extent of sediment contamination: Sufficient sediment sampling has been done in the nearshore area surrounding West Bay Park to identify this sediment area as part of the site and understand nature and extent of contamination. However, this sampling is geographically limited to the nearshore, with a focus on West Bay Park. This limited sampling fails to identify (or verify) sediment quality impacts in the subtidal environment from chemical contamination and wood waste as well as other upland sources that were not identified in the conceptual release model.

To fill these data gaps and further characterize nature and extent of contamination, Ecology recommends the following sediment sampling locations:

1. **Waterward of the West Bay Park shoreline** to identify subtidal chemical contamination. A minimum of six surface sediment samples should be analyzed for the full suite of SMS chemicals, cPAHs, dioxins/furans, and PCB congeners. Adequate volume should be sampled to analyze bioassays on synoptic samples (or at least the same station) if chemistry exceeds SMS benthic chemical criteria.
2. **South of West Bay Park along the shoreline and waterward of this shoreline** to identify nearshore and subtidal contamination from potential upland source pathways (i.e., wood flume, groundwater, oil stain area) which could include:
 - a. Core sampling in the nearshore and subtidal to identify contamination at depth from potential migration of NAPL/Bunker C from Area A - potential conduits to sediment could be the catch basin and wooden flume. Ecology recommends a minimum of two cores at least six-feet deep and analysis of PAHs at two-foot intervals and bioassays analyzed from the surface sediment.

According to the Revised Agreed Order Schedule of Deliverables, you shall provide a revised response document to Ecology within 30 days of Ecology's written comments.⁸ If you have any questions about this letter, please contact me at (360) 407-6247 or steve.teel@ecy.wa.gov.

Sincerely,



Steve Teel, LHG
Toxics Cleanup Program
Southwest Regional Office

Attachment: A - Ecology Response Table

Attachments by email: B - Cultural Resources Review Form (Microsoft Word format)
C - Cultural Resources Review Form (pdf format)
D - IDP template (pdf format)

cc by email: Jonathon Turlove, City of Olympia, jturlove@ci.olympia.wa.us
Chris Waldron, Pioneer Technologies Corporation, waldronc@uspioneer.com
Ivy Anderson, Office of the Attorney General, ivy.anderson@atg.wa.gov
Rebecca S. Lawson, Ecology, rebecca.lawson@ecy.wa.gov
Nick Acklam, Ecology, nicholas.acklam@ecy.wa.gov
Amy Hargrove, Ecology, amy.hargrove@ecy.wa.gov
Ecology Site File

⁸ Re: Revised Agreed Order Schedule of Deliverables. Letter from Steve Teel, Ecology, to Jake Lund, City of Olympia, dated August 19, 2020.

	Ecology Comment	Pioneer Response	Ecology Response
1.	<p>Executive Summary, Footnote 1: Please rewrite this footnote. The agreed order simply identified the general area in which the Site is located – it was not to be used as a limitation on RI investigation. Because the RI has not adequately investigated where contamination has come to be located, a Site boundary has not been established to Ecology’s satisfaction. Accordingly, the RI and FS should not use the phrase “Site boundary”. Ecology will require supplemental RI work to adequately characterize the Site before a draft Cleanup Action Plan can be created.</p>	<p>We will remove the footnote as it has not achieved our intended objective for clarity/transparency between the general use of the term “Site” and the MTCA definition of “Site Boundary” which are often, incorrectly, used interchangeably.</p> <p>The purpose of this footnote was not to limit the RI. The purpose was to clarify that the term “Site” – when used without “Site Boundary” in the text does not have the same meaning as the MTCA Definition (WAC 173-340-200). In other words, we use the term Site generally throughout the report to reference the Solid Wood Incorporated Site. The initial starting point for establishing the Site Boundary was based on the information presented in the Agreed Order – additional samples collected during the RI in order to establish the Site Boundary at the end of the RI so that remedial alternatives could be evaluated in the FS.</p>	<p>Thank you for incorporating our comment. Please note that MTCA does not specifically use or define the term “site boundary.” The term “site” or “facility” is broadly defined as any area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located. However, we acknowledge that in practice, the area where remedial actions need to be performed to reduce the risks to human health and the environment to acceptable levels may be within the area of a “site.” Therefore, we do not encourage the use of “site boundary” in the RI/FS report for the purpose of discussing the locations where remedial alternatives will be applied. Rather, using a term such as “remedial action area” or “cleanup action area” would be more suitable.</p>
2.	<p>Section 1: Introduction, Footnote 3: Same comment as above.</p>	<p>See previous response.</p>	<p>See above.</p>
3.	<p>Section 2.4, Potential Contaminant Sources: This sections fails to describe what contaminants are associated with the “potential contaminant sources”. As such, it is unclear to the reader what contamination may be encountered by potential receptors (e.g., cross reference in Section 2.7).</p>	<p>Section 2.4 Potential Contaminant Sources refers to Table 2-1 which identifies potential containment sources and the associated release mechanisms and the typical contaminants associated with the source and release mechanism. This table provides an overview of the contamination that may be encountered on the Site. Figure 2-3, also referenced in Section 2.4, identifies the locations of the potential contaminant source areas. Text will be revised to include the following: Contaminants associated with the potential contaminant source areas and release mechanisms identified in Table 2-1 and in Figure 2-3 include the following:</p> <ul style="list-style-type: none"> • Heavy metals 	<p>Thank you for agreeing to add text in response to our comment. Your proposed text is a concise summary of the contaminants. However, we recommend that you also include in the text a brief summary of the possible contaminant sources and the release mechanisms that are shown in the table. Please also revise this section to include a discussion on the following potential sources to sediment and revise Figure 2.3:</p> <ul style="list-style-type: none"> • Historical in-water log storage areas as a source of wood waste to sediment. Based on historical maps, in-water log storage occurred for wood processing at this Site (see attached Figure 1).

	Ecology Comment	Pioneer Response	Ecology Response
		<ul style="list-style-type: none"> • Petroleum hydrocarbons • Polycyclic aromatic hydrocarbons (PAHs) • Semi-volatile organic compounds (SVOCs) • Volatile organic compounds (VOCs) • Dioxins • Creosote • Sodium Hydroxide • Phenol formaldehyde resins • Chlorinated solvents • Wood waste • Pentachlorophenol 	<ul style="list-style-type: none"> • Groundwater to sediment as a source of chemical contamination. • The wood flume as a source of chemical contamination. <p>Throughout the report, as you revise text, please try to summarize the main points of the tables and/or figures that are being referenced instead of just referencing them. Especially for tables/figures such as these that represent key information for the RI.</p>
4.	Section 2.7, conceptual site exposure model, page 2-6, last paragraph: The introductory sentence references Figure 2-6 and one footnote regarding pathways that are considered incomplete. It is not adequate to simply reference the figure because the figure does not contain an explanation of why these pathways are incomplete. Please add text (not footnotes) to describe this.	We will revise the text and Figure 2-6 to ensure that they are consistent and add additional explanation of why specific exposure pathways are considered incomplete to the text in Section 2.7.	Thank you for agreeing to incorporate our comment. The notes to Figure 2-6 need to be revised to indicate that the receptors for sediment include the benthic community, humans, and higher trophic levels. Complete exposure pathways for human health should include fish and shellfish consumption, sediment ingestion, and dermal contact – all of which should be based on tribal/subsistence fisher rates (WAC 173-204-561(2)(b); SCUM, Chapter 9). The fish consumption exposure pathway is not included in the CSM and sediment ingestion and dermal contact based on subsistence exposure are not included in the CSM, in addition, construction workers can be exposed to sediment by dermal contact and incidental ingestion during cleanup construction.
5.	Section 3.1.1, soil: The vertical extent of carcinogenic polycyclic aromatic hydrocarbons (cPAHs) contamination along the	Additional soil samples will be collected near the rail spur to delineate the vertical extent of cPAH contamination. A sampling plan, outlining the extent and	Thank you for agreeing to collect more soil samples to define the extent of cPAH contamination. We look forward to receiving and reviewing your work plan.

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	<p>railroad right-of-way (ROW) has not been determined. For example, samples at locations SB26, SB29, and SB30 were all collected at a depth of 4 feet below ground surface (bgs) and all of them exceeded the Model Toxics Control Act (MTCA) Method A Cleanup Level (0.10 milligrams per kilogram, mg/kg) and the maximum concentration was 0.31 mg/kg. No other depths were analyzed for cPAHs at these locations. It is important to know how the cPAH concentration varies with depth at these locations and what the maximum depth of contamination is. Also, what is the site conceptual model explanation for finding cPAH contamination at this depth? Likewise, cPAH screening level exceedances were found at locations SS03, SS05, SS06, and SS12 (0.5 feet bgs depth) but no deeper samples were collected or analyzed.</p>	<p>schedule for the collection of the additional samples, will be prepared and submitted to Ecology for review and approval prior to the collection of any samples.</p> <p>Note: The cPAH concentrations only slightly exceeded the MTCA Method A Soil CUL of 0.1 mg/kg. There is no information that suggests that there was a significant release along the rail spur (historical documentation or visual evidence). As such, the conceptual model for the surface soil exceedances is: (1) creosote-treated railroad ties, (2) minor leaks associated with routine rail operations that would have only impacted surface soil proximate to the rail spur, (3) the fill material that was used to construct the rail spur, and (4) urban background sources. The slightly deeper exceedances (approximately 4 feet bgs) might be associated with: (1) the fill material that was used to construct the rail spur and (2) urban background sources.</p>	
6.	<p>Section 3.1.3, sediment, 1st paragraph: It is not accurate to state that “no IAs [interim actions] were performed in sediment.” As shown in Appendix C, Figure 1, portions of the Area D interim action (IA) area are below mean higher high water (MHHW). Please revise text accordingly. Also, this figure should be incorporated into the main figures of the document rather than only in an appendix.</p>	<p>We will add a Figure (similar to Figure 1 in Appendix C) to the text in Section 3.1.3. We will add a footnote to the text that states: For the purposes of this RI, all samples in Area D were classified as soil samples, even if they are below the mean higher high water (MHHW). This is consistent with how the samples were identified (i.e., as soil) in the IA Report – see Appendix C). The following sample stations (DSW05, DSW09, DSW04, DBT02, DSW01, DSW01, DSW08, DBT01, and DSW03) were located below the MHHW and could also be designated as sediment samples as they are located in the transition zone between soil and sediment.</p>	<p>Ecology does not agree that the RI should classify RI and/or IA samples that were located below MHHW as soil samples. No matter what the sample name indicates, samples must be classified according to their proper media. Under the SMS cleanup rule WAC 173-204-505(22), sediment is defined as “...settled particulate matter located at or below the ordinary high water mark, where the water is present for a minimum of six consecutive weeks, to which biota (including benthic infauna) or humans may potentially be exposed, including that</p>

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			exposed by human activity...." ¹ Please revise the RI Report so that sample media are classified properly. In addition, for all sediment areas screening levels must be based on the SMS sediment cleanup objective for both benthic criteria (SMS Table III or SCUM Table 8-1) and human health, which will likely default to natural background, regional background, or PQL (SCUM Tables 10-1, 10-2, 11-1).
7.	Section 3.2.1.1, Direct Contact: It is confusing to write residential land use is not applicable to the Site. Unless a site qualifies for use of an industrial soil cleanup level (and this Site does not) then soil cleanup levels shall use a presumed unrestricted land use cleanup level in accordance with Washington Administrative Code (WAC) 173-340-740.	We respectfully disagree. The Site is a recreational site. The Site is currently a City-owned, public park and does not qualify as residential under current or future zoning ordinances. It is important that the reader understand that the land use (and associated exposures) will be consistent with a recreator and not a resident. However, this Site does not qualify for the use of industrial soil cleanup levels; therefore, as required by Washington Administrative Code (WAC) 173-340-740, soil cleanup levels were based on unrestricted land use cleanup levels which are protective of residential and recreational exposures.	We agree with the use of MTCA Method A Cleanup Levels for Unrestricted Land Use as screening levels for the Site as stated in the first sentence of this section. If it is important for the reader to understand that the land use (and associated exposures) will be consistent with a recreator then perhaps this text should be added.
8.	Section 3.2.2, groundwater screening levels: Ecology does not agree that groundwater at the site is not a feasible drinking water source due to its proximity to surface water. The RI/FS does not provide sufficient information to make a showing under WAC 173-340-720(2) that groundwater should not be classified as potable. The Ecology-approved Draft Final Closure Request Report	We respectfully disagree. In accordance with WAC 173-340-720(2)(d), even if groundwater is classified as a potential future source of drinking water, it is recognized that there may be sites where there is an extremely low probability that the groundwater can be a feasible drinking water source due to proximity to surface water that is not suitable as a domestic water supply. An example of this situation would be shallow ground waters in close proximity to marine waters such as on Harbor Island in Seattle. The shallow ground waters on the Solid Wood are very similar to	Currently there is insufficient data for Ecology to conclude that the "Harbor Island exemption" is applicable for the Site. WAC 173-340-720(2)(d) lists specific criteria, each of which must be satisfied: <ul style="list-style-type: none"> • (i) The conditions specified in (a) and (c) of this subsection are met; • (ii) There are known or projected points of entry of the ground water into the surface water; • (iii) The surface water is not classified as a suitable domestic

¹ WAC 173-204-505(7).

	Ecology Comment	Pioneer Response	Ecology Response
	(ARCADIS, 2018) ² for the adjacent Industrial Petroleum Distributors (IPD) site states that the future installation of a drinking water well would not be prohibited by the city of Olympia and therefore, as a conservative estimate, it was assumed that groundwater use may include drinking water beneficial uses in the future. Potential beneficial uses for the Solid Wood Site should be consistent with the adjacent IPD site. Please revise the document to include potential drinking water beneficial uses of groundwater for the Solid Wood Site.	Harbor Island in their proximity to marine waters. In this case, groundwater is classified as nonpotable since the groundwater on the Site is shallow and tidally influence by Budd Inlet and is hydraulically connected to marine surface water, which is not practicable to use as a drinking water source.	<p>water supply source under chapter 173-201A WAC; and</p> <ul style="list-style-type: none"> (iv) The ground water is <u>sufficiently</u> (emphasis added) hydraulically connected to the surface water that the ground water is not practicable to use as a drinking water source. <p>Ecology agrees that condition (a) is met – ground water does not serve as a current source of drinking water. However, data are not available to evaluate conditions (b)(i), well yield, or (b)(ii), concentrations of organic or inorganic constituents, for example total dissolved solids greater than 10,000 milligrams per liter. Ecology agrees that (d)(ii) and (d)(iii) are met. However, data have not been presented to demonstrate (iv) - that the Site ground water is <u>sufficiently</u> connected to surface water to make it not practicable for use as a drinking water source. For example, a tidal study has not been done nor has the significant hydraulic gradient from the west and the adjacent bluff been taken into account for how it might affect well yield and quality.</p>
9.	Section 3.3.2, sediment screening levels: Since the draft RI/FS Report was prepared, Ecology has published regional background values for South Puget Sound (Ecology, 2018). ³ For Budd Inlet, this document included regional background values for cPAHs	We respectfully disagree. Regional background concentrations are not intended to be used to identify and determine COPCs. Regional background concentrations are utilized to adjust the cleanup standard to accommodate for “the concentration of contaminant within a department defined geographic area that is primarily attributable to diffuse sources, such as atmospheric deposition or storm water, not attributable to a specific source or release”	Our original comment referenced the incorrect section number, it should refer to Section 3.2.3 instead of 3.3.2. The RI Report only used screening levels for the protection of the benthic community and inappropriately included a soil screening level for dioxins/furans (RI Report Table 3-2). This was apparently the basis for the RI’s not including cPAHs as a sediment COPC. However, the RI must also consider

² Closure Request Report, Industrial Petroleum Distributors Site, 1120 West Bay Drive, dated May 2, 2018, prepared by ARCADIS.

³ South Puget Sound Regional Background, Washington State Department of Ecology publication no. 18-09-117, May 2018.

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	<p>and dioxins/furans. Please incorporate these regional background values into the text and tables in the RI/FS Report.</p>	<p>(Ecology 2018). These values are not intended to be used to identify COCs and/or to reduce the cleanup standards.</p>	<p>sediment screening levels for the protection of human health and higher trophic levels, which means screening levels in SCUM Table 10-1 for natural background and Table 11-1 or PQL (whichever is higher) should be used for bioaccumulatives (e.g. cPAHs, dioxins/furans, PCB congeners and reported as sum TEQ). Therefore, the RI needs to include cPAHs, dioxins/furans, and PCB congeners as sediment COPCs because they are bioaccumulative chemicals that are of particular concern for humans and higher trophic level receptors. Since both cPAHs and dioxins/furans are COPCs for the upland, it is appropriate that they are also included as COCs for sediments. Furthermore, the specific locations of elevated cPAHs in surface and/or deeper sediment generally correspond with areas associated with former facility activities (piling areas, nearshore area adjacent to wood handling area). Dioxins/furans have already been demonstrated to be a COC for sediment due to the interim action excavation that needed to be extended into the sediment zone. Regarding the use of regional background concentrations, Ecology's Sediment Cleanup User's Manual (SCUM)⁴ notes that bioaccumulatives are of particular concern because of their low detection limits that may be required during the RI due to their low risk-based and background concentrations. SCUM also notes that most sites will have sources of PAHs and therefore, should be included among the</p>

⁴ Sediment Cleanup User's Manual, Guidance for Implementing the Cleanup Provisions of the Sediment Management Standards, Chapter 173-204 WAC, Department of Ecology Publication No. 12-09-057, Second Revision, December 2019.


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			COPCs for sediments. As noted in the Sediment Management Standards (SMS) rule (WAC 173-204-560) includes a two-tiered framework used to establish sediment cleanup levels. This framework incorporates natural background as one component of the Sediment Cleanup Objective (SCO), and regional background as one component of the Cleanup Screening Level (CSL).
10a.	Section 3.3.3, sediment contaminants of concern: Revise the document to include cPAHs as a sediment contaminant of concern (COC). Concentrations of cPAHs at several sediment samples locations (for example SD12, SD14, SD16, SD19, SD27, and SD28) exceed the regional background values of 78 micrograms per kilogram (µg/kg) toxic equivalent quotient (TEQ). The RI/FS Report needs to evaluate the potential for upland cPAHs contamination to impact sediments and discuss the site cPAH sediment data in context of results from Budd Inlet.	Please see the response to comment #9.	See above response #9. Also, the following stations exceed the cPAH natural background value of 21 µg/kg: SD7, SD9, SD10, SD11, SD14, SD17, SD20, SD21, SD23, SD24, SD25, SD29, and SD30.
10b.	Section 3.3.3, sediment contaminants of concern: Sediment samples were not collected and analyzed for cPAHs and/or TPH in the vicinity of the north and south trestles. This is a data gap if the trestles are or were previously constructed with creosote-treated pilings.	Additional samples will be proposed for the north and south trestles to address this data gap.	Thank you for agreeing to collect more samples in response to our comments. We look forward to receiving and reviewing your work plan.
10c.	Section 3.3.3, sediment contaminants of concern: The discussion on total dioxins/furans as a sediment COC needs to be	Please see the response to comment # 6. Sample DSW02 was removed during the Area D IA and was, therefore, not included in Table	Please see response #6. As shown in SCUM the South Puget Sound Regional Background and Puget Sound Natural Background values for dioxins/furans are 19

	Ecology Comment	Pioneer Response	Ecology Response
	<p>revised. Dioxins/furans are sediment COC and were one of the key COCs for the Area D interim action (which included upland soil and sediments). Also, Table 3-6 is misleading because it apparently only include "SD" labeled samples and; therefore, does not include the maximum detected dioxins/furans concentrations in Area D sediments (DSW02, 206 nanograms per kilogram, ng/kg). So, the question should not be whether or not total dioxins/furans are a COC, but whether there are any concentrations of them that exceed screening levels at the Site following the interim action.</p>	<p>3-3 (soil) or Table 3-6 (sediment) – see Figure 3-2 in the RI/FS. Note: The same MTCA Screening Level (i.e., 11 ng/kg) was used to evaluate in-place soil concentrations and in-place sediment concentrations so there is not an issue/concern that the COC evaluation would have resulted in different results if sediment samples were classified as soil or sediment.</p>	<p>nanograms per kilogram (ng/kg) toxic equivalent quotient (TEQ) and 4 ng/kg TEQ, respectively -- and the PQL is 5 ng/kg TEQ. These values differ from the soil screening value of 11 ng/kg TEQ, which was inappropriately used for sediment media.</p>
11.	<p>Section 3.3.4.2, Terrestrial Ecological Evaluation: As indicated in the attached Ecological Risk Analysis Memorandum, it is recommended that a Site-Specific Terrestrial Ecological Evaluation (TEE) is conducted at the site per the regulations found in WAC 173-340-7491(2)(a)(i). Please revise the text accordingly. Also, please consult with Ecology if you have any questions as you prepare the Site-Specific TEE.</p>	<p>We respectfully disagree. The Ecological Risk Analysis provided as an attachment to Ecology's comments indicated that the only criterion that potentially triggered a Site-Specific TEE was WAC 173-340-749 (2)(a)(i). Ecology concluded that, all of the other criteria that might trigger a Site-Specific TEE were not met. Ecology's basis for the conclusion was essentially that this is a park that is not used for baseball or football so therefore a Site-Specific TEE must be performed. The intent of this criterion is to protect habitat with native or semi-native vegetation that provide long-term habitat and for which ecological value will therefore increase over time with the loss of other habitat in the region. However, it appears that Ecology has misunderstood the current and planned future use for this park. This park is intended to be a high use, urban park that has walking paths and manicured lawns that are intended for sports activities (e.g., frisbee, pickup-soccer) and leisure activities (e.g., sunbathing,</p>	<p>After considering and reviewing your response, we agree that a Simplified TEE is sufficient for the Site.</p>

	Ecology Comment	Pioneer Response	Ecology Response
		<p>picnicking). Therefore, the park's current/future use is more similar to other parks with intensive use (e.g., a sport field). Land use plans do not include maintaining native vegetation conditions on-Site to any significant degree. The park will continue to be routinely mowed and landscaped.</p> <p>Consequently, a simplified TEE was conducted for the Site as part of the RI/FS and the results of the simplified TEE concluded there was no further evaluation necessary and no endangered or threatened terrestrial species were identified.</p>	
12.	<p>Section 3.6, FS Site Boundary Determination: It is incorrect to write that the Site boundary may be limited to areas with screening levels (SL) exceedances. A MTCA site boundary is "any site or area where a hazardous substance...has come to be located". WAC 173-340-200. This is not limited to areas where the hazardous substance is present above a SL. Therefore the Site boundary must include sediment and groundwater plume areas where hazardous substance(s) have been identified. It is correct to identify that remedial action will only be required in an area of the Site where the hazardous substance is above the SL, and therefore the FS review of work is in the identified areas. Additionally, the FS Alternatives need to review the IA work and determine if the CUL requirements have been met so that the interim action can be considered a final</p>	<p>We respectfully disagree. Site boundaries are typically determined by step out sampling and the site boundary is extended until there are no screening level exceedances. It is not practicable, from an implementation standpoint, to extend the site boundary to a "zero" or non-detect level. The intention was not to limit the extent of the FS, but to identify the remedial action boundaries on-Site. For the purposes of the RI/FS, the Site boundary was identified as the Agreed Order boundary was used to as a starting point for identifying the potential Site boundary and focus for investigation. The identified Site boundary encompasses all remedial action areas. The RI included a review of the IA's and incorporated all results in the FS that were representative of soil that is still in place (i.e., had not been excavated/removed during an IA) at the Site. Consequently, because the FS Alternatives evaluation was based on the data presented in the RI, it included a determination if the CUL requirements have been met so that the interim action can be considered a final cleanup action.</p>	See response #1.

	Ecology Comment	Pioneer Response	Ecology Response
	cleanup action. For example, IA excavation compliance monitoring results can be compared to CUL to determine no further excavation of soil is necessary. If IA results in containment, then the requirements of WAC 173-340-740(6)(f) should be reviewed to show that the cleanup action can be determined to comply with cleanup standards.		
13.	Section 4.1.2, Soil Cleanup Levels: Please rewrite your description of unrestricted land use. The Site does not qualify for use of an industrial soil cleanup level, and therefore unrestricted land use standards will be used. The fact that zoning prohibits single-family residential land use at the Site is not a factor.	This Site is a city-owned park is used only for recreational use. The Site is not zoned for residential use, nor is it likely it will be zoned for residential use in the future; however, it is acknowledged that this Site does not qualify for industrial soil cleanup levels, therefore, MTCA Method A Soil CULs for unrestricted land use (Table 740-1) were utilized in the RI/FS. The purpose of this section is to identify that the Site prohibits single-family residential land use, but is classified as unrestricted land use (i.e., single-family residential) for the purpose of developing CULs.	Response noted. Please also see response #7.
14.	Section 4.3, assembled cleanup action alternatives: Ecology does not agree with the combining of the cleanup of the small Oil Stain Area with the railroad right-of-way (RR-ROW) in the cleanup alternatives. Since there is a very large difference in scale/size and potential approaches for the cleanup of these, they need to be evaluated separately. There is also a significant difference in the risk to groundwater between the two areas. Lube oil range soil concentrations from Oil Stain Area	We will revise the text, tables, and figures to include the sum of TPH-D + TPH-HO per Ecology's request. We respectfully disagree with Ecology's comment with respect to the significant risk to groundwater between the two areas. As shown on Figure 3-4 (see excerpt below), numerous direct push groundwater samples were collected from this area in 2008. In addition, four monitoring wells that were installed and sampled for 4 consecutive quarters in 2009.	As explained in response #8, a demonstration has not been made to Ecology's satisfaction that groundwater can be classified as nonpotable. Therefore, the standard point of compliance for protection of groundwater is throughout the site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the Site. ⁵ Since groundwater exceeds the cleanup level, remedial action is necessary at the Oil Stain Area to reduce groundwater concentrations to appropriate levels.

⁵ WAC 173-340-720(8)(b)

	Ecology Comment	Pioneer Response	Ecology Response
	<p>samples SB48, 7 feet depth (12,000 milligrams per kilogram, mg/kg) and SB59, 6 feet depth (2,000 mg/kg) shown in WAC 173-340-900 Table 747-5). Grab groundwater samples results from downgradient location SB53 showed concentrations of total petroleum hydrocarbons – diesel range (TPH-D) of 460 micrograms per liter (µg/L) and TPH – lube oil range (TPHO) of 480 µg/L. As per Ecology Implementation Memorandum #4 (IM-4), since no prescreening or product matching was done the TPH-D and –O results for SB53 need to be summed together. This results in TPH-O concentration of 940 µg/L which exceeds the TPH-O Method A Cleanup Level for groundwater of 500 µg/L.</p> <p>Ecology does not agree with the conclusion in Parametrix (2014) that it is appropriate to use the re-analyzed results using silica-gel cleanup to remove naturally-occurring organics. Groundwater in the area does not seem to be affected by organic material because TPH-D and –O results in the grab groundwater sample from nearby boring SB52 were below the laboratory reporting limit. Please revise the text, figures, and tables accordingly.</p>	 <p>It is correct that the TPH-D+TPH-HO result from SB53 was 940 ug/L; however, TPH-D and TPH-HO were not detected in any of the surrounding (and crossgradient/downgradient) direct push samples (i.e., SB-52, SB-32, SB-28, SB-30, SB-26, SB-29, SB-25). Further, TPH-D and TPH-HO were not detected in any of the quarterly groundwater samples from MW-04, MW-03, and MW-07. Note: Groundwater flows due east (i.e., from MW-02 towards MW-03). This data demonstrates that the soil-to-groundwater pathway for TPH-related compounds in this area is not complete and there is not a significant difference in the risk to groundwater between the two areas. The RI report does not include the results for SB-53 that included silica gel cleanup. The TPH-D+TPH-HO result is 940 ug/L (see Table E-2). No other results are presented for SB-53. Therefore, no edits are required.</p>	
15.	<p>Section 4.3.2, Alternative 2: Please rewrite this alternative, as institutional controls and engineering controls are not a remedy. It appears that Alternative 2 is using a soil containment remedy, which</p>	<p>Correct. This is a containment remedy that incorporates appropriate institutional/environmental controls. The purpose of this alternative was to propose institutional controls and engineering controls in</p>	<p>Based on the data collected to date, as indicated in the responses above, Ecology does not agree that this alternative adequately protects groundwater. Also, additional data need to be collected to complete the RI for other media also (soil</p>

	Ecology Comment	Pioneer Response	Ecology Response
	requires use of controls as part of that remedy.	addition to the IAs that have already been completed. This alternative proposed no additional removal of soil/treatment of soil and assumes all existing IAs are complete and comprise part of the final cleanup action. The text will be revised to state the following: Under Alternative 2, the previously implemented IAs are considered complete (i.e., no additional soil removal/soil treatment is required) and ICs and ECs would be implemented in addition to the completed IAs to prevent unplanned and unmitigated contact with the impacted soil remaining within the Site boundary.	and sediment). Therefore, we suggest that a new set of FS alternatives be prepared and discussed with Ecology following the collection and analysis of the remaining RI data, prior to the preparation of the revised RI/FS Report.
16.	Section 4.3.3, Alternative 3 – limited soil excavation, cover, and controls: It is not clear to Ecology the rationale for the excavation of one foot of soil “within the TPH-HO [total petroleum hydrocarbons – heavy oil range] constituent delineation...since the vertical extent of TPH-HO contamination is unknown.” Since the Oil Stain Area release has caused an exceedance of the Method A Cleanup Level for groundwater, this alternative is not adequate for the Oil Stain Area. Please revise this alternative accordingly. It is not clear if this alternative will be using a containment remedy for some areas where soil above a CUL is not excavated. Please be clear if all contaminated soil above a CUL will be removed or not. Additional explanation is needed as to why compliance monitoring would not be necessary. If you are planning to use containment, then compliance	This alternative incorporates additional selective excavation and a containment remedy that incorporates appropriate institutional/ environmental controls. There is no evidence to suggest a mass release or nonsurface release of petroleum products remain at the site (i.e., these have been addressed by IAs). The remaining exceedances are primarily low-level exceedances that do not impact groundwater so selective excavation and containment (via cap/cover) are presented in this alternative. However, for additional protectiveness, one foot of soil will be excavated along the rail spur (width of 20 feet centered on the rail line) and around SB47 and SB48. Once the soil has been excavated, a geotextile fabric will be installed and 12 inches of imported, clean fill material will be installed over excavated areas. Please see the response to comment #14b regarding the soil-to-groundwater pathway. As part of this alternative, long-term inspections will be required, but additional compliance monitoring will not be required because confirmation samples will be collected to	Based on the data collected to date, as indicated in the responses above, Ecology does not agree that this alternative adequately protects groundwater. Also, additional data need to be collected to complete the RI for other media also (soil and sediment). Therefore, we suggest that a new set of FS alternatives be prepared and discussed with Ecology following the collection and analysis of the remaining RI data, prior to the preparation of the revised RI/FS Report.

	Ecology Comment	Pioneer Response	Ecology Response
	monitoring and periodic review will both be part of the remedy [see WAC 173-340-740(6)(f)(v)]. If you're planning on just using excavation, then compliance monitoring is still required to show soil cleanup levels post-excavation have been met.	demonstrate that all COC concentrations are below MTCA Method A SLs.	
17.	Section 5, Recommended Remedial Alternatives: Please revise the statement included as a "Note" – any additional sampling and revision to excavation and cover area will need to be included and approved by Ecology as part of the Cleanup Action Plan. The City cannot conduct additional sampling and make changed to the remedy on an independent basis. Additionally, as noted above, it is not clear if this remedy is using a containment approach to meeting soil cleanup standards.	This is correct. Any additional samples or revisions to the CAP will be communicated to and approved by Ecology. The text will be revised to state the following: Upon review and approval from Ecology, the City may collect additional soil samples within the rail spur area to accurately delineate total cPAH concentrations and refine the area requiring excavation and soil cover. Figure 5-1 shows the extent of the excavation and cover area and will be updated if additional sampling is conducted and the data supports modifying the extent of the excavation and soil cover area.	If it is anticipated that additional samples will be needed within the rail spur area to accurately delineate total cPAH concentrations and refine the area requiring excavation and soil cover. This work must be included in the upcoming work plan for sampling. It does not make sense to gather this information after the FS is prepared because this information is needed for the FS to be complete.
18.	Oil Stain Area Figures: The existing figures do not show adequate detail for the Oil Stain Area. Ecology recommend that versions of Figures 2 and 4 from Parametrix (2014) be included to provide this detail. Ecology also recommends that Figure 1 from Parametric (2014) be included as this figure shows better detail of the portion of the site south of West Bay Park.	We will add/revise Figures per Ecology's request.	Thank you for agreeing to incorporate our comment.
19.	Figures 1-1 through 5-1: To improve ease of readability, in the paper copies of the document, please reproduce the figures on 11x17 inch paper.	We will print all Figures in the main text (1-1 through 5-1) on 11x17 inch paper for all future hard copy submittals per Ecology's request.	Thank you for agreeing to incorporate our comment.

	Ecology Comment	Pioneer Response	Ecology Response
20.	Figure 2-5: Please revise the legend to include the descriptions/designations of the interim action areas.	The legend on Figure 2-5 will be revised to include symbols for the interim action areas.	Thank you for agreeing to incorporate our comment.
21.	Figure 2-6: Post-remediation soil exposures to ecological, recreator, and landscape/utility worker are listed as “potential complete.” Please explain in the figure and/or text what is meant by the term and how unacceptable exposures to these receptors will be controlled and prevented.	The following footnotes will be added to Section 2.7 Conceptual Site Exposure Model: <ul style="list-style-type: none"> • Incidental ingestion of and dermal contact with on-Site soil by ecological receptors, recreators, and landscapers/utility workers post-remediation are considered a potentially complete exposure pathway because this RI/FS is proposing to potentially leave contamination in-place and use a cap/cover for containment. It is highly unlikely that these receptors would have contact/exposure to soils contained by the cap/cover. • Inhalation of on-Site and off-Site soil by receptors, recreators, and landscapers/utility workers post-remediation are considered a potentially complete exposure pathway because this RI/FS is proposing to potentially leave contamination in-place and use a cap/cover for containment. It is highly unlikely that these receptors would have contact/exposure to soils contained by the cap/cover. 	Ecology concurs with your proposed text.
22.	Figures 3-1 through 3-5: Please add labels with the interim action area designation (for example “Area A”) to each of the detail panes in the figures.	Interim Action area designations are shown in the legend, however, IA areas (e.g., Area A) will be labeled on Figure 3-1 through 3-5.	Thank you for agreeing to incorporate our comment.
23.	Figure 3-11, comparison of historic operations with in-place soil total	Sample location SS-12 will be added to Figure 3-11; however, Figure 3-11 specifically	Please add figures that show the concentrations in sediment of cPAHs and

	Ecology Comment	Pioneer Response	Ecology Response
	cPAHs results: This figure is incomplete because it does not include the exceedances as SS-12. Please also add the sediment exceedances at SD-12, SD-14, SD-16, SD-27, and SD-28.	identifies the In-Place Soil samples. Samples SD-12, SD-14, SD-16, SD-17, and SD-28 are sediment samples and were appropriately not included on the figure. Please see the response to comment #6.	dioxins/furans. These figures need to show actual concentrations and may also be coded to indicate where exceedances of screening levels occur. Please also add tables that show sediment concentrations of cPAHs and dioxins/furans following Table 3-13.
24a.	Figure 4-1: This Figure shows that SS03, SS05, SS06, SB26, SB29, SB30, and SB48 are in-place soil cleanup level exceedance locations. However, this figure does not indicate which constituents are exceeded at these locations; please indicate this. Also, there is a text box that contains several sentences regarding SB47 but this location is not shown on the figure and so it is unclear what the text box is referring to. It is recommended that instead of trying to explain these details in a text box that these details are discussed in the text of the document.	A callout box will be included to identify the constituents that resulted in soil exceedances at each of the following locations in Figure 4-1: SS03, SS05, SS06, SS26, SS29, SS30, and SB48. The text regarding sample point SB47 will be moved to Section 4.1.2 Soil Cleanup Levels in the RI/FS text. Additional information regarding the evaluation of sample point SB47 is discussed in Section 3.4.1 TPH-HO in Soil.	Thank you for agreeing to incorporate our comment.
24b.	Figure 4-1: Please add the missing cPAH exceedance locations for soil and sediment that are mentioned above.	Sample location SS-12 will be added to Figure 4-1; however, Figure 4-1 specifically identifies the In-Place Soil samples. Samples SD-12, SD-14, SD-16, SD-17, and SD-28 are sediment samples and were appropriately not included on the Figure. Please see the response to comment #6.	Thank you for agreeing to add sample location SS-12 to Figure 4-1. Please see above the above responses pertaining to cPAHs in sediments.
25a.	Table 3-1: Some of the groundwater screening levels for protection of surface water have changed since the table was prepared. For example, the table shows the screening level for antimony as 640 micrograms per liter (µg/L) but the lowest value currently	Table 3-1 will be revised to reflect the most recent values in Ecology's CLARC database.	Thank you for agreeing to incorporate our comment.

	Ecology Comment	Pioneer Response	Ecology Response
	shown in Ecology's Cleanup Level and Risk Calculation (CLARC) database is 90 µg/L (40 CFR 131.45, marine waters, human health). Please check CLARC for the lowest values and modify the table accordingly.		
25b.	Table 3-1: As per Ecology IM-4, since no prescreening or product matching was done the soil and groundwater TPH-D and -O screening levels need to be combined values (2,000 mg/kg and 500 µg/L, respectively).	The text, figures, and tables will be updated accordingly.	Thank you for agreeing to incorporate our comment.
25c.	Table 3-1: Please provide more detail on how the soil-to-surface water screening levels were calculated.	Soil-to-surface water screening levels were determined in accordance with WAC 173-340-747(a) and 173-340-747(4)(a), the fixed parameter three-phase partitioning model (Equation 747-1). Based on the criteria in WAC 173-340-720, the groundwater on-Site is classified as nonpotable due to the tidal influence from surface water (i.e., Budd Inlet) and the hydraulic connectivity to surface water, which is not practicable to use as a drinking water source. Using the assumption that groundwater is nonpotable and the assumption that groundwater needs to be protective of surface waters, MTCA Method A surface water CULs were used to determine the soil-to-surface water screening levels.	Please see responses Nos. 8 and 14.
26.	Table 3-11: Please add a footnote indicating that the industrial or commercial land use values shown in the table for diesel and gasoline range organics are allowed except that the concentrations shall not exceed residual saturation at	The table will be revised to include the following: Footnote (2): For Industrial or Commercial Land Use SLs for Diesel Range Organics and Gasoline Range Organics, the concentration shall not exceed residual saturation at the soil surface.	Thank you for agreeing to incorporate our comment.

	Ecology Comment	Pioneer Response	Ecology Response
	the soil surface (as per WAC 173-340-900, Table 749-2).		
27.	<p>Table 3-12: This table only shows the SB59 averaged result (1,810 mg/kg) for TPH-O of the sample and duplicate (3,200 mg/kg and 420 mg/kg, respectively). It is not acceptable to use averaged values in the table. Please revise all tables in the RI/FIS report to show each individual values. Also, please note that for decision-making purposes, maximum values shall be used rather than averaged values.</p>	All tables will be revised to show individual samples, including field duplicates.	Thank you for agreeing to incorporate our comment.
28.	<p>Table 3-12 and 3-13: Please revise these tables to include soil concentrations for samples removed during the IAs. These results can be footnoted or highlighted as removed but, they still need to be included in the table. The sample locations are shown in Figure 3-2 so it makes sense to allow the reader to see the values for these in the tables.</p>	We respectfully disagree. The purpose of Table 3-12 and Table 3-13 is to report the TPH-HO and cPAH concentrations (respectively) in In-Place soils. The results of the samples removed during the IA are presented in Appendix C.	Ecology concurs with your response.
29.	<p>Appendix E, data tables of analytical laboratory results: Please add a designation to the sample results in the tables (such as bold type or shading) to indicate if the detected concentration and/or laboratory reporting limit exceeds screening and/or cleanup levels.</p>	We respectfully disagree. The purpose of Appendix E is to provide the complete and raw analytical laboratory data. All analytical exceedances are reported in Table 3-3 (MTCA Direct Contact Soil SL Exceedances in In-Place Soil), Table 3-4 (MTCA SL Exceedances in Groundwater), Table 3-6 (SL Exceedances in Sediment), and Table 3-8 (Soil-to-Surface Water SL Exceedances in In-Place Soil).	We insist that a designation to the sample results in the Appendix E is necessary to indicate if the detected concentration and/or laboratory reporting limit exceeds screening and/or cleanup levels. These are prepared data tables, not "raw" results, and as such, adding bold type or shading would not compromise or bias the original values. The original "raw" data consist of the laboratory reports. Furthermore, Tables 3-3, 3-6, and 3-8 are limited in that they do not show individual sample results.

	Ecology Comment	Pioneer Response	Ecology Response
30.	Appendix E, Table E-1: The total cPAH result for sample SB04 does not match Table 3-13. Please check this and make the appropriate changes to show the correct result.	Table E-1 in Appendix E will be updated to reflect the correct results for sample SB04 (i.e., cPAH result of 0.050 mg/kg).	Thank you for agreeing to incorporate our comment.
31.	Electronic file size limit: The maximum size file that can be uploaded to Ecology's Document Storage and Retrieval System (DSARS) is 100 megabytes (MB). The electronic copy of the document that was provided was 226 MB. Please provide an electronic copy of the original document and any future documents in a reduced file size format and/or in portions that are less than 100 MB.	Files will be compressed or uploaded in segments (e.g., text, tables, figures, appendices) to meet Ecology's DSARS maximum file size requirements.	Thank you for agreeing to incorporate our comment for future submittals. Please provide electronic files of the 2015 RI/FS Report to meet Ecology's DSARS maximum file size requirements so that this report can be uploaded.
32.	Submittal of electronic data to Ecology's Environmental Information Management System database: We appreciate your work in submitting Site data to Ecology's Environmental Information Management System (EIM) database as required by Agreed Order section VIII.G. However, some RI/FS data appear to be missing from EIM (for example sediment samples from SD34 through SD41, soil samples SB33 through SB41, and grab groundwater samples SB52 and SB53. Please ensure that all data are entered into EIM as per Toxic Cleanup Program Policy 840 (Data Submittal Requirements).	Data uploaded into EIM will be reviewed and any missing data will be uploaded to Ecology's EIM database.	Thank you for agreeing to incorporate our comment.

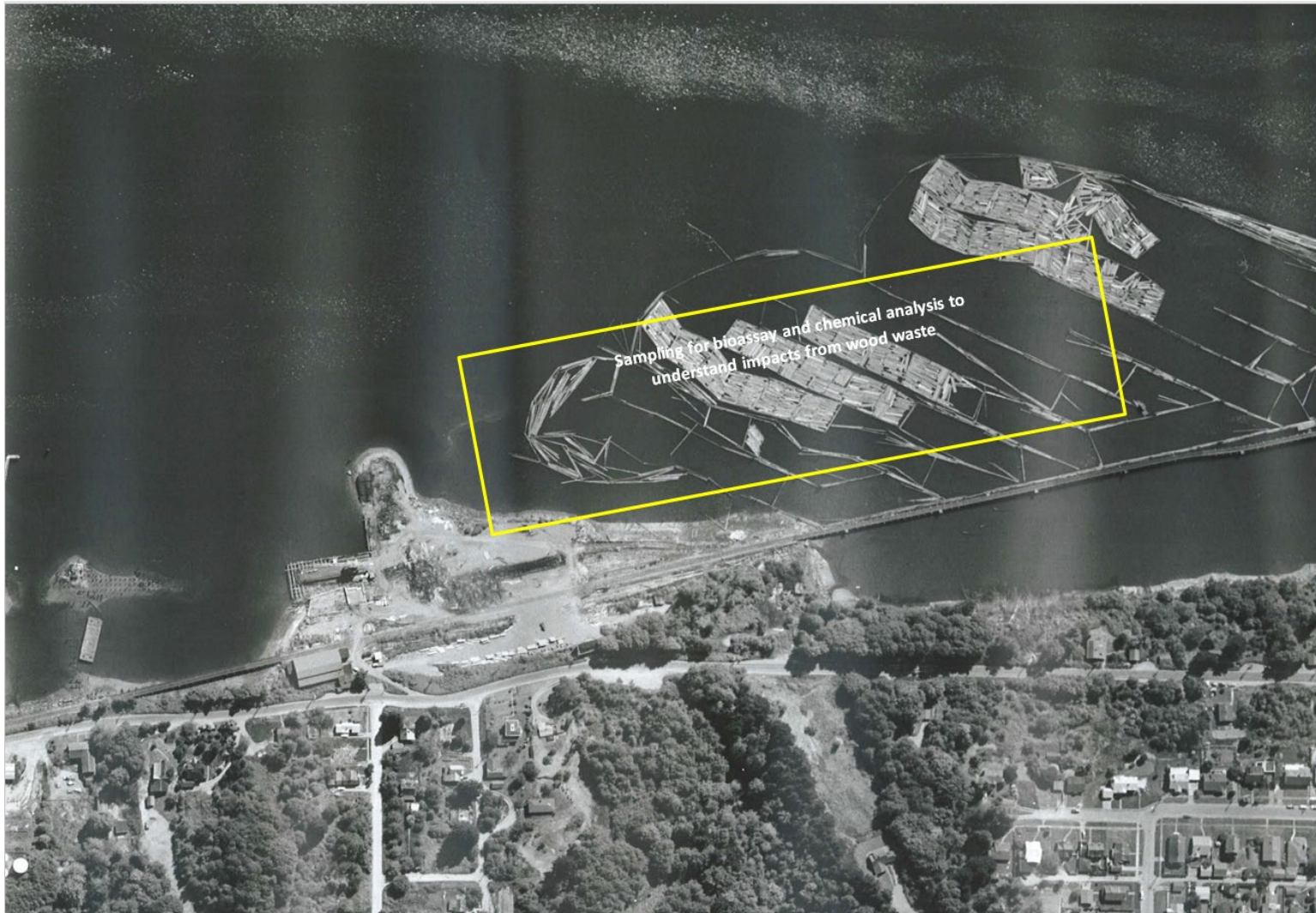


Figure 1: 1961 Air Photo showing historical log storage and area needed for sediment characterization for wood waste impacts.