LANDAU ASSOCIATES

TECHNICAL MEMORANDUM

TO: Christine Yanik, Regional Environmental Manager, Weyerhaeuser NR Company

FROM: Adrianna Jarosz, PE and Joe Kalmar, PE

DATE: June 21, 2024

RE: **Longview Facility East Pond Post-Dredging Summary Report**
Weyerhaeuser NR Company
Longview, Washington
Project No. 0157023.040

INTRODUCTION

This technical memorandum has been prepared by Landau Associates, Inc. (Landau) to document stormwater pond maintenance dredging and sediment dewatering activities completed by Weyerhaeuser NR Company (Weyerhaeuser) at its Longview facility (Facility) located at 1701 Industrial Way in Longview, Washington. The maintenance activities included dredging settled sediments out of East Pond to restore the pond's capacity and stormwater treatment effectiveness.

Weyerhaeuser contracted Golden Enviro LLC (Golden Enviro) to complete stormwater system-related maintenance at East Pond. Golden Enviro was onsite between January 30 and April 29, 2024, to conduct the work.

The Facility is covered under National Pollutant Discharge Elimination System (NPDES) Permit No. WA0991014 (Permit). Prior documents related to the dredging work include the May 30, 2023 *Work Plan for East Pond Dredging and Sediment Dewatering* (Work Plan), and the October 31, 2023 Washington Department of Ecology (Ecology) *Notification of Pond Dredging – NPDES Permit No. WA0991014 Special Condition S10 – Conditional Approval Letter* (Approval Letter).

East Pond Background

East Pond receives stormwater runoff from the Timberlands Log Sort Yard, which spans approximately 150 acres and includes log storage, sorting, debarking, and export activities. East Pond's drainage area includes the export dock and a portion of the Nippon Dynawave Packaging Company (NDP) chip storage area. These areas are shown on the site map of the eastern portion of the Facility, shown on Figure 1.

East Pond has a surface area of approximately 1.9 acres and a maximum design depth of approximately 11 feet (ft). One of the main benefits that East Pond provides is sedimentation for the incoming stormwater prior to stormwater entering CDID Ditch #3 via Outfall 003B.

A turbidity curtain is located within East Pond to enhance the sedimentation process and to reduce the amount of suspended solids and turbidity in stormwater discharging to Outfall 003B. Weyerhaeuser also

maintains a sodium hydroxide tank and injection control system at the stormwater inlet to East Pond, to help raise the pH of the discharged stormwater and to keep it within the discharge limit range established in the Permit. The pond is additionally equipped with two aeration units to promote aerobic biological activity in the pond.

EAST POND DREDGING PROCEDURES

The following section describes the procedures utilized for East Pond dredging, dredged sediment dewatering, dewatering plant water (filtrate) discharge back into East Pond, field turbidity monitoring at Outfall 003B, stormwater sampling at Outfall 003B, and stormwater best management practice (BMP) implementation activities conducted between January 30 and April 24, 2024. A map of the East Pond dredging equipment staging, BMPs, and final pond depths are shown on Figure 2. Representative site photographs taken during field activities are included in Appendix A.

Hydraulic Dredging

On January 30, 2024, Golden Enviro mobilized to the Facility to begin setting up equipment at East Pond. The dredging watercraft consisted of a diesel-powered IMS 4010 hydraulic suction dredge capable of dredging to a depth of up to 15 ft. The dredge was delivered to the Facility via truck and was positioned on East Pond using a crane. All sediment and water picked up by the hydraulic dredge was fed into a dewatering plant, staged along the south-southwestern side of East Pond, for separation of dredged solids from pond water.

Hydraulic dredging work was completed over a period of 46 workdays between January 31 and April 24, 2024. East Pond continued to take in stormwater runoff from the Facility and to discharge to Outfall 003B during the dredging operations. Throughout dredging activities, the turbidity curtain was re-positioned as necessary to provide access for the suction dredge while still utilizing the curtain within the pond to maintain sedimentation process enhancement. During dredging activities, the two in-pond aeration units were temporarily taken offline to minimize interference with the hydraulic dredge.

Dredging activities commenced at the southwest (inlet) side of East Pond and proceeded steadily toward the northeast (outlet) side of the pond. After one full pass across the entirety of the pond, the contractor returned to the center of the pond for an additional pass of dredging in the center. Accumulated solids were removed from the pond bottom to recover a pond depth of approximately 2 ft on the southwest (inlet) side of the pond, approximately 3 ft on the northeast (outlet) side of the pond, and approximately 7 ft toward the pond center. After the hydraulic dredging work ceased, a vacuum truck was used for one day on April 25, 2024 to remove accumulated solids from the northeast portion of the pond, in the vicinity of Outfall 003B, where hydraulic dredging could not be readily conducted.

Dewatering of Dredging Slurry

A staging area of approximately 80 ft by 20 ft was utilized to accommodate the dewatering plant along the southwestern side of East Pond. The dewatering plant consisted of a Triflo ES2000 Phase Separator unit designed to accept full dredge slurry flow. A mechanical system utilized a series of linear motion

vibratory shaker screens with hydro-cyclones to separate solids up to 25 micrometers (µm) in diameter out of dredge slurry.

After solids separation, filtered stormwater (filtrate) was drained back to the inlet side of East Pond. As shown in Table 1, the total volume of filtrate processed through the dewatering plant and discharged back into East Pond was estimated to be approximately 312,100 gallons, calculated from a total dredging run time of 312.1 hours and an estimated filtrate pumping rate of 1,000 gallons per minute (gpm).

Approximately 296 tons of dewatered dredged solids were accumulated in a pile to the north-northwest of East Pond. The dewatered solids were disposed of off-site after the completion of dredging activities.

Field Turbidity Monitoring at Outfall 003B

As outlined in the Work Plan and Approval Letter, Weyerhaeuser collected turbidity measurements from Outfall 003B every 15 minutes using a field meter during dredging and dewatering activities. The field measurements were compared against the daily maximum turbidity limit of 1,110 Nephelometric turbidity units (NTU) and the monthly average turbidity limit of 372 NTU for Outfall 003B, as established in the Permit, and the turbidity measurements are presented in Table 2.

Stormwater Sampling at Outfall 003B

In addition to the field turbidity measurements, Weyerhaeuser continued the collection of weekly turbidity, BOD_5, and settleable solids samples from Outfall 003B as required by the Permit. Analytical samples were submitted to the Specialty Analytical laboratory in Clackamas, Oregon under standard chain of custody procedures. The results of the weekly samples are included in Table 2. Analytical results were submitted to Ecology with the February, March, and April 2024 Discharge Monitoring Reports (DMRs).

Stormwater Best Management Practices

Throughout the course of dredging activities, several stormwater BMPs were implemented, including around the dewatering plant and dewatered dredged solids pile to prevent entry of sediment into the Facility's stormwater system. Specific BMPs implemented are listed below and indicated on Figure 2.

Throughout the duration of dredging activities, the existing turbidity curtain remained in East Pond but was periodically re-positioned to allow for hydraulic dredge access. In addition, the dredging contractor installed a temporary silt curtain at the northeast (outlet) side of East Pond, near Outfall 003B, to provide additional sedimentation within the pond during dredging activities.

Hay bales were placed in a line downslope from the dewatered sediments pile to filter and block sediment draining back into East Pond. Inspections around the dewatering plant area were included as part of Weyerhaeuser's weekly stormwater BMP inspection activities. The Facility Stormwater Pollution Prevention Plan (SWPPP) was revised to identify the additional BMPs.

COMPLETION OF DREDGING ACTIVITIES

The following section describes the dredging equipment decommissioning and rinsing and the dredged solids disposal activities conducted upon completion of the maintenance dredging at East Pond.

Dredging Equipment Decomissioning and Rinsing

Hydraulic dredging of East Pond was completed on April 24, 2024. Upon completion of dredging activities, the dredging equipment was demobilized from East Pond and transported to the washdown area near the log stackers for equipment rinsing, as shown on Figure 1.

On April 29, 2024, the dredging equipment was decontaminated with a hot water wash to destroy potential invasive species present on the watercraft. Approximately 600 to 750 gallons of wash water were generated and discharged to the NDP industrial wastewater treatment plant (WWTP) via Outfall 001B. On April 29, 2024, Weyerhaeuser notified NDP via email of the anticipated non-routine discharge prior to equipment washing, as required in the Approval Letter. A copy of the notification is included in Appendix B.

At the time of equipment washing, Weyerhaeuser collected a representative sample of the wash water discharging to Outfall 001B. The sample was submitted to Specialty Analytical laboratory in Clackamas, Oregon under standard chain of custody procedures and analyzed for BOD_5, total suspended solids (TSS), pH, and oil & grease. The results from the wash water sampling were reported on the April DMR submitted to Ecology on May 13, 2024. A copy of the analytical laboratory report is also included in Appendix C.

Dewatered Dredged Solids Disposal

On February 8, 2024, Weyerhaeuser collected a composite sample from the dewatered solids pile and submitted the sample to the Specialty Analytical laboratory in Clackamas, Oregon under standard chain of custody procedures.

The solids sample was analyzed for metals (arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium) using the Toxicity Characteristic Leaching Procedures (TCLP) by EPA Method 1311. Additionally, Weyerhaeuser analyzed the solids sample for TCLP volatile organics (including benzene),

TCLP organochlorine pesticides, TCLP semivolatile organic compounds, and TCLP chlorinated herbicides. The results are presented in Table 3 and the analytical laboratory report is provided in Appendix D.

The analytical results were compared against Washington Dangerous Waste Criteria maximum concentrations for toxicity characteristic, established in Washington Administrative Code (WAC) 173-303-090, and did not exceed toxicity characteristic concentrations for any analyte.

Between June 6 and 11, 2024, a total of 296 tons of dewatered solids were transported to the Cowlitz County solid waste landfill for disposal as non-hazardous waste. A copy of the disposal weigh ticket is presented in Appendix E.

TURBIDITY MONITORING AT OUTFALL 003B

Throughout the duration of dredging activities, turbidity was monitored at Outfall 003B at 15-minute intervals using a field meter, and the turbidity measurements are listed in Table 2. The field turbidity measurements allowed for real-time monitoring of East Pond discharge conditions during dredging activities. Turbidity measurements were used to determine if it was necessary to adjust dredging operations to meet Outfall 003B effluent limits (372 NTU average monthly, and 1,110 NTU maximum daily). Dredging operations were paused and/or adjustments were made to dredging operations or to BMPs on multiple occasions during the course of dredging activities when field turbidity readings were elevated.

In addition to the field turbidity measurements, weekly turbidity samples continued to be collected at Outfall 003B for laboratory analysis in accordance with Permit requirements. There were noted discrepancies between the field turbidity measurements and laboratory turbidity measurements.

To determine if the discrepancies were related to potential issues with the field unit, an assessment was conducted to determine if the unit was properly calibrated and if measurements were being collected correctly. The field unit used for collecting turbidity measurements was a MicroTPW portable turbidimeter equipped with an EPA Method 180.1-compliant tungsten lamp, a measurement range of 0.01 to 1,100 NTU, and a manufacturer's cited accuracy of ±2% for readings between 0 to 500 NTU and ±3% for readings between 500 to 1,100 NTU. The assessment concluded that the field measurements were being collected in accordance with manufacturer recommendations for the unit, which was calibrated correctly using unexpired commercially available calibration standards. An alternate similar unit was additionally utilized in the field, and the readings from both calibrated field turbidity units were consistent with one another.

Additionally, the sampling procedures for laboratory analysis were assessed for proper sample handling protocols, and it was determined that the samples were being collected in the appropriate containers and properly preserved in accordance with laboratory recommendations.

On March 26, 2024, Weyerhaeuser collected split samples from Outfall 003B to be analyzed for turbidity by EPA Method 180.1 and submitted to two laboratories for comparison: Specialty Analytical laboratory of Clackamas, Oregon, and Analytical Resources, LLC of Tukwila, Washington. The results of the split

sampling were 3,980 NTU and 1,340 NTU, respectively, further adding to uncertainty related to the accuracy of turbidity measurements.

Weyerhaeuser has reported only the laboratory analytical sample results on the February, March, and April 2024 DMRs, per request from Ecology.

During dredging activities, laboratory turbidity measurements exceeded the maximum daily turbidity limit (1,100 NTU) at Outfall 003B on February 13, March 12, March 19, March 26, and April 9, 2024, and exceeded the average monthly turbidity limit (372 NTU) in February and March 2024. These exceedances were reported on the February, March, and April 2024 DMRs. Additional notifications related to these apparent exceedances were submitted to Ecology along with written investigation reports submitted on March 25, April 2, and April 19, 2024. The turbidity exceedances are attributed to the dredging operations.

Weyerhaeuser coordinated with Ecology on the dredging work challenges and regarding a request to use a coagulant chemical in the hydraulic dredging treatment process. Kelsey Brotherton of Ecology was onsite on April 9, 2024, to meet with Christine Yanik of Weyerhaeuser and Jesikah Cavanaugh of Landau to review the dredging work and discuss the proposed dredging process modifications.

In an email received on April 12, 2024, Ecology approved the use of ferric chloride as a coagulating agent during East Pond dredging and water filtration activities, at a concentration up to 300 milligrams per liter (mg/L). On April 16, 2024, Golden Enviro began adding ferric chloride as a coagulating agent to its filtration process and a turbidity sample was collected. In accordance with Ecology's approval for the use of ferric chloride, Weyerhaeuser collected turbidity samples on three additional consecutive days (April 17, 18, and 19, 2024) from Outfall 003B during the initial use of ferric chloride and submitted the samples to the Specialty Analytical laboratory. The results of the four consecutive sampling events were 1,960, 5,160, 7,550, and 8,430 NTU, respectively. A final turbidity sample was collected at Outfall 003B on April 26, 2024, upon completion of dredging activities and the result was 2,700 NTU.

Weyerhaeuser noted additional exceedances of the maximum daily turbidity limit at Outfall 003B on April 16, April 17, April 18, April 19, and April 26, 2024, and an exceedance of the average monthly turbidity limit in April 2024. These exceedances were reported on the April 2024 DMR. Additional notification was submitted to Ecology along with written investigation reports submitted on May 1, 2024.

The ferric chloride appeared to be effective in reducing the filtration system effluent turbidity, but a higher concentration than what was initially proposed and approved by Ecology might have been necessary for more complete effectiveness. Given the apparent ineffectiveness of the dredging filtration equipment, it was decided to conclude dredging activity and to develop a more effective dredging process for a future dredging event.

EAST POND POST-DREDGING POND DEPTHS

As established in the Work Plan, the planned East Pond dredging depth for the activities conducted between January and April 2024 was 10 ft. The dredging contractor noted that they encountered

difficulties with sediment removal during dredging activities that precluded the hydraulic dredge from being able to achieve the planned pond depth. The sediment was more fine and more tightly packed than expected, and therefore required additional effort to remove.

On the evening of July 18, 2023, Weyerhaeuser's neighbor NDP had a significant fire in their chips department. Firefighting measures at NDP impacted the stormwater system and East Pond. The stormwater conveyance ditches were cleaned on July 30, 2023 after the chips fire to remove residue resulting from the fire and fire response, but Weyerhaeuser believes that the composition of the sediment encountered at the bottom of East Pond indicates that some of the charred material residue was able to migrate to East Pond.

Because the planned full pond depth was not achieved by the dredging event at East Pond, and to allow for better turbidity controls, rather than trying to do the full pond dredging once every five or so years, Weyerhaeuser plans to implement a dredging scheduled where a portion of East Pond will be dredged yearly, beginning in the summer of 2025. The Facility O&M Manual will be updated to reflect that planned schedule.

LANDAU ASSOCIATES, INC.

Adrianna Jarosz, PE
Senior Engineer

Joseph (Joe) Kalmar, PE
Principal

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Attachments:

Figure 1 – Facility Map
Figure 2 – East Pond Dredging Equipment Staging, BMPs, and Post-Dredging Pond Depth Measurements

Table 1 – Dredging Run Times and Dewatering Plant Filtrate Volume Calculations
Table 2 – Outfall 003B Turbidity Monitoring Data
Table 3 – Dewatered Solids Analytical Data

Appendix A – Selected Site Photographs
Appendix B – Copy of Notification Email to NDP
Appendix C – Dredging Equipment Wash Water Analytical Report
Appendix D – Dredged Solids Analytical Lab Report
Appendix E – Dredged Solids Disposal Ticket

Figures

INDUSTRIAL WAY

PATRIOT RAIL

WEYERHAEUSER
(LOG YARD)

NIPPON

OREGON WAY

E 67,000 | E 68,000 | E 69,000 | E 70,000 | E 71,000

N 30,000 | N 29,000 | N 28,000 | N 27,000

NORTH

STORMWATER FROM PATRIOT RAIL POTENTIALLY SHEET FLOWS TO EAST POND

SUMP

SAMPLE PUMP STATION 7 [OUTFALL 005B] TO NIPPON WASTE WATER

TO NORPAC LIFT STATION (PROCESS WATER)

LOG SURGE YARD

LOG DECKS

TURBIDITY CURTAIN

EAST POND

PATRIOT RAIL OVERLAND FLOW MAIN DISCHARGE POINT

BOOM

SAMPLE [OUTFALL 003B] TO CDIDD

SCALES

EXPOSED OLD MILL "A" FOUNDATION

LOG TRUCK TRAILER LOADERS

WATER VALVE

CHECK DAM

OPEN DITCH, TYPICAL

CHECK DAMS BOOMS

LOG GATE

EAST SUMP

TIMBER LANDS OPERATIONS

WATER TANK FILL

THINNING YARD

OVERLAND FLOW

UNDER GROUND PIPE

DISCHARGE FROM NIPPON CHIPS SOLIDS SEPARATOR

BOOM CHECK DAM

FROM NDP CHIPS

DISCHARGE TO NIPPON

OVERLAND FLOW DISCHARGES TO NIPPON

SHOP

RAMP

LOG DEBARKER

DISCHARGE TO NIPPON

DECOMMISSIONED TRUCK WASH OILY WATER SEPARATOR

STACKER SHOP SAMPLE [OUTFALL 001B] TO NIPPON WASTE WATER

STACKER SHOP ANNEX

LOG STACKER SHOPS

PIPE CAPPED & DECOMMISSIONED

SEE INSET

[OUTFALL 007B] CLOSED

BARGE CRANE

LEGEND

- STORMWATER PIPE
- OVERLAND FLOW
- OPEN DITCH
- CATCH BASIN
- MANHOLE
- CONDENSATE LINE
- CHECK DAM
- BOOM
- UNVERIFIED STORMWATER FEATURES ON ADJACENT PROPERTY
- PROPERTY LINES

[OUTFALL 007B] CLOSED

DOCK SUMP SAMPLE [OUTFALL 009B] FLOWS TO [OUTFALL 003B]

LONGSHOREMAN SHACK

EXPORT DOCK

INSET

SCALE: 1" = 150'

250' 200' 150' 100' 50' 0' 250' 500' 750' 1000'

SITE PLAN - EAST
(EXPORT DOCK)

Figure 1 - Facility Map

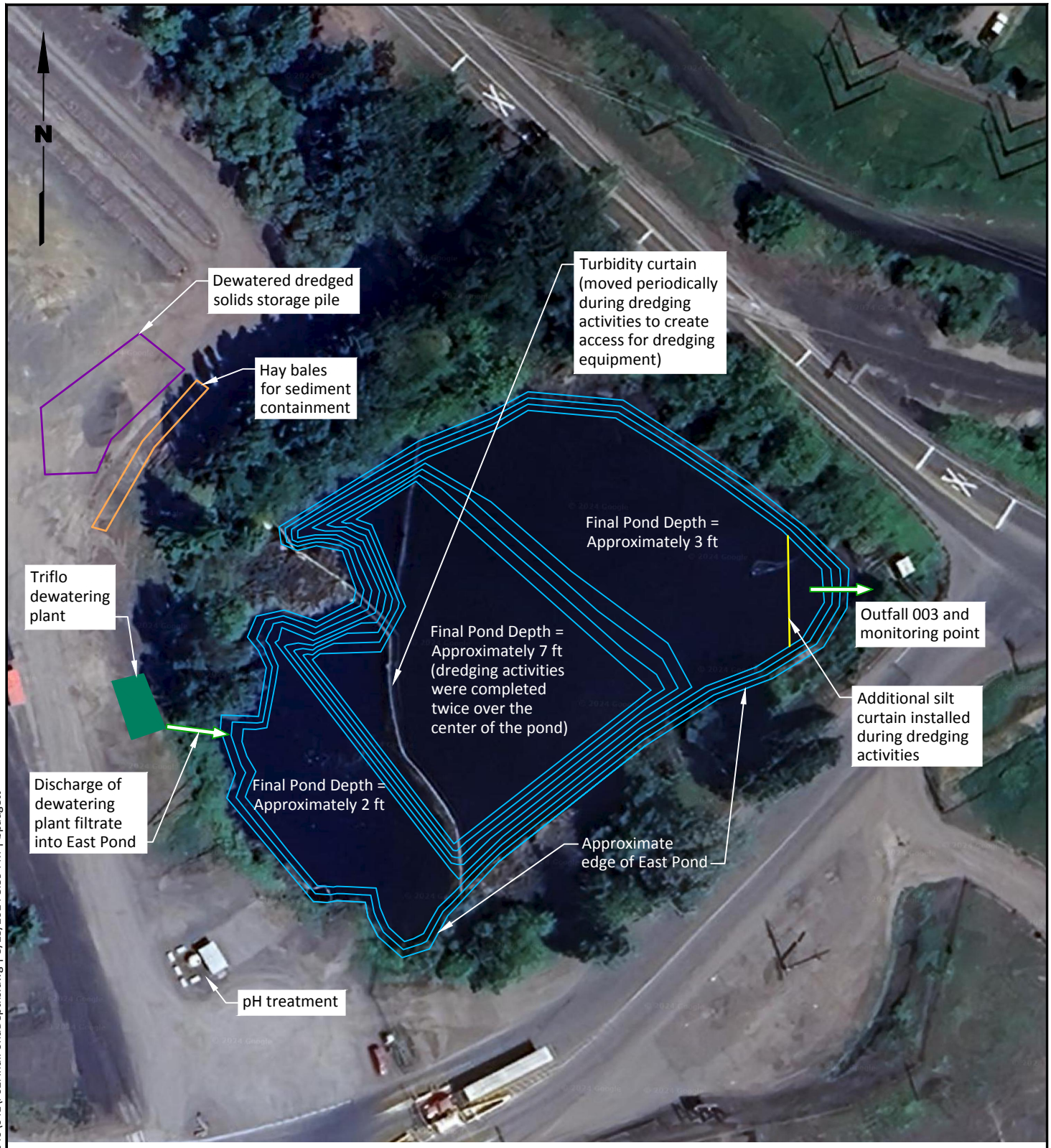
DATE: 11/02/2021 REVISED PRINT VOID ALL PREVIOUS

DATE: 3/25/2020 PRELIMINARY NOT FOR CONSTRUCTION

REV.	REVISION RECORD	DATE
F	MAPPING AND GRAPHICAL UPDATES	12/21/2020
G	REMOVED ADJACENT PROPERTY STORMWATER INFO	08/26/2021
H	WEYERHAEUSER COMMENTS	11/01/2021
D	ADJUSTMENTS FOR PRINTING	05/04/2020
E	ADDED GEOTERRA AERIAL PHOTO DATE 05/09/2019	05/22/2020

Lower Columbia Engineering
St. Helens, Oregon
(503) 366-0399

PROJ. NO.	2967	EAST (EXPORT DOCK)	
DWG. BY	TRJ	STORMWATER MAPPING	
APPR. BY		WEYERHAEUSER	SHEET V-3
FILE	D-2967-V-3-H	DATE 01/26/20	



Legend

- Rough Pond Contours
- Water Flow Direction
- Dewatering Facility

0 80 160

Scale in Feet

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: Google Aerial Imagery, 2024

Weyerhauser Longview Longview, Washington	**Final Pond Depths and BMPs**	Figure 2

LANDAU ASSOCIATES

Tables

Table 1: Dredging Run Times and Dewatering Plant Filtrate Volume Calculations - East Pond Dredging			
Date	**Dredge Start Time**	**Dredge End Time**	**Run Time (hr)**
1/30/2024	*Equipment mobilization*		
1/31/2024	9:30	17:00	7.5
2/1/2024	10:15	16:00	5.75
2/2/2024	9:00	16:30	7.5
2/5/2025	9:45	16:30	6.75
2/6/2024	9:00	17:15	8.25
2/7/2024	9:15	17:30	8.25
2/8/2024	9:00	12:30	3.5
2/9/2024	*No dredging or dewatering activities*		
2/12/2024	8:45	17:00	8.25
2/13/2024	9:00	17:00	8
2/14/2024	9:00	17:00	8
2/15/2024	8:30	17:15	8.75
2/16/2024	8:45	17:00	8.25
2/19/2024	8:15	10:45	2.5
2/20/2024	8:15	16:45	8.5
2/21/2024	9:00	12:30	3.5
2/22/2024	*No dredging or dewatering activities*		
2/23/2024			
2/26/2024	10:45	16:45	6
2/27/2024	9:30	17:00	7.5
2/28/2024	8:15	17:00	8.75
2/29/2024	8:45	16:45	8
3/1/2024	8:30	16:00	7.5
3/4/2024	8:40	16:40	8
3/5/2024	8:20	14:30	6.2
3/6/2024	10:38	16:35	5.95
3/7/2024	8:25	16:48	8.4
3/8/2024	*Equipment maintenance - no dredging or dewatering*		
3/11/2024	*activities*		
3/12/2024			
3/13/2024			
3/14/2024	8:30	17:13	8.7
3/15/2024	8:30	16:58	8.47
3/18/2024	9:30	16:58	7.47
3/19/2024	*No dredging or dewatering activities*		
3/20/2024	8:28	16:47	8.32
3/21/2024	10:30	17:00	6.5
3/22/2024	8:35	14:00	5.4

Table 1: Dredging Run Times and Dewatering Plant Filtrate Volume Calculations - East Pond Dredging			
Date	**Dredge Start Time**	**Dredge End Time**	**Run Time (hr)**
4/1/2024	*No dredging or dewatering activities*		
4/2/2024			
4/3/2024	8:52	16:21	7.48
4/4/2024	9:10	16:25	7.25
4/5/2024	8:30	16:35	8.08
4/8/2024	8:30	16:38	8.13
4/9/2024	9:21	16:46	7.42
4/10/2024	8:50	16:52	8.03
4/11/2024	8:47	11:04	2.3
4/12/2024	*No dredging or dewatering activities*		
4/15/2024			
4/16/2024	11:50	16:50	5
4/17/2024	8:33	16:54	8.35
4/18/2024	9:00	16:46	7.77
4/19/2024	8:30	16:45	8.25
4/22/2024	8:39	16:37	7.97
4/23/2024	8:15	16:00	7.75
4/24/2024	12:50	16:49	3.98
4/25/2024	*No dredging or dewatering activities - vac truck cleanout*		
		Total Runtime Hours	**312.1**
		Dewatering Plant Filtrate Pumping Rate (gpm)	**1,000**
		Estimated Total Filtrate Discharge Volume (gal)	**312,137**

Table 2: Outfall 003B Monitoring During East Pond Dredging								
Date	**Field Turbidity Measurements [1]**				**Grab Laboratory Sample Results [2]**			**Average Daily Turbidity Value [3]** (NTU)
	Number of Measurements Collected	**Daily Minimum** (NTU)	**Daily Maximum** (NTU)	**Daily Average** (NTU)	**Turbidity [a]** (NTU)	**BOD-5 [b]** (mg/L)	**Settleable Solids [c]** (mL/L)	
1/31/2024	29	114.6	167.6	130.6	-	-	-	130.6
January 2024 Monthly Average Turbidity Value								**130.6**
2/1/2024	23	142.7	196.8	178.7	-	-	-	178.7
2/2/2024	31	159.0	259.5	223.2	-	-	-	223.2
2/5/2024	28	299.0	330.6	313.1	-	-	-	313.1
2/6/2024	33	306.6	347.9	325.5	1,010	108.9	< 0.100	345.6
2/7/2024	33	320.7	369.2	358.7	-	-	-	358.7
2/8/2024	13	346.8	363.1	357.0	-	-	-	357.0
2/12/2024	32	329.5	358.3	343.7	-	-	-	343.7
2/13/2024	32	344.8	368.7	358.0	1,440	73.90	< 0.100	390.8
2/14/2024	33	330.0	358.2	344.7	-	-	-	344.7
2/15/2024	35	298.8	333.9	318.0	-	-	-	318.0
2/16/2024	34	317.0	353.8	334.6	-	-	-	334.6
2/19/2024	16	369.8	415.9	389.7	-	-	-	389.7
2/20/2024	36	350.4	405.3	374.2	1,090	70.60	< 0.100	393.5
2/21/2024	25	369.2	428.2	406.3	-	-	-	406.3
2/22/2024	*No dredging activities*							
2/23/2024								
2/26/2024	29	132.5	150.1	140.2	-	-	-	140.2
2/27/2024	32	240.1	303.2	270.2	408	50.30	< 0.100	274.4
2/28/2024	37	308.9	370.2	349.5	-	-	-	349.5
2/29/2024	37	254.9	295.4	275.9	-	-	-	275.9
February 2024 Monthly Average Turbidity Value								**318.7**
3/1/2024	32	332.6	368.1	349.2	-	-	-	349.2
3/4/2024	37	231.4	283.5	267.3	-	-	-	267.3
3/5/2024	29	295.8	357.2	319.7	810	97.90	< 0.100	336.0
3/6/2024	37	294.3	363.4	325.3	-	-	-	325.3
3/7/2024	38	95.0	285.3	216.2	-	-	-	216.2
3/8/2024	30	112.4	168.8	125.1	-	-	-	125.1
3/11/2024	*No dredging activities*							
3/12/2024					2,030	88.60	< 0.100	2030.0
3/13/2024								
3/14/2024	36	309.5	365.5	337.9	-	-	-	337.9
3/15/2024	36	125.9	262.3	222.8	-	-	-	222.8
3/18/2024	37	230.2	281.8	257.4	-	-	-	257.4
3/19/2024	37	185.2	244.0	209.2	4,760	72.90	< 0.100	328.9
3/20/2024	38	64.3	105.7	85.0	-	-	-	85.0
3/21/2024	35	31.9	77.6	55.7	-	-	-	55.7
3/22/2024	25	47.9	72.9	60.8	-	-	-	60.8
3/25/2024	*No dredging activities*							
3/26/2024					3,980 / 1,340 [4]	111.8	< 0.100	2675.0 [5]
3/27/2024								
3/28/2024								
3/29/2024								
March 2024 Monthly Average Turbidity Value								**511.5**
4/1/2024	*No dredging activities*							
4/2/2024					624	104.8	< 0.100	624.0
4/3/2024	33	262.9	330.9	287.5	-	-	-	287.5
4/4/2024	36	261.0	391.3	352.6	-	-	-	352.6
4/5/2024	36	215.7	407.5	306.8	-	-	-	306.8
4/8/2024	36	305.7	365.8	352.4	-	-	-	352.4
4/9/2024	37	63.0	370.6	218.8	1,950	74.50	< 0.100	264.4
4/10/2024	37	51.8	207.5	117.5	-	-	-	117.5
4/11/2024	17	45.0	94.7	68.7	-	-	-	68.7
4/12/2024	*No dredging activities*							
4/15/2024								
4/16/2024	37	171.1	270.4	249.4	1,960	-	-	294.4
4/17/2024	38	55.4	160.6	98.1	5,160	-	-	227.9
4/18/2024	37	47.4	74.4	61.4	7,550	-	-	258.5
4/19/2024	37	63.5	97.8	79.5	8,430	-	-	299.2
4/22/2024	36	122.1	166.9	139.4	-	-	-	139.4
4/23/2024	34	113.5	184.1	154.3	-	-	-	154.3
4/24/2024	21	135.7	167.0	147.4	-	-	-	147.4
4/25/2024	*No dredging activities on 4/25/2024 - field measurements were collected during vac truck cleanout*							
	16	100.3	159.0	125.1	-	-	-	125.1
4/26/2024	*No dredging activities*				2,700			2,700
4/29/2024								
4/30/2024								
April 2024 Monthly Average Turbidity Value								**395.3**

Notes:

1 - Field turbidity measurements were collected with a calibrated turbidity meter at 15-minute intervals during dredging activities.

2 - Grab samples were collected and submitted to the Specialty Analytical laboratory in Clackamas, Oregon.

3 - Average daily turbidity values were calculated using all field measurements and lab samples results collected on a given date.

4 - Split sample was collected by Landau and submitted to Analytical Resources laboratory in Tukwila, WA. Results shown are Specialty Analytical / Analytical Resources.

5 - Turbidity value is the average of the two split samples.

a - Turbidity was analyzed by EPA Method 180.1.

b - 5-day Biological Oxygen Demand (BOD-5) was analyzed by Standard Method (SM) 5210B.

c - Settleable Solids were analyzed by SM 2540F.

NTU - Nephelometric Turbidity Unit

mg/L - milligrams per liter

mL/L - milliliters per liter

Table 3: Dewatered Solids Analytical Data - East Pond Dredging			Comparison of Analytical Data to Washington Toxicity Characertistic Concentrations			
Sampling Date		2/8/2024	Maximum Concentration for Toxicity Characteristic, per WAC 173-303-090	Dangerous Waste Number	CAS No.	Alternate Common Chemical Name(s)
Sample ID		East Pond				
Analytical Methods and Analytes	Units					
TCLP Metals - Method E1311/6020						
Arsenic	mg/L	**0.00526**	5.0	D004	7440-38-2	
Barium	mg/L	**0.494**	100.0	D005	7440-39-3	
Cadmium	mg/L	< 0.00500	1.0	D006	7440-43-9	
Chromium	mg/L	< 0.00500	5.0	D007	7440-47-3	
Lead	mg/L	**0.0835**	5.0	D008	7439-92-1	
Selenium	mg/L	< 0.00500	1.0	D010	7782-49-2	
Silver	mg/L	< 0.00500	5.0	D011	7440-22-4	
TCLP CVAF Mercury - Method 1311/7470						
Mercury	mg/L	< 0.000500	0.2	D009	7439-97-6	
TCLP Volatile Organics - Method SW8260D/SW1311						
1,1-Dichloroethene	mg/L	< 0.00100	0.7	D029	75-35-4	1,1-Dichloroethylene; vinylidene chloride; 1,1-DCE
1,2-Dichloroethane	mg/L	< 0.00100	0.5	D028	107-06-2	Ethylene dichloride (EDC)
1,3-Dichlorobenzene	mg/L	< 0.00100	-	-	541-73-1	
2-Butanone	mg/L	< 0.0100	200.0	D035	78-93-3	Butanone; methyl ethyl ketone; ethyl methyl ketone
Benzene	mg/L	< 0.000300	0.5	D018	71-43-2	
Carbon tetrachloride	mg/L	< 0.00100	0.5	D019	56-23-5	Tetrachloromethane
Chlorobenzene	mg/L	< 0.00100	100.0	D021	108-90-7	
Chloroform	mg/L	< 0.00100	6.0	D022	67-66-3	Trichloromethane
Tetrachloroethene	mg/L	< 0.00100	0.7	D039	127-18-4	PCE
Trichloroethene	mg/L	< 0.00100	0.5	D040	79-01-6	TCE
Vinyl chloride	mg/L	< 0.00100	0.2	D043	75-01-4	Vinyl chloride monomer; chloroethene
TCLP Organochlorine Pesticides - Method SW8081B						
Chlordane	mg/L	< 0.000000465	0.03	D020	57-74-9	Chlordan
Endrin	mg/L	< 0.0000000233	0.02	D012	72-20-8	
gamma-BHC	mg/L	**0.00000930**	0.4	D013	58-89-9	Lindane
Heptachlor epoxide	mg/L	< 0.0000000233	0.008 (For Heptachlor and its epoxide)	D031	1024-57-3	
Heptachlor	mg/L	< 0.0000000233			76-44-8	
Methoxychlor	mg/L	< 0.0000000233	10.0	D014	72-43-5	
Toxaphene	mg/L	< 0.000000465	0.5	D015	8001-35-2	
TCLP Semivolatile Organic Compounds - Method 8270D						
2,4-Dinitrotoluene	mg/L	< 0.10	0.13	D030	121-14-2	Dinitro
Hexachlorobenzene	mg/L	< 0.10	0.13	D032	118-74-1	Perchlorobenzene
Hexachlorobutadiene	mg/L	< 0.10	0.5	D033	87-68-3	
Hexachloroethane	mg/L	< 0.10	3.0	D034	67-72-1	
2-Methylphenol	mg/L	< 0.10	200.0	D023	95-48-7	o-Cresol; ortho-Cresol
4-Methylphenol	mg/L	< 0.10	200.0	D025	106-44-5	p-Cresol; para-Cresol
Nitrobenzene	mg/L	< 0.10	2.0	D036	98-95-3	
Pentachlorophenol	mg/L	< 0.25	100.0	D037	87-86-5	
Pyridine	mg/L	< 0.50	5.0	D038	110-86-1	
2,4,5-Trichlorophenol	mg/L	< 0.10	400.0	D041	95-95-4	Dowicide 2; Collunosol
2,4,6-Trichlorophenol	mg/L	< 0.10	2.0	D042	88-06-2	Phenachlor; Dowicide 2S; Phenachlor
TCLP Chlorinated Herbicides - Method 8151A						
2,4-D	µg/L	< 40	10,000	D016	94-75-7	
2,4,5-TP (Silvex)	µg/L	< 20	1,000	D017	93-72-1	

Notes:

mg/L - Milligrams per liter.

µg/L - Micrograms per liter.

bold - Analytes was detected above laboratory reporting limits.

< - Analyte was not detected above laboratory reporting limits.

CAS - Chemical Abstracts Services

CVAF - Cold vapour atomic fluorescence spectroscopy

TCLP - Toxicity characteristic leaching procedure

WAC - Washington Administrative Code

APPENDIX A

Selected Site Photographs

1. View of hydraulic dredge in East Pond.

2. View of turbidity curtain in East Pond.

Photographs taken on April 22 and 16, 2024

LANDAU ASSOCIATES	Weyerhaeuser Longview 1701 Industrial Way Longview, Washington	**Selected Site Photographs – East Pond Dredging**

Figure
A-1

3. View of Triflo dewatering plant.

4. View of dewatered dredged solids pile.

Photographs taken on March 20 and April 5, 2024.

LANDAU ASSOCIATES

Weyerhaeuser Longview 1701 Industrial Way Longview, Washington	**Selected Site Photographs – East Pond Dredging**	Figure A-2

5. View of erosion control straw bales near dewatered solids pile.

6. View of straw bales near dewatered solids pile.

Photographs taken on April 18 and 9, 2024.

LANDAU ASSOCIATES

Weyerhaeuser Longview 1701 Industrial Way Longview, Washington	**Selected Site Photographs – East Pond Dredging**	Figure A-3

APPENDIX B

Copy of Notification Email to NDP

Adrianna Jarosz

From: Jesikah Cavanaugh
Sent: Monday, April 29, 2024 1:39 PM
To: Adrianna Jarosz
Subject: Fwd: Weyerhaeuser Discharge to Outfall 001B

Jesikah

Begin forwarded message:

> **From:** "Yanik, Christine" <Christine.Yanik@weyerhaeuser.com>
> **Date:** April 29, 2024 at 9:05:58 AM PDT
> **To:** Joe Kalmar <JKalmar@landauinc.com>
> **Cc:** Jesikah Cavanaugh <JCavanaugh@landauinc.com>
> **Subject: FW: Weyerhaeuser Discharge to Outfall 001B**

From: Wood, Brian <brian.wood@NipponDynawave.com>
Sent: Monday, April 29, 2024 8:28 AM
To: Yanik, Christine <Christine.Yanik@weyerhaeuser.com>
Subject: [EXTERNAL] RE: Weyerhaeuser Discharge to Outfall 001B

Received. Thank you.

BDW

From: Yanik, Christine <Christine.Yanik@weyerhaeuser.com>
Sent: Monday, April 29, 2024 8:19 AM
To: Wood, Brian <brian.wood@NipponDynawave.com>
Cc: Holbrook, Kelsey (ECY) <keho461@ecy.wa.gov>; Joseph Kalmar <JKalmar@landauinc.com>
Subject: Weyerhaeuser Discharge to Outfall 001B

[EXTERNAL]

Good morning, Brian,

Per our dredging agreement with Ecology, Weyerhaeuser is required to give notification to NDP of upcoming equipment wash water that will be discharged to outfall 001B. GoldenEnviro intends to utilize the washdown area near the log stacker shops to clean their equipment today April 29th around noon. Decontamination is only a hot water wash to destroy any potential invasive species on their watercraft. This water will discharge to NDP's Industrial WWTP via outfall 001B.

GoldenEnviro will estimate the total volume of wash water generated and discharged to outfall 001B and Weyerhaeuser will be sampling at the time of the wash water discharge. The analytical sample results will be included on the April DMR.

Please let me know if you have any questions.

Thank you,

Christine Yanik | **Regional Environmental Manager**
541-409-7770

Weyerhaeuser

OUR VISION: **Working together to be the world's premier timber, land, and forest products company**
OUR VALUES: **Safety | Integrity | Citizenship | Sustainability | Inclusion**

APPENDIX C

Dredging Equipment Wash Water Analytical Report

Specialty Analytical

9011 SE Jannsen Rd
Clackamas, OR 97015
TEL: (503) 607-1331
Website: www.specialtyanalytical.com

May 06, 2024

Christine Yanik
Weyerhaeuser
3401 Industrial Way
Longview, WA 98632
TEL: (541) 409-7770
FAX:

RE: Dredge Washwater / East Pond Order No.: 2404326

Dear Christine Yanik:

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Marty French
Lab Director

Specialty Analytical

WO#: **2404326**
Date Reported: **5/6/2024**

CLIENT: Weyerhaeuser
Project: Dredge Washwater / East Pond

Lab ID: 2404326-001 **Matrix:** WATER
Client Sample ID Washwater **Collection Date:** 4/29/2024 1:08:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HEM/SGT PER EPA 1664				**E1664**		Analyst: **MB**
HEM (Total Hexane Extractable Material)	27.4	5.26		mg/L	1	5/3/2024 8:00:42 AM
SGT (Non-Polar Extractable Materia	24.7	5.26		mg/L	1	5/3/2024 8:00:42 AM
BIOLOGICAL OXYGEN DEMAND- 5				**SM5210B**		Analyst: **NK**
BOD, 5 Day	50.00	2.00		mg/L	1	5/1/2024 10:36:00 AM
TOTAL SUSPENDED SOLIDS				**M2540 D**		Analyst: **AT**
Total Suspended Solids	768	10.0		mg/L	1	5/1/2024 2:03:33 PM
FIELD PARAMETERS				**FLD**		Analyst: **Clien**
pH, SM4500H+ B	7.02			S.U.		4/29/2024 1:08:00 PM

Specialty Analytical
9011 SE Jannsen Ra
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Accreditation Program Analytes Report

WO#: **2404326**

06-May-24

Client: Weyerhaeuser

Project: Dredge Washwater / East Pond

Program Name	Sample ID	ClientSampleID	Matrix	Test Name	Analyte	Status
ORELAP	2404326-001A	Washwater	Aqueous	TOTAL SUSPENDED SOLIDS	Total Suspended Solids	A
				BIOLOGICAL OXYGEN DEMAND- 5	BOD, 5 Day	A
	2404326-001B			HEM/SGT PER EPA 1664	SGT (Non-Polar Extractable Material)	A
					HEM (Total Hexane Extractable Material)	A

ORELAP A Accredited A

ACCRED

QC SUMMARY REPORT

Specialty Analytical

WO#: **2404326**

5/6/2024

Client: Weyerhaeuser

Project: Dredge Washwater / East Pond **TestCode:** **1664_SPE**

Sample ID: **MB-R53915** SampType: **MBLK** TestCode: **1664_SPE** Units: **mg/L** Prep Date: RunNo: **53915**

Client ID: **PBW** Batch ID: **R53915** TestNo: **E1664** Analysis Date: **5/3/2024** SeqNo: **697566**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
HEM (Total Hexane Extractable Materia	ND	5.00									
SGT (Non-Polar Extractable Material)	ND	5.00									

Sample ID: **LCS-R53915** SampType: **LCS** TestCode: **1664_SPE** Units: **mg/L** Prep Date: RunNo: **53915**

Client ID: **LCSW** Batch ID: **R53915** TestNo: **E1664** Analysis Date: **5/3/2024** SeqNo: **697567**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
HEM (Total Hexane Extractable Materia	36.5	5.00	40.00	0	91.2	78	114				
SGT (Non-Polar Extractable Material)	14.6	5.00	20.00	0	73.0	64	132				

Sample ID: **LCSD-R53915** SampType: **LCSD** TestCode: **1664_SPE** Units: **mg/L** Prep Date: RunNo: **53915**

Client ID: **LCSS02** Batch ID: **R53915** TestNo: **E1664** Analysis Date: **5/3/2024** SeqNo: **697568**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
HEM (Total Hexane Extractable Materia	37.9	5.00	40.00	0	94.8	78	114	36.50	3.76	20	
SGT (Non-Polar Extractable Material)	18.4	5.00	20.00	0	92.0	64	132	14.60	23.0	20	R

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2404326**

5/6/2024

Client: Weyerhaeuser

Project: Dredge Washwater / East Pond **TestCode:** **BOD_CWA**

Sample ID: **MB-R53917**	SampType: **MBLK**	TestCode: **BOD_CWA**	Units: **mg/L**	Prep Date:	RunNo: **53917**
Client ID: **PBW**	Batch ID: **R53917**	TestNo: **SM5210B**		Analysis Date: **5/1/2024**	SeqNo: **697614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
BOD, 5 Day	ND	2.00									

Sample ID: **LCS-R53917**	SampType: **LCS**	TestCode: **BOD_CWA**	Units: **mg/L**	Prep Date:	RunNo: **53917**
Client ID: **LCSW**	Batch ID: **R53917**	TestNo: **SM5210B**		Analysis Date: **5/1/2024**	SeqNo: **697615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
BOD, 5 Day	162.8	2.00	198.0	0	82.2	80	116				

Sample ID: **2404329-001ADUP**	SampType: **DUP**	TestCode: **BOD_CWA**	Units: **mg/L**	Prep Date:	RunNo: **53917**
Client ID: **BatchQC**	Batch ID: **R53917**	TestNo: **SM5210B**		Analysis Date: **5/1/2024**	SeqNo: **697618**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
BOD, 5 Day	5.10	2.00						4.90	4.00	20	

Sample ID: **2404333-001ADUP**	SampType: **DUP**	TestCode: **BOD_CWA**	Units: **mg/L**	Prep Date:	RunNo: **53917**
Client ID: **BatchQC**	Batch ID: **R53917**	TestNo: **SM5210B**		Analysis Date: **5/1/2024**	SeqNo: **697623**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
BOD, 5 Day	3.10	2.00						3.30	6.25	20	

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2404326**

5/6/2024

Client: Weyerhaeuser

Project: Dredge Washwater / East Pond **TestCode:** **BOD_CWA**

Sample ID: **2404333-001ADUP** SampType: **DUP** TestCode: **BOD_CWA** Units: **mg/L** Prep Date: RunNo: **53917**

Client ID: **BatchQC** Batch ID: **R53917** TestNo: **SM5210B** Analysis Date: **5/1/2024** SeqNo: **697623**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2404326**

5/6/2024

Client: Weyerhaeuser

Project: Dredge Washwater / East Pond **TestCode:** **TSS_WW**

Sample ID: **MB-R53883**	SampType: **MBLK**	TestCode: **TSS_WW**	Units: **mg/L**	Prep Date:	RunNo: **53883**
Client ID: **PBW**	Batch ID: **R53883**	TestNo: **M2540 D**		Analysis Date: **5/1/2024**	SeqNo: **697099**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	ND	10.0									

Sample ID: **LCS-R53883**	SampType: **LCS**	TestCode: **TSS_WW**	Units: **mg/L**	Prep Date:	RunNo: **53883**
Client ID: **LCSW**	Batch ID: **R53883**	TestNo: **M2540 D**		Analysis Date: **5/1/2024**	SeqNo: **697100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	101	10.0	100.0	0	101	80	120				

Sample ID: **2404336-001ADUP**	SampType: **DUP**	TestCode: **TSS_WW**	Units: **mg/L**	Prep Date:	RunNo: **53883**
Client ID: **BatchQC**	Batch ID: **R53883**	TestNo: **M2540 D**		Analysis Date: **5/1/2024**	SeqNo: **697112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	ND	10.0						0	0	20	RRF

Sample ID: **2404339-001ADUP**	SampType: **DUP**	TestCode: **TSS_WW**	Units: **mg/L**	Prep Date:	RunNo: **53883**
Client ID: **BatchQC**	Batch ID: **R53883**	TestNo: **M2540 D**		Analysis Date: **5/1/2024**	SeqNo: **697114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	ND	10.0						0	0	20	

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2404326**

5/6/2024

Client: Weyerhaeuser

Project: Dredge Washwater / East Pond **TestCode:** **TSS_WW**

Sample ID: **2404339-001ADUP** SampType: **DUP** TestCode: **TSS_WW** Units: **mg/L** Prep Date: RunNo: **53883**

Client ID: **BatchQC** Batch ID: **R53883** TestNo: **M2540 D** Analysis Date: **5/1/2024** SeqNo: **697114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Name WEYERHAEUSER Work Order Number 2404326

RcptNo: 1 Date and Time Receive 4/29/2024 4:42:02 PM Received by: Polly Miller

Completed by Reviewed by:

Completed Date: 4/29/2024 4:42:53 PM Reviewed Date: 4/30/2024 2:33:53 PM

Carrier name: Client

Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	Not Present ☐
Are matrices correctly identified on Chain of custody?	Yes ☑	No ☐	
Is it clear what analyses were requested?	Yes ☑	No ☐	
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Samples in proper container/bottle?	Yes ☑	No ☐	
Were correct preservatives used and noted?	Yes ☑	No ☐	NA ☐
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
Were container lables complete (ID, Pres, Date)?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☑	No ☐	NA ☐
Response when temperature is outside of range:			
Preservative added to bottles:			
Sample Temp. taken and recorded upon receipt?	Yes ☑	No ☐	To 3.6 ºC
Water - Were bubbles absent in VOC vials?	Yes ☐	No ☐	No Vials ☑
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
Are Samples considered acceptable?	Yes ☑	No ☐	
Custody Seals present?	Yes ☐	No ☑	
Traffic Report or Packing Lists present?	Yes ☐	No ☑	
Airbill or Sticker?	Air Bill ☐	Sticker ☐	Not Present ☑
Airbill No:			
Sample Tags Present?	Yes ☐	No ☑	
Sample Tags Listed on COC?	Yes ☐	No ☑	
Tag Numbers:			
Sample Condition?	Intact ☑	Broken ☐	Leaking ☐

Case Number: SDG: SAS:

Adjusted? _____ Checked by

Any No and/or NA (not applicable) response must be detailed in the comments section be

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Contacted? ☐ Yes ☑ No ☐ NA Person Contacted: Comments:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

Chain of Custody Record

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, OR 97015
Phone: 503-607-1331
www.specialtyanalytical.com

Date: 4/29/24 Page: 1 of: 1
Project Name: Dredge Washwater
Project No: East Pond PO No:
Collected by: Jessica Cavanaugh
State Collected: OR (WA) OTHER
Report To (PM): Christine Yamik
PM Email(s): christine.yamik@weyerhaeuser.com

Laboratory Project No (internal): 2404326
Temperature on Receipt: 3.6 °C
Cooling: Ice Shipped Via: Client
Custody Seal: Y / (N) Intact / Broken Cooler / Bottle
MDL TIER IV EDD
Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 60 days)

Client: Weyerhaeuser Export Yard
Address: 2901 Industrial Way
City, State, Zip: Longview, WA 98632
Telephone: 541-409-7770
Invoice Email: APEmailInvoice@weyerhaeuser.com

	Sample Name	Sample Date	Sample Time	Sample Matrix*	# of Containers	Requested Tests: TSS	BOD5	Lwdy	Comments (Please note potential hazards)
1	Washwater	4/29/24	1309	W	2	X	X	X	pH = 7.02
2									
3									
4									
5									
6									
7									
8									
9									
10									

*Matrix: A = Air, AQ = Aqueous, L=Liquid, O = Oil, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water, M = Miscellaneous

Turn-around Time: Standard: ~~X~~ TAT 3 Day: X (5 day) 2 Day: _____ Next Day: _____ Same Day: _____
Expedited turn-around requests should be coordinated in advance

Relinquished	Date/Time	Received	Date/Time
x [signature]	4/29/24 1605 Landau Associates	x [signature]	4/29/24 1635
x		x	
x		x	

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Definition Only

WO#: **2404326**
Date: **5/6/2024**

Definitions:

KEY TO FLAGS

A: This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was qualified against gasoline calibration standards.

A1: This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was qualified against diesel calibration standards.

A2: This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was qualified against lube oil calibration standards.

A3: The results was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.

A4: The product appears to be aged or degraded.

B: The blank exhibited a positive result greater than the reporting limit for this compound.

BC: Sample concentration is >10x positive result in blank. Data is considered acceptable.

CN: See Case Narrative.

E: Result exceeds the calibration range for this compound. The result should be considered an estimate.

F: The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.

FS: Follow-up testing is suggested.

G: Result may be biased high due to biogenic interferences. Clean up is recommended.

H: Sample was analyzed outside recommended holding time.

HT: At client's request, samples was analyzed outside of recommended holding time.

HP: Sample was analyzed outside recommended holding time due to VOA having pH >2.

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Definition Only

WO#: **2404326**
Date: **5/6/2024**

Definitions:

J: The results for this analyte is between the MDL and the PQL and should be considered an estimated concentration.

K: Diesel result is biased high due to amount of Oil contained in the sample.

L: Diesel result is biased high due to amount of Gasoline contained in the sample.

M: Oil result is biased high due to amount of Diesel contained in the sample.

N: Gasoline result is biased high due to amount of Diesel contained in the sample.

MC: Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.

MI: Result is outside control limits due to matrix interference.

NH: Sample matrix is non-homogeneous

MSA: Value determined by Method of Standard Addition.

O: Laboratory Control Standard (LCS) exceeded laboratory control limits but meets CCV criteria. Data meets EPA requirements.

Q: Detection levels elevated due to sample matrix.

R: RPD control limits were exceeded

RF: Duplicate failed due to result being at or near the method-reporting limit.

RP: Matrix spike values exceed established QC limits; post digestion spike is in control.

S: Recovery is outside control limits.

SC: CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.

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Definition Only

WO#: **2404326**
Date: **5/6/2024**

Definitions:

SL: LCS exceeded recovery control limits, but associated MS/MSD passing. Data meets EPA requirements.

SV: CCV exceded low recovery control limits. ND as reported evaluated using EPA method 8260D section 11.4.3.2

TA: Sample treated with ascorbic acid for the removal of thiocyanates.

TS: Sample treated with Sodium Sulfite for the removal of chlorine.

APPENDIX D

Dredged Solids Analytical Lab Report

Specialty Analytical

9011 SE Jannsen Rd
Clackamas, OR 97015
TEL: (503) 607-1331
Website: www.specialtyanalytical.com

March 11, 2024

Christine Yanik
Weyerhaeuser
1701 Industrial Way
Longview, WA 98632
TEL: (541) 409-7770
FAX:

RE: 003B Pond Dredging Order No.: 2402095

Dear Christine Yanik:

REVISED REPORT: Please see case narrative for information on revision.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Marty French
Lab Director

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Case Narrative

WO#: **2402095**
Date: **3/11/2024**

CLIENT: Weyerhaeuser
Project: 003B Pond Dredging

Revision 1.

Report revised to include additional 8260 results.

Specialty Analytical

WO#: **2402095**
Date Reported: **3/11/2024**

CLIENT: Weyerhaeuser
Project: 003B Pond Dredging

Lab ID: 2402095-001 **Matrix:** SOIL
Client Sample ID East Pond **Collection Date:** 2/8/2024 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP				**E1311/6020**	**SW3010A**	Analyst: **AC**
ICP/MS METALS-TCLP LEACHED						
Arsenic, TCLP	0.00526	0.00500		mg/L	10	2/15/2024 2:39:49 PM
Barium, TCLP	0.494	0.0500		mg/L	10	2/15/2024 2:39:49 PM
Cadmium, TCLP	ND	0.00500		mg/L	10	2/15/2024 2:39:49 PM
Chromium, TCLP	ND	0.00500		mg/L	10	2/15/2024 2:39:49 PM
Lead, TCLP	0.0835	0.00500		mg/L	10	2/15/2024 2:39:49 PM
Selenium, TCLP	ND	0.0500		mg/L	10	2/15/2024 2:39:49 PM
Silver, TCLP	ND	0.00500		mg/L	10	2/15/2024 2:39:49 PM
TCLP				**1311/7470**	**E245.2**	Analyst: **AC**
CVAF MERCURY-TCLP LEACHED						
Mercury	ND	0.000500		mg/L	1	2/23/2024 10:22:00 AM
TCLP				**SW8260D**	**SW1311**	Analyst: **LB**
VOLATILE ORGANICS BY GC/MS						
1,1-Dichloroethene, TCLP	ND	0.00100		mg/L	1	2/13/2024 6:32:00 PM
1,2-Dichlorethane, TCLP	ND	0.00100		mg/L	1	2/13/2024 6:32:00 PM
1,3-Dichlorobenzene	ND	0.00100		mg/L	1	2/13/2024 6:32:00 PM
2-Butanone, TCLP	ND	0.0100		mg/L	1	2/13/2024 6:32:00 PM
Benzene	ND	0.000300		mg/L	1	2/13/2024 6:32:00 PM
Carbon tetrachloride, TCLP	ND	0.00100		mg/L	1	2/13/2024 6:32:00 PM
Chlorobenzene, TCLP	ND	0.00100		mg/L	1	2/13/2024 6:32:00 PM
Chloroform, TCLP	ND	0.00100		mg/L	1	2/13/2024 6:32:00 PM
Tetrachloroethene, TCLP	ND	0.00100		mg/L	1	2/13/2024 6:32:00 PM
Trichloroethene	ND	0.00100		mg/L	1	2/13/2024 6:32:00 PM
Vinyl chloride, TCLP	ND	0.00100		mg/L	1	2/13/2024 6:32:00 PM
Surr: 1,2-Dichloroethane-d4	103	75.3 - 126		%Rec	1	2/13/2024 6:32:00 PM
Surr: 4-Bromofluorobenzene	94.3	78.1 - 120		%Rec	1	2/13/2024 6:32:00 PM
Surr: Dibromofluoromethane	102	74.2 - 122		%Rec	1	2/13/2024 6:32:00 PM
Surr: Toluene-d8	100	76.2 - 135		%Rec	1	2/13/2024 6:32:00 PM
TCLP				**SW8081B**	**SW3510C**	Analyst: **LB**
ORGANOCHLORINE PESTICIDES						
Chlordane, TCLP	ND	0.000000465		mg/L	1	2/22/2024 1:00:00 PM
Endrin, TCLP	ND	0.0000000233		mg/L	1	2/22/2024 1:00:00 PM
gamma-BHC, TCLP	0.00000930	0.0000000233		mg/L	1	2/22/2024 1:00:00 PM
Heptachlor epoxide, TCLP	ND	0.0000000233		mg/L	1	2/22/2024 1:00:00 PM
Heptachlor, TCLP	ND	0.0000000233		mg/L	1	2/22/2024 1:00:00 PM
Methoxychlor, TCLP	ND	0.0000000233		mg/L	1	2/22/2024 1:00:00 PM

CLIENT: Weyerhaeuser
Project: 003B Pond Dredging

TCLP				**SW8081B**	**SW3510C**	Analyst: **LB**
ORGANOCHLORINE PESTICIDES						
Toxaphene, TCLP	ND	0.000000465	mg/L	1	2/22/2024 1:00:00 PM	
Surr: Decachlorobiphenyl		-	%Rec	1	2/22/2024 1:00:00 PM	
Surr: Tetrachloro-m-xylene		-	%Rec	1	2/22/2024 1:00:00 PM	

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **6020_TCLP**

Sample ID: **ICV**	SampType: **ICV**	TestCode: **6020_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52777**
Client ID: **ICV**	Batch ID: **23035**	TestNo: **E1311/6020**	**SW3010A**	Analysis Date: **2/15/2024**	SeqNo: **681294**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0501	0.000100	0.0500	0	100	90	110				
Barium, TCLP	0.0500	0.00100	0.0500	0	99.9	90	110				
Cadmium, TCLP	0.0510	0.000100	0.0500	0	102	90	110				
Chromium, TCLP	0.0506	0.000100	0.0500	0	101	90	110				
Lead, TCLP	0.0500	0.000100	0.0500	0	100	90	110				
Selenium, TCLP	0.0508	0.00100	0.0500	0	102	90	110				
Silver, TCLP	0.0490	0.000100	0.0500	0	98.0	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **6020_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52777**
Client ID: **CCB**	Batch ID: **23035**	TestNo: **E1311/6020**	**SW3010A**	Analysis Date: **2/15/2024**	SeqNo: **681297**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **6020_TCLP**

Sample ID: **CCV**	SampType: **CCV**	TestCode: **6020_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52777**
Client ID: **CCV**	Batch ID: **23035**	TestNo: **E1311/6020**	**SW3010A**	Analysis Date: **2/15/2024**	SeqNo: **681301**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0507	0.000100	0.0500	0	101	90	110				
Barium, TCLP	0.0495	0.00100	0.0500	0	99.1	90	110				
Cadmium, TCLP	0.0505	0.000100	0.0500	0	101	90	110				
Chromium, TCLP	0.0512	0.000100	0.0500	0	102	90	110				
Lead, TCLP	0.0500	0.000100	0.0500	0	100	90	110				
Selenium, TCLP	0.0507	0.00100	0.0500	0	101	90	110				
Silver, TCLP	0.0505	0.000100	0.0500	0	101	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **6020_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52777**
Client ID: **CCB**	Batch ID: **23035**	TestNo: **E1311/6020**	**SW3010A**	Analysis Date: **2/15/2024**	SeqNo: **681302**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **6020_TCLP**

Sample ID: **CCV**	SampType: **CCV**	TestCode: **6020_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52777**
Client ID: **CCV**	Batch ID: **23035**	TestNo: **E1311/6020**	**SW3010A**	Analysis Date: **2/15/2024**	SeqNo: **681303**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0526	0.000100	0.0500	0	105	90	110				
Barium, TCLP	0.0487	0.00100	0.0500	0	97.4	90	110				
Cadmium, TCLP	0.0511	0.000100	0.0500	0	102	90	110				
Chromium, TCLP	0.0530	0.000100	0.0500	0	106	90	110				
Lead, TCLP	0.0503	0.000100	0.0500	0	101	90	110				
Selenium, TCLP	0.0524	0.00100	0.0500	0	105	90	110				
Silver, TCLP	0.0513	0.000100	0.0500	0	103	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **6020_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52777**
Client ID: **CCB**	Batch ID: **23035**	TestNo: **E1311/6020**	**SW3010A**	Analysis Date: **2/15/2024**	SeqNo: **681304**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser
Project: 003B Pond Dredging **TestCode:** **6020_TCLP**

Sample ID: **MB-23035** SampType: **MBLK** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **2/15/2024** RunNo: **52777**
Client ID: **PBW** Batch ID: **23035** TestNo: **E1311/6020** **SW3010A** Analysis Date: **2/15/2024** SeqNo: **681305**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Sample ID: **LCS-23035** SampType: **LCS** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **2/15/2024** RunNo: **52777**
Client ID: **LCSW** Batch ID: **23035** TestNo: **E1311/6020** **SW3010A** Analysis Date: **2/15/2024** SeqNo: **681306**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0492	0.000100	0.0500	0	98.4	80	120				
Barium, TCLP	0.0487	0.00100	0.0500	0	97.3	80	120				
Cadmium, TCLP	0.0496	0.000100	0.0500	0	99.3	80	120				
Chromium, TCLP	0.0484	0.000100	0.0500	0	96.8	80	120				
Lead, TCLP	0.0494	0.000100	0.0500	0	98.8	80	120				
Selenium, TCLP	0.0490	0.00100	0.0500	0	98.1	80	120				
Silver, TCLP	0.0494	0.000100	0.0500	0	98.8	80	120				

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **6020_TCLP**

Sample ID: **2402089-001ADUP** SampType: **DUP** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **2/15/2024** RunNo: **52777**

Client ID: **BatchQC** Batch ID: **23035** TestNo: **E1311/6020** **SW3010A** Analysis Date: **2/15/2024** SeqNo: **681308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.00500						0.00625	200	20	RRF
Barium, TCLP	1.46	0.0500						1.43	2.45	20	
Cadmium, TCLP	0.0502	0.00500						0.0519	3.32	20	
Chromium, TCLP	0.0263	0.00500						0.0250	5.21	20	
Lead, TCLP	0.164	0.00500						0.162	1.23	20	
Selenium, TCLP	ND	0.0500						0	0	20	RRF
Silver, TCLP	ND	0.00500						0	0	20	

Sample ID: **2402089-001AMS** SampType: **MS** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **2/15/2024** RunNo: **52777**

Client ID: **BatchQC** Batch ID: **23035** TestNo: **E1311/6020** **SW3010A** Analysis Date: **2/15/2024** SeqNo: **681309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.257	0.00500	0.250	0.00625	100	70	130				
Barium, TCLP	1.66	0.0500	0.250	1.43	93.9	70	130				
Cadmium, TCLP	0.301	0.00500	0.250	0.0519	99.7	70	130				
Chromium, TCLP	0.281	0.00500	0.250	0.0250	103	70	130				
Lead, TCLP	0.408	0.00500	0.250	0.162	98.5	70	130				
Selenium, TCLP	0.253	0.0500	0.250	0.0272	90.1	70	130				
Silver, TCLP	0.238	0.00500	0.250	0.000398	95.2	70	130				

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **6020_TCLP**

Sample ID: **2402089-001AMSD** SampType: **MSD** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **2/15/2024** RunNo: **52777**

Client ID: **BatchQC** Batch ID: **23035** TestNo: **E1311/6020** **SW3010A** Analysis Date: **2/15/2024** SeqNo: **681310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.258	0.00500	0.250	0.00625	101	70	130	0.257	0.231	20	
Barium, TCLP	1.78	0.0500	0.250	1.43	141	70	130	1.66	6.90	20	SMC
Cadmium, TCLP	0.299	0.00500	0.250	0.0519	99.0	70	130	0.301	0.582	20	
Chromium, TCLP	0.289	0.00500	0.250	0.0250	105	70	130	0.281	2.54	20	
Lead, TCLP	0.423	0.00500	0.250	0.162	105	70	130	0.408	3.66	20	
Selenium, TCLP	0.256	0.0500	0.250	0.0272	91.5	70	130	0.253	1.33	20	
Silver, TCLP	0.240	0.00500	0.250	0.000398	96.0	70	130	0.238	0.770	20	

Sample ID: **CCV** SampType: **CCV** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: RunNo: **52777**

Client ID: **CCV** Batch ID: **23035** TestNo: **E1311/6020** **SW3010A** Analysis Date: **2/15/2024** SeqNo: **681314**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0529	0.000100	0.0500	0	106	90	110				
Barium, TCLP	0.0490	0.00100	0.0500	0	97.9	90	110				
Cadmium, TCLP	0.0513	0.000100	0.0500	0	103	90	110				
Chromium, TCLP	0.0532	0.000100	0.0500	0	106	90	110				
Lead, TCLP	0.0502	0.000100	0.0500	0	100	90	110				
Selenium, TCLP	0.0526	0.00100	0.0500	0	105	90	110				
Silver, TCLP	0.0513	0.000100	0.0500	0	103	90	110				

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **6020_TCLP**

Sample ID: **CCB**	SampType: **CCB**	TestCode: **6020_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52777**
Client ID: **CCB**	Batch ID: **23035**	TestNo: **E1311/6020**	**SW3010A**	Analysis Date: **2/15/2024**	SeqNo: **681315**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **8081BLL_TCLP**

Sample ID: **CCV1** SampType: **CCV** TestCode: **8081BLL_TC** Units: **mg/L** Prep Date: RunNo: **52877**

Client ID: **CCV** Batch ID: **23040** TestNo: **SW8081B** **SW3510C** Analysis Date: **2/22/2024** SeqNo: **682761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Endrin, TCLP	0.0965	0.0000100	0.100	0	96.5	80	120				
gamma-BHC, TCLP	0.104	0.0000100	0.100	0	104	80	120				
Heptachlor epoxide, TCLP	0.109	0.0000100	0.100	0	109	80	120				
Heptachlor, TCLP	0.100	0.0000100	0.100	0	100	80	120				
Methoxychlor, TCLP	0.0902	0.0000100	0.100	0	90.2	80	120				

Sample ID: **MB-23040** SampType: **MBLK** TestCode: **8081BLL_TC** Units: **mg/L** Prep Date: **2/14/2024** RunNo: **52877**

Client ID: **PBW** Batch ID: **23040** TestNo: **SW8081B** **SW3510C** Analysis Date: **2/22/2024** SeqNo: **682762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlordane, TCLP	ND	0.000000400									
Endrin, TCLP	ND	0.0000000200									
gamma-BHC, TCLP	ND	0.0000000200									
Heptachlor epoxide, TCLP	ND	0.0000000200									
Heptachlor, TCLP	ND	0.0000000200									
Methoxychlor, TCLP	ND	0.0000000200									
Toxaphene, TCLP	ND	0.000000400									
Surr: Decachlorobiphenyl	0.128										
Surr: Tetrachloro-m-xylene	0.154										

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser
Project: 003B Pond Dredging **TestCode:** **8081BLL_TCLP**

Sample ID: **LCSD-23040**	SampType: **LCSD**	TestCode: **8081BLL_TC**	Units: **mg/L**	Prep Date: **2/14/2024**	RunNo: **52877**
Client ID: **LCSS02**	Batch ID: **23040**	TestNo: **SW8081B**	**SW3510C**	Analysis Date: **2/22/2024**	SeqNo: **682763**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Endrin, TCLP	0.000322	0.0000000200	0.000200	0	161	38.7	95.7	0.000322	0.00932	20	SSC
gamma-BHC, TCLP	0.000204	0.0000000200	0.000200	0	102	33	96	0.000213	4.02	20	SSC
Heptachlor epoxide, TCLP	0.000237	0.0000000200	0.000200	0	118	70	130	0.000237	0.157	0	
Heptachlor, TCLP	0.000227	0.0000000200	0.000200	0	113	34	92.4	0.000229	0.954	20	SSC
Methoxychlor, TCLP	0.000388	0.0000000200	0.000200	0	194	70	130	0.000373	3.89	0	SSC

Sample ID: **LCS-23040**	SampType: **LCS**	TestCode: **8081BLL_TC**	Units: **mg/L**	Prep Date: **2/14/2024**	RunNo: **52877**
Client ID: **LCSW**	Batch ID: **23040**	TestNo: **SW8081B**	**SW3510C**	Analysis Date: **2/22/2024**	SeqNo: **682766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Endrin, TCLP	0.000322	0.0000000200	0.000200	0	161	38.7	95.7				SSC
gamma-BHC, TCLP	0.000213	0.0000000200	0.000200	0	106	33	96				SSC
Heptachlor epoxide, TCLP	0.000237	0.0000000200	0.000200	0	119	70	130				
Heptachlor, TCLP	0.000229	0.0000000200	0.000200	0	115	34	92.4				SSC
Methoxychlor, TCLP	0.000373	0.0000000200	0.000200	0	187	70	130				SSC

Sample ID: **CCV3**	SampType: **CCV**	TestCode: **8081BLL_TC**	Units: **mg/L**	Prep Date:	RunNo: **52877**
Client ID: **CCV**	Batch ID: **23040**	TestNo: **SW8081B**	**SW3510C**	Analysis Date: **2/22/2024**	SeqNo: **682827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **8081BLL_TCLP**

Sample ID: **CCV3** SampType: **CCV** TestCode: **8081BLL_TC** Units: **mg/L** Prep Date: RunNo: **52877**

Client ID: **CCV** Batch ID: **23040** TestNo: **SW8081B** **SW3510C** Analysis Date: **2/22/2024** SeqNo: **682827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Endrin, TCLP	0.116	0.0000100	0.100	0	116	80	120				
gamma-BHC, TCLP	0.108	0.0000100	0.100	0	108	80	120				
Heptachlor epoxide, TCLP	0.110	0.0000100	0.100	0	110	80	120				
Heptachlor, TCLP	0.115	0.0000100	0.100	0	115	80	120				
Methoxychlor, TCLP	0.109	0.0000100	0.100	0	109	80	120				

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser
Project: 003B Pond Dredging **TestCode:** **8260_W**

Sample ID: **CCV**	SampType: **CCV**	TestCode: **8260_W**	Units: **mg/L**	Prep Date:	RunNo: **52736**
Client ID: **CCV**	Batch ID: **23026**	TestNo: **SW8260D**	**SW1311**	Analysis Date: **2/13/2024**	SeqNo: **680824**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene, TCLP	0.0354	0.00100	0.0400	0	88.6	80	120				
1,2-Dichlorethane, TCLP	0.0391	0.00100	0.0400	0	97.6	80	120				
1,3-Dichlorobenzene	0.0412	0.00100	0.0400	0	103	80	120				
2-Butanone, TCLP	0.0885	0.0100	0.0800	0	111	80	120				
Benzene	0.0396	0.000300	0.0400	0	98.9	80	120				
Carbon tetrachloride, TCLP	0.0358	0.00100	0.0400	0	89.6	80	120				
Chlorobenzene, TCLP	0.0396	0.00100	0.0400	0	98.9	80	120				
Chloroform, TCLP	0.0389	0.00100	0.0400	0	97.2	80	120				
Tetrachloroethene, TCLP	0.0330	0.00100	0.0400	0	82.5	80	120				
Trichloroethene	0.0374	0.00100	0.0400	0	93.6	80	120				
Vinyl chloride, TCLP	0.0433	0.00100	0.0400	0	108	80	120				

Sample ID: **MB**	SampType: **MBLK**	TestCode: **8260_W**	Units: **mg/L**	Prep Date:	RunNo: **52736**
Client ID: **PBW**	Batch ID: **23026**	TestNo: **SW8260D**	**SW1311**	Analysis Date: **2/13/2024**	SeqNo: **680825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene, TCLP	ND	0.00100									
1,2-Dichlorethane, TCLP	ND	0.00100									
1,3-Dichlorobenzene	ND	0.00100									
2-Butanone, TCLP	ND	0.0100									
Benzene	ND	0.000300									

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **8260_W**

Sample ID: **MB** SampType: **MBLK** TestCode: **8260_W** Units: **mg/L** Prep Date: RunNo: **52736**

Client ID: **PBW** Batch ID: **23026** TestNo: **SW8260D** **SW1311** Analysis Date: **2/13/2024** SeqNo: **680825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon tetrachloride, TCLP	ND	0.00100									
Chlorobenzene, TCLP	ND	0.00100									
Chloroform, TCLP	ND	0.00100									
Tetrachloroethene, TCLP	ND	0.00100									
Trichloroethene	ND	0.00100									
Vinyl chloride, TCLP	ND	0.00100									
Surr: 1,2-Dichloroethane-d4	99.9		100.0		99.9	75.3	126				
Surr: 4-Bromofluorobenzene	94.1		100.0		94.1	78.1	120				
Surr: Dibromofluoromethane	100		100.0		100	74.2	122				
Surr: Toluene-d8	100		100.0		100	76.2	135				

Sample ID: **2402099-001AMS** SampType: **MS** TestCode: **8260_W** Units: **mg/L** Prep Date: RunNo: **52736**

Client ID: **BatchQC** Batch ID: **23026** TestNo: **SW8260D** **SW1311** Analysis Date: **2/13/2024** SeqNo: **680828**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene, TCLP	0.0216	0.00100	0.0200	0	108	47.8	165				
1,2-Dichlorethane, TCLP	0.0199	0.00100	0.0200	0	99.5	70	130				
1,3-Dichlorobenzene	0.0212	0.00100	0.0200	0	106	70	130				
2-Butanone, TCLP	0.0399	0.0100	0.0400	0	99.8	70	130				
Benzene	0.0211	0.000300	0.0200	0	105	74.1	136				
Carbon tetrachloride, TCLP	0.0227	0.00100	0.0200	0	113	70	130				

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode: 8260_W**

Sample ID: **2402099-001AMS** SampType: **MS** TestCode: **8260_W** Units: **mg/L** Prep Date: RunNo: **52736**

Client ID: **BatchQC** Batch ID: **23026** TestNo: **SW8260D** **SW1311** Analysis Date: **2/13/2024** SeqNo: **680828**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene, TCLP	0.0205	0.00100	0.0200	0	102	70.7	133				
Chloroform, TCLP	0.0205	0.00100	0.0200	0	103	70	130				
Tetrachloroethene, TCLP	0.0208	0.00100	0.0200	0	104	70	130				
Trichloroethene	0.0202	0.00100	0.0200	0	101	50.8	164				
Vinyl chloride, TCLP	0.0230	0.00100	0.0200	0	115	70	130				

Sample ID: **2402099-001AMSD** SampType: **MSD** TestCode: **8260_W** Units: **mg/L** Prep Date: RunNo: **52736**

Client ID: **BatchQC** Batch ID: **23026** TestNo: **SW8260D** **SW1311** Analysis Date: **2/13/2024** SeqNo: **680829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene, TCLP	0.0200	0.00100	0.0200	0	100	47.8	165	0.0216	7.55	20	
1,2-Dichlorethane, TCLP	0.0192	0.00100	0.0200	0	96.0	70	130	0.0199	3.53	20	
1,3-Dichlorobenzene	0.0201	0.00100	0.0200	0	101	70	130	0.0212	5.18	20	
2-Butanone, TCLP	0.0397	0.0100	0.0400	0	99.2	70	130	0.0399	0.628	20	
Benzene	0.0197	0.000300	0.0200	0	98.4	74.1	136	0.0211	6.77	20	
Carbon tetrachloride, TCLP	0.0203	0.00100	0.0200	0	102	70	130	0.0227	10.9	20	
Chlorobenzene, TCLP	0.0193	0.00100	0.0200	0	96.6	70.7	133	0.0205	5.93	20	
Chloroform, TCLP	0.0193	0.00100	0.0200	0	96.4	70	130	0.0205	6.23	20	
Tetrachloroethene, TCLP	0.0186	0.00100	0.0200	0	93.2	70	130	0.0208	10.8	20	
Trichloroethene	0.0191	0.00100	0.0200	0	95.4	50.8	164	0.0202	6.00	20	
Vinyl chloride, TCLP	0.0180	0.00100	0.0200	0	90.1	70	130	0.0230	24.2	20	RMI

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **8260_W**

Sample ID: **2402099-001AMSD**	SampType: **MSD**	TestCode: **8260_W**	Units: **mg/L**	Prep Date:	RunNo: **52736**
Client ID: **BatchQC**	Batch ID: **23026**	TestNo: **SW8260D**	**SW1311**	Analysis Date: **2/13/2024**	SeqNo: **680829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **LCS**	SampType: **LCS**	TestCode: **8260_W**	Units: **mg/L**	Prep Date:	RunNo: **52736**
Client ID: **LCSW**	Batch ID: **23026**	TestNo: **SW8260D**	**SW1311**	Analysis Date: **2/13/2024**	SeqNo: **680832**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene, TCLP	0.0354	0.00100	0.0400	0	88.6	61.2	135				
1,2-Dichlorethane, TCLP	0.0391	0.00100	0.0400	0	97.6	80	120				
1,3-Dichlorobenzene	0.0412	0.00100	0.0400	0	103	80	120				
2-Butanone, TCLP	0.0885	0.0100	0.0800	0	111	80	120				
Benzene	0.0396	0.000300	0.0400	0	98.9	76.8	125				
Carbon tetrachloride, TCLP	0.0358	0.00100	0.0400	0	89.6	80	120				
Chlorobenzene, TCLP	0.0396	0.00100	0.0400	0	98.9	84.1	116				
Chloroform, TCLP	0.0389	0.00100	0.0400	0	97.2	80	120				
Tetrachloroethene, TCLP	0.0330	0.00100	0.0400	0	82.5	80	120				
Trichloroethene	0.0374	0.00100	0.0400	0	93.6	68.5	124				
Vinyl chloride, TCLP	0.0433	0.00100	0.0400	0	108	80	120				

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **8260_W**

Sample ID: **CCB** SampType: **CCB** TestCode: **8260_W** Units: **%Rec** Prep Date: RunNo: **52736**

Client ID: **CCB** Batch ID: **R52736** TestNo: **SW8260D** Analysis Date: **2/16/2024** SeqNo: **681838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	102		100.0		102	75.3	126				
Surr: 4-Bromofluorobenzene	94.4		100.0		94.4	78.1	120				
Surr: Dibromofluoromethane	102		100.0		102	74.2	122				
Surr: Toluene-d8	101		100.0		101	76.2	135				

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser
Project: 003B Pond Dredging **TestCode:** **HG_TCLP**

Sample ID: **MB-R52902**	SampType: **MBLK**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **PBW**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/15/2024**	SeqNo: **683071**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000100									

Sample ID: **LCS-R52902**	SampType: **LCS**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **LCSW**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/15/2024**	SeqNo: **683072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00422	0.000100	0.00400	0	106	85.4	116				

Sample ID: **A2402137-001ADUP**	SampType: **DUP**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **BatchQC**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/15/2024**	SeqNo: **683074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.000374	0.000100						0	200	20	RRF

Sample ID: **A2402137-001AMS**	SampType: **MS**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **BatchQC**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/15/2024**	SeqNo: **683075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00275	0.000100	0.00400	0	68.8	69.5	125				SMI

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser
Project: 003B Pond Dredging **TestCode:** **HG_TCLP**

Sample ID: **A2402137-001AMS**	SampType: **MS**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **BatchQC**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/15/2024**	SeqNo: **683075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **A2402137-001AMSD**	SampType: **MSD**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **BatchQC**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/15/2024**	SeqNo: **683076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00262	0.000100	0.00400	0	65.6	69.5	125	0.00275	4.80	20	SMI

Sample ID: **CCV1-R52902**	SampType: **CCV**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **CCV**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/15/2024**	SeqNo: **683077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00414	0.000100	0.00400	0	103	90	110				

Sample ID: **CCB2-R52902**	SampType: **CCB**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **CCB**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/15/2024**	SeqNo: **683078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser
Project: 003B Pond Dredging **TestCode:** **HG_TCLP**

Sample ID: **CCV2-R52902**	SampType: **CCV**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **CCV**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/23/2024**	SeqNo: **683079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00386	0.000100	0.00400	0	96.6	90	110				

Sample ID: **CCB2-R52902**	SampType: **CCB**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **CCB**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/23/2024**	SeqNo: **683080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000100									

Sample ID: **CCV3-R52902**	SampType: **CCV**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **CCV**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/23/2024**	SeqNo: **683083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00397	0.000100	0.00400	0	99.2	90	110				

Sample ID: **CCB3-R52902**	SampType: **CCB**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **CCB**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/23/2024**	SeqNo: **683084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2402095**

3/11/2024

Client: Weyerhaeuser

Project: 003B Pond Dredging **TestCode:** **HG_TCLP**

Sample ID: **CCB3-R52902**	SampType: **CCB**	TestCode: **HG_TCLP**	Units: **mg/L**	Prep Date:	RunNo: **52902**
Client ID: **CCB**	Batch ID: **23034**	TestNo: **1311/7470**	**E245.2**	Analysis Date: **2/23/2024**	SeqNo: **683084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Name WEYERHAEUSER Work Order Number 2402095

RcptNo: 1 Date and Time Received 2/8/2024 3:00:00 PM Received by: Mandy Wehe

Completed by Reviewed by:

Completed Date: 2/8/2024 Reviewed Date: 2/9/2024 9:50:03 AM

Carrier name: SA

Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐	Not Present	☐
Are matrices correctly identified on Chain of custody?	Yes ☑	No ☐		
Is it clear what analyses were requested?	Yes ☑	No ☐		
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present	☑
Samples in proper container/bottle?	Yes ☑	No ☐		
Were correct preservatives used and noted?	Yes ☑	No ☐	NA	☐
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
Were container lables complete (ID, Pres, Date)?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Was an attempt made to cool the samples?	Yes ☑	No ☐	NA	☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☑	No ☐	NA	☐
Response when temperature is outside of range:				
Preservative added to bottles:				
Sample Temp. taken and recorded upon receipt?	Yes ☑	No ☐	To	2.7 ºC
Water - Were bubbles absent in VOC vials?	Yes ☐	No ☐	No Vials	☑
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA	☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	NA	☑
Are Samples considered acceptable?	Yes ☑	No ☐		
Custody Seals present?	Yes ☐	No ☑		
Traffic Report or Packing Lists present?	Yes ☐	No ☑		
Airbill or Sticker?	Air Bill ☐	Sticker ☐	Not Present	☑
Airbill No:				
Sample Tags Present?	Yes ☐	No ☑		
Sample Tags Listed on COC?	Yes ☐	No ☑		
Tag Numbers:				
Sample Condition?	Intact ☑	Broken ☐	Leaking	☐

Case Number: SDG: SAS:

Adjusted? _____ Checked by

Any No and/or NA (not applicable) response must be detailed in the comments section be

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Sample Receipt Checklist

Client Contacted? ☐ Yes ☑ No ☐ NA Person Contacted: Comments:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

February 26, 2024 Service Request No:K2401391

Julie Clay
Specialty Analytical
9011 SE Jannsen Road
Clackamas, OR 97015

Laboratory Results for: 2402095

Dear Julie,

Enclosed are the results of the sample(s) submitted to our laboratory February 08, 2024
For your reference, these analyses have been assigned our service request number **K2401391.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Howard Holmes
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental

Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Specialty Analytical
Project: 2402095
Sample Matrix: Soil

Service Request: K2401391
Date Received: 02/08/2024

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

One soil sample was received for analysis at ALS Environmental on 02/08/2024. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

No significant anomalies were noted with this analysis.

Semivoa GC:

Method 8151A, 02/20/2024:The upper control criterion was exceeded for 2,4,5-TP (Silvex) in Continuing Calibration Verification (CCV). The field sample analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Metals:

No significant anomalies were noted with this analysis.

Approved by  Date 02/26/2024

Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Specialty Analytical **Service Request:**K2401391
Project: 2402095

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
K2401391-001	East Pond	2/8/2024	0845

K2401391 * ALS *

Chain of Custody Record

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Date: 2/8/2024 | Page: 1 of: 1 | Laboratory Project No (internal):

Project Name: 2402095 | Temperature on Receipt: °C

Client: Specialty Analytical | Project No: | PO No: | Cooling: ice | Shipped Via: SA

Address: 9011 SE Jannsen Rd | Collected by: Client | Custody Seal: Y / N Intact / Broken Cooler / Bottle

City, State, Zip: Clackamas, OR, 97015 | State Collected: OR ☐ WA ☑ OTHER | MDL ☐ TIER IV ☐ EDD ☐

Telephone: 503-607-1331 | Report To (PM): PM / Mandy Wehe | Sample Disposal: ☐ Return to client ☑ Disposal by lab (after 60 days)

AP Email: mandy@specialtyanalytical.com | PM Email: PM@specialtyanalytical.com / mandy@specialtyanalytical.com

	Sample Name	Sample Date	Sample Time	Sample Matrix*	# of Containers	Requested Tests: TCLP 8270	TCLP Herbicides (8151)	Comments
1	East Pond	2-8-24	0845	S	1	✓	✓	
2								
3								
4								
5								
6								
7								
8								
9								
10								

*Matrix: A = Air, AQ = Aqueous, L=Liquid, O = Oil, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water, M = Miscellaneous

Turn-around Time: Standard (5-7 Business): ✓ 3 Day: ☐ 2 Day: ☐ Next Day: ☐ Same Day: ☐

Expedited turn-around requests should be coordinated in advance

Relinquished	Date/Time	Received	Date/Time
x [signature]	2-8-24 1327	x M. Mellgar	2/8/24 1327
x		x	
x		x	

PM ###

Cooler Receipt and Preservation Form

Client Specialty Analytical Service Request K24 01391

Received: 2/8/24 Opened: 2/8/24 By: HS Unloaded: 2/8/24 By: HS

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed

4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
   If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. NA Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
14. Was C12/Res negative? NA Y N
15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

Miscellaneous Forms

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Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Analyst Summary report

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095/		

Sample Name:	East Pond	**Date Collected:**	02/8/24
Lab Code:	K2401391-001	**Date Received:**	02/8/24
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8151A	ZPRIM	BBRIGHT
8270D	JCHRISTENSEN	MPLATT

Sample Results

ALS Environmental—Kelso Laboratory
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Semivolatile Organic Compounds by GC/MS

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www.alsglobal.com

Analytical Report

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Collected:**	02/08/24 08:45
Sample Matrix:	Soil	**Date Received:**	02/08/24 13:27
Sample Name:	East Pond	**Units:**	mg/L
Lab Code:	K2401391-001	**Basis:**	NA

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	2/13/24

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-Dinitrotoluene	ND U	0.10	1	02/20/24 20:46	2/17/24	
Hexachlorobenzene	ND U	0.10	1	02/20/24 20:46	2/17/24	
Hexachlorobutadiene	ND U	0.10	1	02/20/24 20:46	2/17/24	
Hexachloroethane	ND U	0.10	1	02/20/24 20:46	2/17/24	
2-Methylphenol	ND U	0.10	1	02/20/24 20:46	2/17/24	
4-Methylphenol	ND U	0.10	1	02/20/24 20:46	2/17/24	
Nitrobenzene	ND U	0.10	1	02/20/24 20:46	2/17/24	
Pentachlorophenol	ND U	0.25	1	02/20/24 20:46	2/17/24	
Pyridine	ND U	0.50	1	02/20/24 20:46	2/17/24	
2,4,5-Trichlorophenol	ND U	0.10	1	02/20/24 20:46	2/17/24	
2,4,6-Trichlorophenol	ND U	0.10	1	02/20/24 20:46	2/17/24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	82	45 - 101	02/20/24 20:46	
Nitrobenzene-d5	85	54 - 100	02/20/24 20:46	
Phenol-d6	72	49 - 89	02/20/24 20:46	
p-Terphenyl-d14	108	39 - 124	02/20/24 20:46	
2,4,6-Tribromophenol	86	34 - 128	02/20/24 20:46	

Semivolatile Organic Compounds by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Analytical Report

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Collected:**	02/08/24 08:45
Sample Matrix:	Soil	**Date Received:**	02/08/24 13:27
Sample Name:	East Pond	**Units:**	ug/L
Lab Code:	K2401391-001	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	2/13/24

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D	ND U	40	1	02/20/24 23:20	2/15/24	
2,4,5-TP (Silvex)	ND U	20	1	02/20/24 23:20	2/15/24	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	78	17 - 113	02/20/24 23:20	

QC Summary Forms

ALS Environmental—Kelso Laboratory
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Semivolatile Organic Compounds by GC/MS

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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Specialty Analytical **Service Request:** K2401391
Project: 2402095
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	2,4,6-Tribromophenol 34 - 128	2-Fluorobiphenyl 45 - 101	Nitrobenzene-d5 54 - 100
East Pond	K2401391-001	86	82	85
Method Blank	KQ2402195-01	80	79	81
Method Blank	KQ2402420-01	85	84	88
Lab Control Sample	KQ2402420-02	81	79	79
East Pond MS	KQ2402420-03	86	85	87

Client: Specialty Analytical **Service Request:** K2401391
Project: 2402095
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	Phenol-d6 49 - 89	p-Terphenyl-d14 39 - 124
East Pond	K2401391-001	72	108
Method Blank	KQ2402195-01	69	106
Method Blank	KQ2402420-01	73	109
Lab Control Sample	KQ2402420-02	63	84
East Pond	KQ2402420-03	72	91

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Collected:**	02/08/24
Sample Matrix:	Soil	**Date Received:**	02/08/24
		Date Analyzed:	02/20/24
		Date Extracted:	02/17/24

Matrix Spike Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	East Pond	**Units:**	mg/L
Lab Code:	K2401391-001	**Basis:**	NA
Analysis Method:	8270D		
Prep Method:	EPA 3510C		

Matrix Spike
KQ2402420-03

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
2,4-Dinitrotoluene	ND U	0.937	1.00	94	52-125
Hexachlorobenzene	ND U	0.918	1.00	92	63-104
Hexachlorobutadiene	ND U	0.707	1.00	71	47-106
Hexachloroethane	ND U	0.605	1.00	61	53-93
2-Methylphenol	ND U	0.850	1.00	85	53-105
4-Methylphenol	ND U	0.908	1.00	91	55-105
Nitrobenzene	ND U	0.840	1.00	84	64-100
Pentachlorophenol	ND U	0.965	1.00	96	51-112
Pyridine	ND U	0.597	2.00	30	7-109
2,4,5-Trichlorophenol	ND U	0.919	1.00	92	63-113
2,4,6-Trichlorophenol	ND U	0.928	1.00	93	63-112

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Analytical Report

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ2402195-01	**Basis:**	NA

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	2/13/24

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-Dinitrotoluene	ND U	0.10	1	02/20/24 19:42	2/17/24	
Hexachlorobenzene	ND U	0.10	1	02/20/24 19:42	2/17/24	
Hexachlorobutadiene	ND U	0.10	1	02/20/24 19:42	2/17/24	
Hexachloroethane	ND U	0.10	1	02/20/24 19:42	2/17/24	
2-Methylphenol	ND U	0.10	1	02/20/24 19:42	2/17/24	
4-Methylphenol	ND U	0.10	1	02/20/24 19:42	2/17/24	
Nitrobenzene	ND U	0.10	1	02/20/24 19:42	2/17/24	
Pentachlorophenol	ND U	0.25	1	02/20/24 19:42	2/17/24	
Pyridine	ND U	0.50	1	02/20/24 19:42	2/17/24	
2,4,5-Trichlorophenol	ND U	0.10	1	02/20/24 19:42	2/17/24	
2,4,6-Trichlorophenol	ND U	0.10	1	02/20/24 19:42	2/17/24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	79	45 - 101	02/20/24 19:42	
Nitrobenzene-d5	81	54 - 100	02/20/24 19:42	
Phenol-d6	69	49 - 89	02/20/24 19:42	
p-Terphenyl-d14	106	39 - 124	02/20/24 19:42	
2,4,6-Tribromophenol	80	34 - 128	02/20/24 19:42	

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ2402420-01	**Basis:**	NA

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-Dinitrotoluene	ND U	0.10	1	02/20/24 19:20	2/17/24	
Hexachlorobenzene	ND U	0.10	1	02/20/24 19:20	2/17/24	
Hexachlorobutadiene	ND U	0.10	1	02/20/24 19:20	2/17/24	
Hexachloroethane	ND U	0.10	1	02/20/24 19:20	2/17/24	
2-Methylphenol	ND U	0.10	1	02/20/24 19:20	2/17/24	
4-Methylphenol	ND U	0.10	1	02/20/24 19:20	2/17/24	
Nitrobenzene	ND U	0.10	1	02/20/24 19:20	2/17/24	
Pentachlorophenol	ND U	0.25	1	02/20/24 19:20	2/17/24	
Pyridine	ND U	0.50	1	02/20/24 19:20	2/17/24	
2,4,5-Trichlorophenol	ND U	0.10	1	02/20/24 19:20	2/17/24	
2,4,6-Trichlorophenol	ND U	0.10	1	02/20/24 19:20	2/17/24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	84	45 - 101	02/20/24 19:20	
Nitrobenzene-d5	88	54 - 100	02/20/24 19:20	
Phenol-d6	73	49 - 89	02/20/24 19:20	
p-Terphenyl-d14	109	39 - 124	02/20/24 19:20	
2,4,6-Tribromophenol	85	34 - 128	02/20/24 19:20	

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Analyzed:**	02/20/24
Sample Matrix:	Soil	**Date Extracted:**	02/17/24

Lab Control Sample Summary
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Units:**	mg/L
Prep Method:	EPA 3510C	**Basis:**	NA
		Analysis Lot:	833134

Lab Control Sample
KQ2402420-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol	0.855	1.00	86	63-113
2,4,6-Trichlorophenol	0.865	1.00	87	63-112
2,4-Dinitrotoluene	0.871	1.00	87	52-125
2-Methylphenol	0.761	1.00	76	53-105
4-Methylphenol	0.809	1.00	81	55-105
Hexachlorobenzene	0.869	1.00	87	63-104
Hexachlorobutadiene	0.640	1.00	64	47-106
Hexachloroethane	0.550	1.00	55	53-93
Nitrobenzene	0.769	1.00	77	64-100
Pentachlorophenol	0.878	1.00	88	51-112
Pyridine	0.874	2.00	44	7-109

Semivolatile Organic Compounds by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Specialty Analytical **Service Request:** K2401391
Project: 2402095
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 17 - 113
East Pond	K2401391-001	78
Method Blank	KQ2402195-01	78
Lab Control Sample	KQ2402301-01	78
Method Blank	KQ2402301-02	67

Analytical Report

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ2402195-01	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	2/13/24

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D	ND U	40	1	02/20/24 22:02	2/15/24	
2,4,5-TP (Silvex)	ND U	20	1	02/20/24 22:02	2/15/24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	78	17 - 113	02/20/24 22:02	

Analytical Report

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ2402301-02	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D	ND U	40	1	02/20/24 22:28	2/15/24	
2,4,5-TP (Silvex)	ND U	20	1	02/20/24 22:28	2/15/24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	67	17 - 113	02/20/24 22:28	

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Analyzed:**	02/20/24
Sample Matrix:	Soil	**Date Extracted:**	02/15/24

Lab Control Sample Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Units:**	ug/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	832945

Lab Control Sample
KQ2402301-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-TP (Silvex)	211	250	84	37-114
2,4-D	211	250	84	35-110

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client:	Specialty Analytical	**Service Request:**	K2401391
Project:	2402095	**Date Collected:**	NA
Matrix:	Soil	**Date Received:**	
Sample Name:	Lab Control Sample		
Lab Code:	KQ2402301-01	**Units:**	ug/L
		Basis:	NA

TCLP Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

LOQ	LOQ	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-TP (Silvex)	20	211	227	7		1	02/20/24 22:54
2,4-D	40	211	232	9		1	02/20/24 22:54

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Chain of Custody Record

Date: | Page: 1 of: 1 | Laboratory Project No (internal): 2402095

Project Name: 0033 Pond Dredging | Temperature on Receipt: 2.7 °C

Client: Weyerhaeuser | Project No: | PO No: | Cooling: Ice | Shipped Via: SA

Address: 1701 ~~Longview~~ Industrial Way (98632) | Collected by: Christian Clark | Custody Seal: Y (N) Intact / Broken Cooler / Bottle

City, State, Zip: Longview, WA, 98632 | State Collected: OR (WA) OTHER | MDL TIER IV EDD

Telephone: (541)409-7770 | Report To (PM): Christine Yanik | Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 60 days)

AP Email: | PM Email: christine.yanik@weyerhaeuser.com

	Sample Name	Sample Date	Sample Time	Sample Matrix*	# of Containers	Requested Tests: FULL LIST TCLP 1311	Comments
1	East Pond	2/8/24	0845	S	4	✓	Full list TCLP 1311
2							
3							
4							
5							
6							
7							
8							
9							
10							

*Matrix: A=Air, AQ=Aqueous, L=Liquid, O=Oil, P=Product, S=Soil, SD=Sediment, SL=Solid, W=Water, DW=Drinking Water, GW=Ground Water, SW=Storm Water, WW=Waste Water, M=Miscellaneous

Turn-around Time: Standard: _____ 3 Day: _____ 2 Day: _____ Next Day: _____ Same Day: _____

Expedited turn-around requests should be coordinated in advance

Relinquished	Date/Time	Received	Date/Time
x Christian Clark	2/8/24 0915	x	2-8-24 1242
x	2-8-24 1500	x	2/8/24 1500
x		x	

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Definition Only

WO#: **2402095**

Date: **3/11/2024**

Definitions:

KEY TO FLAGS

A: This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was qualified against gasoline calibration standards.

A1: This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was qualified against diesel calibration standards.

A2: This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was qualified against lube oil calibration standards.

A3: The results was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.

A4: The product appears to be aged or degraded.

B: The blank exhibited a positive result greater than the reporting limit for this compound.

BC: Sample concentration is >10x positive result in blank. Data is considered acceptable.

CN: See Case Narrative.

E: Result exceeds the calibration range for this compound. The result should be considered an estimate.

F: The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.

FS: Follow-up testing is suggested.

G: Result may be biased high due to biogenic interferences. Clean up is recommended.

H: Sample was analyzed outside recommended holding time.

HT: At client's request, samples was analyzed outside of recommended holding time.

HP: Sample was analyzed outside recommended holding time due to VOA having pH >2.

Specialty Analytical
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Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Definition Only

WO#: **2402095**
Date: **3/11/2024**

Definitions:

J: The results for this analyte is between the MDL and the PQL and should be considered an estimated concentration.

K: Diesel result is biased high due to amount of Oil contained in the sample.

L: Diesel result is biased high due to amount of Gasoline contained in the sample.

M: Oil result is biased high due to amount of Diesel contained in the sample.

N: Gasoline result is biased high due to amount of Diesel contained in the sample.

MC: Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.

MI: Result is outside control limits due to matrix interference.

NH: Sample matrix is non-homogeneous

MSA: Value determined by Method of Standard Addition.

O: Laboratory Control Standard (LCS) exceeded laboratory control limits but meets CCV criteria. Data meets EPA requirements.

Q: Detection levels elevated due to sample matrix.

R: RPD control limits were exceeded

RF: Duplicate failed due to result being at or near the method-reporting limit.

RP: Matrix spike values exceed established QC limits; post digestion spike is in control.

S: Recovery is outside control limits.

SC: CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.

Specialty Analytical
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Clackamas, Oregon 97015
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Website: www.specialtyanalytical.com

Definition Only

WO#: **2402095**
Date: **3/11/2024**

Definitions:

SL: LCS exceeded recovery control limits, but associated MS/MSD passing. Data meets EPA requirements.

SV: CCV exceded low recovery control limits. ND as reported evaluated using EPA method 8260D section 11.4.3.2

TA: Sample treated with ascorbic acid for the removal of thiocyanates.

TS: Sample treated with Sodium Sulfite for the removal of chlorine.

APPENDIX E

Dredged Solids Disposal Ticket

Daily Transactions - All

(((Trans.DateOut BETWEEN '2024-06-01' AND '2024-06-30')
AND (Trans.Void = 0)
AND (Trans.BillAcct LIKE '5311%')))

TranNum	DateIn	DateOut	Truck	BillAcct	BillCompany	MT	MTLabel	GrossSTN	TareSTN	NetSTN	Rate	TipFee
674025	6/6/2024	6/6/2024	217WCR WEYERHAEUSER	5311	WASTE CONTROL - LANDFILL	5003000	INDUSTRIAL - 30	57.66	23.04	34.62	30	1038.6
674054	6/6/2024	6/6/2024	217WCR WEYERHAEUSER	5311	WASTE CONTROL - LANDFILL	5003000	INDUSTRIAL - 30	53.31	22.99	30.32	30	909.6
674071	6/6/2024	6/6/2024	217WCR WEYERHAEUSER	5311	WASTE CONTROL - LANDFILL	5003000	INDUSTRIAL - 30	49.7	22.94	26.76	30	802.8
674094	6/6/2024	6/6/2024	217WCR WEYCO	5311	WASTE CONTROL - LANDFILL	5003000	INDUSTRIAL - 30	52.5	22.88	29.62	30	888.6
674334	6/11/2024	6/11/2024	217WCR WEYCO	5311	WASTE CONTROL - LANDFILL	5003000	INDUSTRIAL - 30	48.95	22.81	26.14	30	784.2
674363	6/11/2024	6/11/2024	215WCR WEYCO	5311	WASTE CONTROL - LANDFILL	5003000	INDUSTRIAL - 30	50.59	23.12	27.47	30	824.1
674366	6/11/2024	6/11/2024	217WCR WEYCO	5311	WASTE CONTROL - LANDFILL	5003000	INDUSTRIAL - 30	52.19	22.76	29.43	30	882.9
674383	6/11/2024	6/11/2024	215WCR WEYERHAEUSER	5311	WASTE CONTROL - LANDFILL	4003000	PCS - 30	53.03	23.08	29.95	30	898.5
674386	6/11/2024	6/11/2024	217WCR WEYERHAEUSER	5311	WASTE CONTROL - LANDFILL	4003000	PCS - 30	53.33	22.69	30.64	30	919.2
674412	6/11/2024	6/11/2024	217WCR WEYERHOSUR	5311	WASTE CONTROL - LANDFILL	4003000	PCS - 30	53.76	22.65	31.11	30	933.3