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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office
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November 15, 2022

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: Conditional Approval of Data Gaps Investigation Work Plan

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

Dear Jake Lund:

Thank you for revising the Data Gaps Investigation Work Plan (plan[1] for Department of Ecology (Ecology) review in response to Ecology's comments that were previously communicated via email on July 26, 2022.[2] These comments are shown in Enclosure A of this letter.

We also appreciate the meeting summary that was provided by Chris Waldron, Pioneer Technologies Corporation, on September 9, 2022, from the meeting between Chris Waldron and Chance Asher, TCP-HQ on that same day to discuss Ecology's comments #7 and #10.[3] This meeting summary is shown in Enclosure B of this letter.

[1] Pioneer Technologies Corporation, Data Gaps Investigation Work Plan for the City of Olympia's Solid Wood, Inc. Site in Olympia Washington, August 2022.
[2] Ecology, *City of Olympia – Solid Wood, Inc. – Data Gaps Investigation Work Plan*. Email to Hannah Morse, Pioneer Technologies, July 26, 2022.
[3] Pioneer Technologies Corporation, *Solid Wood WP,* Email from Chris Waldron to Chance Asher, Ecology, September 9, 2022.

Ecology has no further comments on the plan and accepts the August 24, 2022 Data Gaps Investigation Work Plan provided that the clarifications for comments #7 and #10, shown in Enclosure B, are incorporated into the work. Please also note that there are a couple of things we noticed in Section 3.1, Chemical Analysis:

- The plan cites PSEP 1995 for the grain size analytical method. However, Ecology's Sediment Cleanup User's Manual (SCUM) cites PSEP 1986 or ASTM-D-422[i].[4]

- The plan cites PSEP 1995 instead of Plumb (1981) for total sulfides.

Please ensure that the analyses that you use are consistent with SCUM. Also, please keep us updated regarding your schedule for the field work. The above conditional approval was also previously communicated via email on September 14, 2022.[5]

If you have any questions about this letter, please contact me at 360-890-0059 or steve.teel@ecy.wa.gov.

Sincerely,

Steve Teel, LHG
Toxics Cleanup Program
Southwest Region Office

ST/js

Enclosure(s): A – Ecology Comments
B – Email from Chris Waldron to Chance Asher

cc: Jonathon Turlove, City of Olympia, jturlove@ci.olympia.wa.us
Chris Waldron, Pioneer Technologies Corporation, waldronc@uspioneer.com
Rebecca S. Lawson, PE, LHG, Ecology, rebecca.lawson@ecy.wa.gov
Jerome Lambiotte, Ecology, jerome.lambiotte@ecy.wa.gov
Chance Asher, Ecology, chance.asher@ecy.wa.gov
Ecology Site File

[4] Ecology, Sediment Cleanup User's Manual (SCUM), Publication No. 12-09-057, Third Revision, December 2021. [5] Ecology, *Conditional approval of Solid Wood Work Plan*. Email to Chris Waldron, Pioneer Technologies, September 14, 2022.

[5] Ecology, *Conditional approval of Solid Wood Work Plan*. Email to Chris Waldron, Pioneer Technologies, September 14, 2022.

Enclosure A

Ecology comments transmitted July 26, 2022, on the *Data Gaps Investigation Work Plan for the City of Olympia's Solid Wood, Inc. Site in Olympia Washington*, May 4, 2022, prepared by Pioneer Technologies Corporation.

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Ecology Comments

1. Section 1 – Introduction: Add the Sediment Management Standards WAC 173-204 to the last paragraph.

2. Section 2.1.1 – Soil, Table 2, Summary of Sample Analysis and Number of Samples: Please modify the table to more accurately show the actual number of samples that will be collected and possibly analyzed. For example, the table indicates that 12 samples will be analyzed for carcinogenic polycyclic aromatic hydrocarbons (cPAHs) plus one duplicate sample. However, archive samples will also be collected for potential analysis from depths of 6-8 feet below ground surface (bgs) and/or 12-15 feet bgs from the rail spur and soil stain areas. Therefore, the total number of field samples that could be analyzed ranges from a minimum of 12 and a maximum of 33 (not including duplicates). Please also note that duplicates need to be collected at a frequency of 1 per 20 samples.

3. Figure 2-1, Proposed Soil Sample Locations: The figure indicates that rail spur samples will be collected from a depth of approximately 2 4o 4 feet bgs. However, the text description in Section 2.1.1 states that the sample depth will be approximately 4 feet bgs. Please modify so that the text and figure are consistent.

4. Section 2.1.2, Sediment: This section states that the deeper intertidal sediment samples will be collected from a depth of approximately 2- to-4 feet bgs. However, Figure 2-2 indicates that the subsurface sediment samples will be collected at approximately 2 feet bgs. Please revise the text and figure to state that the subsurface sediment samples will be collected at the depth interval beginning at 0.5 feet bgs and ending 2- to- 3 feet bgs. This change is needed to ensure that the underlying interval immediately below the biologically active zone (BAZ) sample interval (< 6 inches bgs) is sampled. Section 2.2.2 will also need to be corrected to be consistent with these changes.

5. Figure 2-2: The sample area for sampling historical log rafting activities in Figure 2-2 (box outlined with red dotted line) is significantly larger than the suggested sample area indicated in Figure 1 from Ecology's May 19, 2021 comment letter (see yellow outlined box below). **Please reduce the size of the proposed sample area to be more consistent with Ecology's comment letter or provide an explanation of why it is appropriate to investigate the larger area shown in Figure 2-2.** Ecology's concern is that a too large a sample area will require more field time and expense than necessary plus there will be an increased likelihood that fewer samples will be from the main historic log storage area.

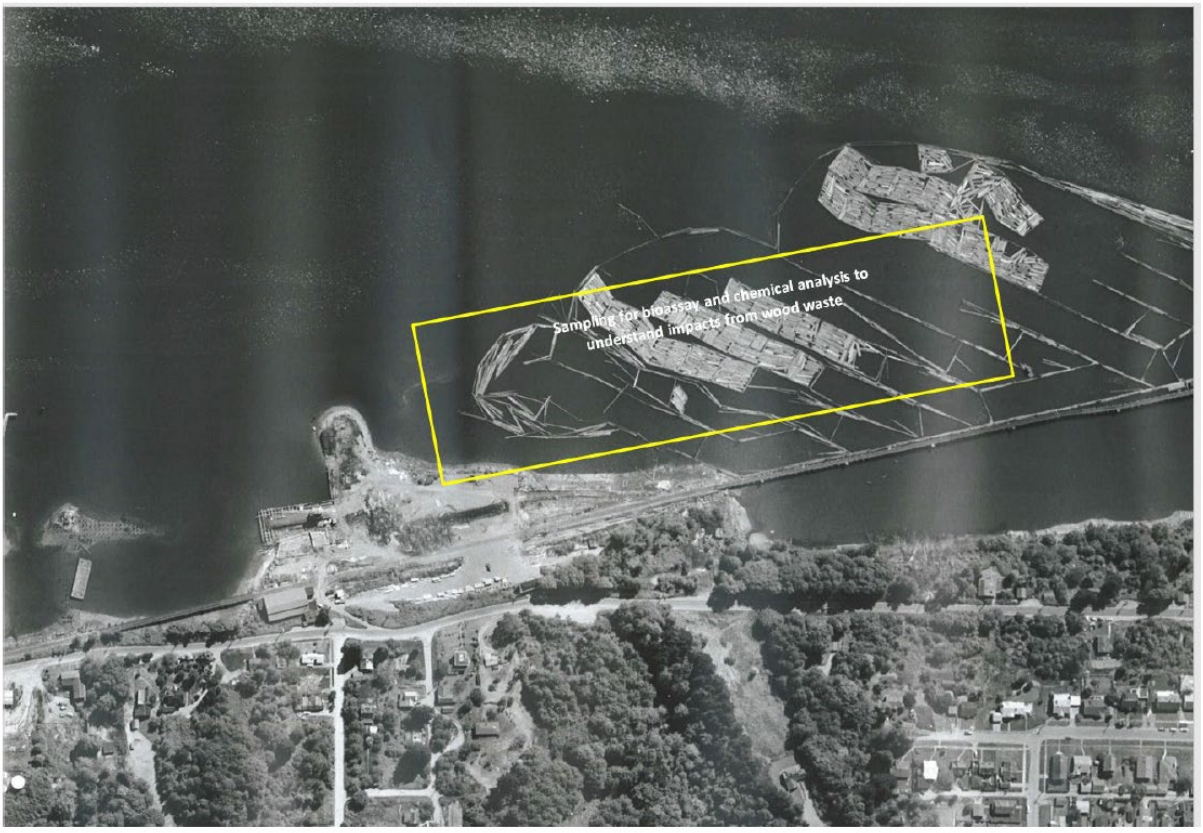

Figure 1: 1961 Air Photo showing historical log storage and area needed for sediment characterization for wood waste impacts.

6. Section 2.2.2 Wet sieving: Step 3 states that aggregates of material will be gently broken to facilitate sieving. These aggregates may be woodwaste, such as pieces of bark from log storage. Care should be taken to retain the woodwaste aggregates to include in the %woodwaste estimates. Any woodwaste would have had decades to decay into finer particles. To ensure woodwaste in the fines is not missed in Step 6, careful examination of the fines should be done.

7. Section 2.2.2 Sediment sampling procedures: Step 4 states that if the sample is contains large amounts of debris it should be discarded. Prior to discarding, please document the debris characteristics with detailed photos and descriptions. Also, please use care to ensure the debris is not woodwaste. If the sample contains woodwaste but is unacceptable due to other debris, gravel, or rocks, then attempts should be made to remove the woodwaste and include in the next grab. In Step 6, add woodwaste as part of the observation and document the nature of the woodwaste (e.g., bark, large pieces of logs, etc).

8. Section 3.1, Chemical Analysis:

    a. Analyses Methods: Several of the analyses methods shown in this section do not match the methods indicated in Table 5-1 of Ecology's Sediment Cleanup User's Manual (SCUM, 2021). Please revise this section to be consistent with SCUM or provide an explanation why a different method is more appropriate.

b. Mercury: Mercury is analyzed by a separate method from the other metals constituents. Please include this in the list.

c. Footnote (9): Please add arsenic to the list of metals that will be analyzed.

d. Footnote (10): Please revise this footnote to indicate that dioxins/furans will be analyzed in the subsurface intertidal samples also.

e. Add phthalates to the analyte list for intertidal samples. The response to Ecology comment 1 in the March 1, 2022 minutes from the December 2, 2021 meeting states that "all intertidal sediment samples will be analyzed for the Full SMS Suite, dioxins/furans, and cPAHs."

f. Grain Size and total organic carbon (TOC): Please revise to include analyses of grain size and TOC in all sediment samples. Currently, the list of analytes for the intertidal and subtidal samples south of West Bay Park and downgradient of the outfalls does not include grain size or TOC.

9. Section 3.2 Biological Testing.

a. Ensure appropriate modifications are made to the bioassay test conditions according to Ecology's woodwaste cleanup guidance publication No. 09-09-044 and include this guidance in the paragraph – it currently states PSEP and SCUM. For example, aeration for the amphipod test, retaining woodwaste in the test chamber to reflect *in situ* conditions.

b. The last sentence states that chemical testing will be conducted before the bioassays. This is not necessary in this case since running bioassays is not dependent on the chemistry results.

c. 3.2.1.1 Ash-free dry weight. Ensure SCUM, Table 8-2 is used for appropriate performance standards.

10. Section 4, Data Analysis and Reporting:

a. 3rd bullet: This bullet states that results will be compared to the "appropriate screening levels" to identify exceedances. Please include in the work plan a table that lists the screening levels. Please note that the appropriate screening levels for cPAHs, dioxins/furans, and bioaccumulative metals include sediment natural background or practical quantitation limit, whichever is higher (WAC 173-204-560), as well as South Puget Sound regional background for dioxins/furans and cPAHs.

b. 4th bullet: Ensure SCUM, Table 8-2 criteria is used to compare bioassay results.

11. Section 6, References: The SCUM reference lists December 2021 at the end of the reference. For clarity, please change the reference to SCUM 2021 and ensure this is consistent throughout the document.

According to the Revised Agreed Order Schedule of Deliverables, the revised plan to Ecology within 30 days of Ecology's written comments.[6] Since Ecology's written comments were sent via email on July 26, 2022, the due date for the revised plan was August 25, 2022. The revised plan was received on August 24, 2022.

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

Enclosure B

Pioneer Technologies Corporation, Solid Wood WP, Email from Chris Waldron to Chance Asher, Ecology, September 9, 2022.

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Teel, Steve (ECY)

From: Asher, Chance (ECY)
Sent: Friday, September 9, 2022 12:22 PM
To: Chris Waldron
Cc: Teel, Steve (ECY); Hannah Morse; Jake Lund (jlund@ci.olympia.wa.us)
Subject: RE: Solid Wood WP

Looks good Chris. Thanks for summarizing our chat.

From: Chris Waldron <waldronc@uspioneer.com>
Sent: Friday, September 9, 2022 11:19 AM
To: Asher, Chance (ECY) <CASH461@ECY.WA.GOV>
Cc: Teel, Steve (ECY) <stee461@ECY.WA.GOV>; Hannah Morse <morseh@uspioneer.com>; Jake Lund (jlund@ci.olympia.wa.us) <jlund@ci.olympia.wa.us>
Subject: RE: Solid Wood WP

Hi Chance,

Thank you for taking the time to discuss Comment #7 and Comment #10 for the Solid Wood Site (see the attached PDF for reference). Below is a summary of our call. I think we are on the same page. Our common goal is collect representative samples.

Comment #7: We agreed that the objective is to collect representative samples for testing and that samples with wood debris from multiple stations would not be composited into a single sample. The purpose of the text in Section 2.2.2 is to document that we need to have enough sediment (volume) from each sample station to perform the required tests. If there are large amounts of rocks, gravel, trash in a sample, there may not be enough sediment to perform the required tests. However, since we are sampling in a depositional environment, I do not expect that this will be a significant issue. We will thoroughly document the wet sieve process via field notes/photos so the sample selection process will be transparent. In the unlikely event that we have multiple locations with extensive non-wood debris (such that we would not collect the required number of sediment samples), we will: 1) Increase the number of wet sieve locations (i.e., > 20) and/or 2) collect multiple grab samples from the same location and combine them to ensure that we have enough sample volume from the station to perform the required tests.

Comment #10: We agreed that the screening levels presented in the work plan are not the final screening levels for the RI/FS report. The preliminary sediment screening levels presented in the work plan were developed based on MTCA Method A CULs, SMS criteria, and regional background values are included to assist in evaluating whether or not the laboratory methods are sensitive enough to achieve data quality objectives. Final screening levels will be developed in the RI/FS report and will include all appropriate "candidate screening levels" (e.g., Natural Background, Regional Background, PQLs, MTCA Values, SMS Criteria). We will follow applicable MTCA/SMS Guidance when developing final screening levels (and cleanup levels) in the RI/FS.

Please let me know if I have not accurately summarized our discussion.

Have a great weekend!

-Thanks,

-Chris

Chris Waldron, P.E.

PIONEER Technologies Corporation
5205 Corporate Ctr. Ct. SE, Ste. A
Olympia, WA 98503-5901
Phone: 360.570.1700 Ext: 103
https://uspioneer.com/

-----Original Appointment-----
From: Asher, Chance (ECY) <CASH461@ECY.WA.GOV>
Sent: Wednesday, September 7, 2022 10:05 AM
To: Asher, Chance (ECY); Chris Waldron
Subject: Solid Wood WP
When: Friday, September 9, 2022 10:00 AM-10:15 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Microsoft Teams Meeting

Brief discussion to clarify responses to #7 and #10 (attached).

Microsoft Teams meeting

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