March 25, 2024

Ms. Bernadette Wright
U.S. Environmental Protection Agency
1200 Sixth Avenue, ECL-111
Seattle, WA 98101

RE: Pacific Sound Resources Superfund Site, West Seattle, WA
AOC# 10-94-0213
2023 Annual Progress Report

1.0 INTRODUCTION

This progress report has been prepared in accordance with the Administrative Order on Consent (AOC) signed September 29, 1994, and the Supplemental AOC signed December 2, 2002, between the United States Environmental Protection Agency (EPA) and the Port of Seattle (Port). This progress report summarizes the work performed to comply with the AOCs and identifies problems or delays encountered during the reporting period or anticipated for the upcoming year. Work planned for next year is also summarized in this document.

2.0 SUMMARY OF WORK PERFORMED TO COMPLY WITH THE AOC

This section summarizes the work performed according to the Statement of Work (SOW) in the AOC and the Supplemental Scope of Work (SSOW) in the Supplemental AOC. Three additional tasks, referred to as SSOW-I, -II, and -III in the SSOW, were added to this reporting process for project continuity. The work performed is summarized according to the original six tasks described in the SOW and the three additional SSOW tasks. The nine tasks are as follows:

Task 1 – Project Management
Task 2 – Assess Current Conditions and Supplement Site Security/Control
Task 3 – Site Stabilization and Plant Demolition (Time-Critical Removal Actions)
Task 4 – Early Actions (Non-Time-Critical Removal Actions)
Task 5 – Remedial Investigation/Feasibility Study Sampling
Task 6 – Surface Capping (Task 600)
Task SSOW-I – Pilings Removal

Task SSOW-II – New Well Replacement
Task SSOW-III – Groundwater Monitoring

Periodic non-aqueous-phase liquids (NAPL) monitoring/pumping in selected wells was included under Task SSOW-III.

Task 1 – Project Management

Subtask 1.1 – Project Management

We continue to implement the Project Management Plan, including performing general project management duties, attending any scheduled meetings, tracking budget and schedule, reporting, submitting deliverables, and implementing the AOC.

Subtask 1.2 – Monthly Reporting

We maintained and updated the summary of dense NAPL (DNAPL) quantities removed each month or quarter and prepared the annual progress report each year.

Subtask 1.3 – Scheduling

We continued updating the Project Schedule.

Subtask 1.4 – Records Management

We continued updating the project file as needed.

Task 2 – Assess Current Conditions and Supplement Site Security/Control

The Port and the site operator continue to maintain site security through the facility's fencing and site controls.

The Port prepared and submitted the Proposed Signage Update Memorandum to the EPA on September 25, 2023, for the Terminal 5 Public Access Area (PAA), which comprises a portion of Jack Block Park. The memorandum was developed based on an inspection of the PAA conducted in June 2023, which focused on inspecting existing signage and identifying infrastructure condition changes. Proposed updates to the previous signage plan from 2017 were developed for implementation.

Task 3 – Site Stabilization and Plant Demolition (Time-Critical Removal Actions)

Task complete.

Task 4 – Early Actions (Non-Time-Critical Removal Actions)

Task complete.

Task 5 – Remedial Investigation/Feasibility Study Sampling

Task complete.

Task 6 – Surface Capping (Task 600)

Subtask 6.1 – Cap Inspection

Cap inspections are conducted annually in accordance with the Phase II schedule. The annual inspection at the Intermodal Yard (IY) and the Public Access Area (PAA) for reporting-year 2023 was performed and documented in Attachment A. The next inspection is scheduled for 2024. The Port proposes to complete future annual cap inspections during the summer months based on safety concerns. Completing cap inspections during summer months will allow for better lighting and longer days to complete the inspections. The Port plans to implement this change in 2024.

The following tasks are being conducted by the Port in cooperation with EPA under the Supplemental AOC.

Task SSOW-I – Pilings Removal

Task complete.

Task SSOW-II – New Well Replacement

Task complete.

Task SSOW-III – Groundwater Monitoring/DNAPL Removal

Quarterly DNAPL recovery from wells MW-5I, RW-1D, RW-1I, RW-1S, and MW-13I is being conducted as part of the Groundwater Monitoring task. A summary of DNAPL recovery data from this effort is presented in Table 1. Volumes (gallons) of DNAPL recovered in 2023 included the following: 2.0 from MW-5I, 0.25 from RW-1D, 0.5 from RW-1I, 0.0 from RW-1S, 12.0 from MW-13I, and 14.75 total at the site. DNAPL recovery frequency was increased from quarterly to monthly in Well MW-13I in November 2023, after it produced greater than 2 gallons of DNAPL in previous recovery events. After less than 2 gallons of DNAPL were recovered from MW-13I in both the November and December 2023 recovery events, the recovery frequency for this well was returned back to quarterly.

The frequency of DNAPL recovery is conducted in accordance with the requirements of the 2004 Groundwater Confirmational Monitoring Plan, which sets the frequency for NAPL recovery for each well at quarterly when less than 2 gallons are recovered, monthly when 2 to 5 gallons are recovered, and weekly when greater than 5 gallons are recovered.

Miscellaneous Non-SOW Activities

None.

3.0 PROBLEMS/DELAYS ENCOUNTERED OR ANTICIPATED

No problems or delays were encountered in 2023 or are anticipated for the next reporting year.

4.0 WORK PLANNED FOR TO COMPLY WITH THE AOC

This section summarizes the work planned for the next reporting year. The work planned is summarized according to the nine tasks in the original SOW and SSOW.

Task 1 – Project Management

Subtask 1.1 – Project Management

No deviations from the Project Management Plan are anticipated.

Subtask 1.2 – Weekly/Monthly Reporting

The Port's consultant will summarize recovered DNAPL volumes at appropriate frequencies, in accordance with the 2004 Groundwater Confirmational Monitoring Plan. Summaries will be included in the annual progress report.

Subtask 1.3 – Scheduling

We will continue updating the Project Schedule.

Subtask 1.4 – Records Management

We will continue updating the project file.

Task 2 – Assess Current Conditions and Supplement Site Security/Control

In June 2011, security fencing was removed by the Port under EPA approval to allow public beach access. Beach access is limited to Jack Block Park from 6 a.m. to 9 p.m. in summer and 6 a.m. to 7 p.m. in winter. Park gates are locked when the park is closed. The park is routinely visited by Port Police. Fishing warning/prohibition and no trespassing signs will continue to be monitored to maintain nearshore habitat areas and protect public health.

Task 3 – Site Stabilization and Plant Demolition (Time-Critical Removal Actions)

Task complete.

Task 4 – Early Actions (Non-Time-Critical Removal Actions)

Task complete.

Task 5 – Remedial Investigation/Feasibility Study Sampling

Task complete

Task 6 – Surface Capping

Subtask 6.1 – Cap Inspection

The next inspection is scheduled for the last quarter of the next reporting year.

Task SSOW-I – Pilings Removal

Task complete.

Task SSOW-II – New Well Replacement

Task complete.

Task SSOW-III – Groundwater Monitoring/DNAPL Removal

Product recovery will continue to be performed quarterly (or more frequently, based upon recovery volume) for all wells where recoverable product is present. The DNAPL Recovery Optimization memorandum was submitted to EPA on September 25, 2023, summarizing the review of, and proposed modifications to, ongoing DNAPL recovery. With EPA concurrence, the following modifications will be made to the DNAPL recovery approach in the first quarter of 2024 starting with MW-13I and potentially expanding to the full recovery well network based upon results at MW-13I:

- **Increase DNAPL Accumulation in Recovery Wells:** Existing dedicated in-well pneumatic bladder pumps will be removed from wells to allow for increased well capacity for accumulation of additional DNAPL between recovery events.
- **Evaluate Presence of DNAPL Prior to Attempting DNAPL Recovery:** DNAPL gauging can be initiated following removal of in-well bladder pumps. Wells will be gauged to determine depth to water, depth to DNAPL, and DNAPL thickness prior to attempting DNAPL recovery.
- **Evaluate Alternative DNAPL Pumping Methods:** Use of portable peristaltic pump for DNAPL recovery will be evaluated in an attempt to reduce displacement of DNAPL in the well and reduce generation of extracted groundwater.

Please call me at (206) 787-3193 if you have any questions or comments. We hope that this report provides the level of detail needed to support our monthly cost accounting statements. Please let us know if additional detail is necessary.

Sincerely,

Brick Spangler

Brick Spangler
Sr. Environmental Program Manager

Table 1 – Summary of DNAPL Recovered
Attachment A – Public Access Area & PSR Area Inspection Forms, Site Plan, and Photo Logs

cc: Paul Kalina - AECOM

Table 1. Summary of DNAPL Recovered

Date	MW-5I			RW-1D			RW-1I			RW-1S			MW-13I			Total DNAPL Recovered (gal)	Cumulative DNAPL Recovered (gal)
	Liquid Removed (gal)	DNAPL Recovered (gal)	Cumulative DNAPL Recovered (gal)	Liquid Removed (gal)	DNAPL Recovered (gal)	Cumulative DNAPL Recovered (gal)	Liquid Removed (gal)	DNAPL Recovered (gal)	Cumulative DNAPL Recovered (gal)	Liquid Removed (gal)	DNAPL Recovered (gal)	Cumulative DNAPL Recovered (gal)	Liquid Removed (gal)	DNAPL Recovered (gal)	Cumulative DNAPL Recovered (gal)		
03/06/18	2.50	0.25	94.62	2.00	1.00	1,045.15	2.50	0.75	87.38	0.25	0.00	0.25	2.00	1.50	102.46	3.50	1,456.25
05/23/18	3.50	0.60	95.22	1.25	0.00	1,045.15	1.75	0.00	87.38	3.90	0.00	0.25	5.00	1.00	103.46	1.60	1,457.85
08/23/18	5.00	0.25	95.47	5.00	0.10	1,045.25	5.00	0.10	87.48	0.00	0.00	0.25	5.00	0.50	103.96	0.95	1,458.80
11/20/18	3.00	0.30	95.77	5.00	1.00	1,046.25	5.00	1.00	88.48	1.00	0.00	0.25	5.00	0.50	104.46	2.80	1,461.60
04/08/19	5.00	0.50	96.27	4.00	1.00	1,047.25	4.50	1.00	89.48	1.00	0.25	0.50	5.00	0.50	104.96	3.25	1,464.85
06/27/19	3.00	0.50	96.77	5.00	1.00	1,048.25	4.00	0.50	89.98	0.50	0.25	0.75	4.50	0.50	105.46	2.75	1,467.60
09/27/19	4.00	0.50	97.27	4.00	0.75	1,049.00	5.00	1.00	90.98	1.00	0.00	0.75	3.00	1.00	106.46	3.25	1,470.85
01/29/20	5.00	0.75	98.02	3.00	1.00	1,050.00	4.00	0.50	91.48	1.00	0.25	1.00	4.00	0.50	106.96	3.00	1,473.85
11/02/20	4.00	0.50	98.52	3.50	0.25	1,050.25	5.00	0.50	91.98	0.50	0.00	1.00	4.50	0.50	107.46	1.75	1,475.60
05/20/21	5.00	0.50	99.02	4.00	0.25	1,050.50	4.00	0.50	92.48	1.00	0.00	1.00	3.00	0.25	107.71	1.50	1,477.10
09/17/21	4.00	0.50	99.52	3.50	0.20	1,050.70	4.00	0.25	92.73	0.50	0.00	1.00	4.00	0.50	108.21	1.45	1,478.55
12/29/22	2.50	0.00	99.02	2.50	0.10	1,050.60	2.50	0.10	92.58	3.00	0.00	1.00	3.00	0.10	107.81	0.30	1,477.40
03/24/23	2.50	0.10	99.62	2.00	0.00	1,050.70	2.00	0.00	92.73	1.00	0.00	1.00	4.50	4.00	112.21	4.10	1,482.65
06/28/23	3.90	0.90	100.52	1.50	0.00	1,050.70	1.75	0.00	92.73	0.75	0.00	1.00	4.50	4.50	116.71	5.40	1,488.05
09/26/23	3.00	0.50	101.02	1.25	0.00	1,050.70	2.25	0.00	92.73	0.50	0.00	1.00	5.00	2.25	118.96	2.75	1,490.80
11/03/23	NC	NC	101.02	NC	NC	1,050.70	NC	NC	92.73	NC	NC	1.00	4.00	0.75	119.71	0.75	1,491.55
12/13/23	2.50	0.50	101.52	1.50	0.25	1,050.95	3.75	0.50	93.23	0.25	0.00	1.00	3.00	0.50	120.21	1.75	1,493.30

Notes:
This table presents the last five years of data only. The listed cumulative DNAPL recovery volumes detail total volumes recovered since initiating recovery efforts.
For cumulative volume tracking, field measurements of "trace" are considered to be zero and measurements of "<0.25" are considered to be 0.25 gal.
NC - Not Collected. DNAPL recovery frequency was increased from quarterly to monthly only for wells producing 2 to 5 gallons per recovery event, in accordance with the 2004 Groundwater Confirmational Monitoring Plan.

ATTACHMENT A

Public Access Area & PSR Area Inspection Logs, Site Plan, and Photo Logs

Port of Seattle: Terminal 5 Cap Inspection Report

PUBLIC ACCESS AREA (PACIFIC SOUND RESOURCES SUPERFUND SITE)

Name of Inspector: Lillian Celovsky, Megan Valcq, and Jamalyn Green
Date (D/M/Y): 11/29/2023, 11/30/2023, & 1/6/2024
Title: Environmental Engineer
Employer: AECOM Technical Services, Inc. (AECOM)

PUBLIC ACCESS AREA – PACIFIC SOUND RESOURCES SUPERFUND SITE

AECOM Technical Services, Inc. (AECOM) staff inspected the informational signs, shoreline fencing and barricades, anti-fishing measures, and site capping and fill structures. A summary of findings is described below, including location, nature of the problem, and possible corrective actions.

This inspection was conducted in December 2023 and January 2024 and the inspection log is provided below. Site observations were compared to the *Proposed Signage Update Memorandum*, submitted to the United States Environmental Protection Agency (USEPA) from the Port of Seattle on September 25, 2023. During the fourth quarter of 2023, the Port of Seattle's Marine Maintenance replaced the fish advisory signs and updated the contact information on the informational signs. Marine Maintenance installed the fish advisory signs in generally the same location as the plan and the informational sign's contact information has been updated. See Table 1 below for a list of signs included in the Proposed Signage Update Memorandum and their proposed locations.

The asphalt cap and fill areas were intact. The beach area is open to the public with EPA concurrence, and there was no evidence of the public fishing or shellfish harvesting activities from the shoreline during the inspection. The beach habitat area appeared intact and undisturbed. There was no visual evidence of intertidal activities during the inspection.

Informational Signs

Large (30" x 37") Signs		
Are all three (3) signs in place?	YES	X NO*
Are all present signs legible?	X YES	NO

*Two of the three informational signs are currently in place. Informational signs aren't required per the Inspection and Maintenance Plan (RETEC, 1998).

SHORELINE FENCING AND BARRICADES

Is the 4-ft chain-link fencing intact?	X YES	NO
Is the 7-ft chain-link fencing intact?	X YES	NO
Are all guardrails intact?	X YES	NO
Are all handrails intact?	X YES	NO
Are all pier railings intact?	X YES	NO
Is there evidence of the public gaining access to the Intertidal sediment areas adjacent to PSR?	YES	X NO*

*The beach area is open to the public with EPA concurrence. The beach habitat area appeared intact and undisturbed. There was no visual evidence of intertidal activities (e.g., clamming) during the inspection.

See Table 1 (below) for list of sign locations and current observations.

Anti-fishing Measures

Is the fish barrier intact along the elevated walkway?	NA**	
Is the fish barrier intact along Pier Plaza?	NA**	
Is the fish barrier intact along Finger Pier?	NA**	
Is there evidence of the public either fishing or harvesting shellfish from the shoreline of PSR?	YES	X NO

**The fish barrier along the elevated walkway was removed in 2011 in concurrence with EPA's directions. This section will be removed from future inspections.

Site Capping and Fill

Is the asphalt cap intact?	X YES	NO
Are the fill areas intact?	X YES	NO
Is there evidence that the public has access to native soils of PSR?	YES	X NO

TABLE 1. PUBLIC ACCESS AREA (JACK BLOCK PARK) SIGN LOCATIONS

No.	Description
Informational Signs	
1	Entrance sign (east side of first parking area)
2	Path sign before fencing along the beach access area from main parking area
3	Sign at entrance to Pier Plaza
Fish Advisory / Health Warning Signs	
1	First planned sign on fencing along the beach access area from main parking area
2	Second planned sign on fencing along the beach access area from main parking area
3	Third planned sign on fencing along the beach access area from main parking area
4	Fourth planned sign on fencing along the beach access area from main parking area
5	Fourth planned sign on fencing along the beach access area from main parking area
6	Sign on fence by closed pier.

Note: The sign list above is based on the Port's *Proposed Signage Update Memorandum,* dated September 25, 2023.

TERMINAL 5 INTERMODAL YARD

AECOM staff inspected the overall cap striping and edge details, conditions along structures, railroads, and high impact areas, as well as areas which represent potential pathways for infiltration of surface water through pavement. A summary of findings is described below, including location, nature of the problem, and possible corrective actions.

The cap appears to be generally intact but has clear signs of damage and weathering to pavement. Areas of unsealed pavement were prevalent, including a 10-ft wide area that spans almost the length of the RA. These should be sealed to protect the pavement from further weathering. Several areas of pavement damage can be seen throughout the RA due to heavy containers being placed on the cap. These unsealed areas should be addressed as some are already starting to erode. Numerous areas of linear and spidering cracks were observed in each row throughout the rail portion (BNSF yard and intermodal yard) of the RA. These cracks typically spanned the entire length (north – south) of the RA and were accompanied with small holes and areas of erosion. Some areas were observed to have been sealed recently but the seal has weathered significantly or has been scraped off. Drain structures mostly appeared intact but some localized areas of the drains have settled creating sections of ponding next to drains and lips where the concrete structures meet the asphalt. These sections should be addressed to ensure sufficient drainage on the cap. Vegetation appeared to impact a few areas including along the rails of the northwest portion of the cap. Vegetation noted should be removed and the pavement damage should be repaired.

Generalized observations with recommended repairs are noted in the Photo Log (Attachment 1).

Cap Striping and Edge Details

Environmental Cap, Slurry Wall, and 8-inch/4-inch, demarcations were mostly intact throughout the cap. There were a couple of areas noted to have illegible or missing demarcations. These areas include the southern border and eastern border “Environmental Cap” demarcations (Attachment 1).

Conditions Along Structures

Is gap greater than 1-inch wide visible? No

- Width of gap: NA
- Depth of gap: NA
- Continuous along structure? NA
- Location of Cracks: NA

Conditions along structures are satisfactory with no significant damage. Conditions documented along structures included vegetation growth, cracking, and settlement (Attachment 1).

High Impact Area Inspections

1) 8-inch Cap: T-5 Intermodal Yard

Are cracks greater than ¼ inch wide visible? Yes
- Variety of cracks observed ranging in widths and lengths.

Is settlement visible? Yes
- As expected, slight settlement observed in pavement as ponding.
- More significant settlement observed next to drainage structures.

Is vegetation present? Yes
- Vegetation is mostly minimal but should be addressed where applicable.

Is erosion present? Yes
- Erosion of holes and damaged pavement is prevalent.
- Weathering of sealant was also observed.

2) 4-inch Cap: BNSF Storage Yard east of Terminal 5

Are cracks greater than ¼ inch wide visible? Yes
- A few linear cracks observed.

Is settlement visible? Yes
- As expected, slight settlement observed in pavement as ponding.

Is vegetation present? Yes
- Vegetation observed in drainage structures and along rails mostly.

Is erosion present? Yes
- Scraped pavement with eroded hole observed.

3) Conditions Along Railroad Tracks

Inspection completed along all tracks. Cracks wider than ¼ inch observed between and next to rails, but no significant gaps observed. Some eroded scrapes and holes also observed along tracks.

Is a gap greater than 1 inch wide visible? No

List attachments:
Attachment 1. RA-4 Inspection Photo Log

Attachment 1: RA-4 INSPECTION PHOTO LOG FOR PAVEMENT AND BALLAST COVERS, SURFACE WATER COLLECTION SYSTEMS, AND SECURITY SYSTEMS

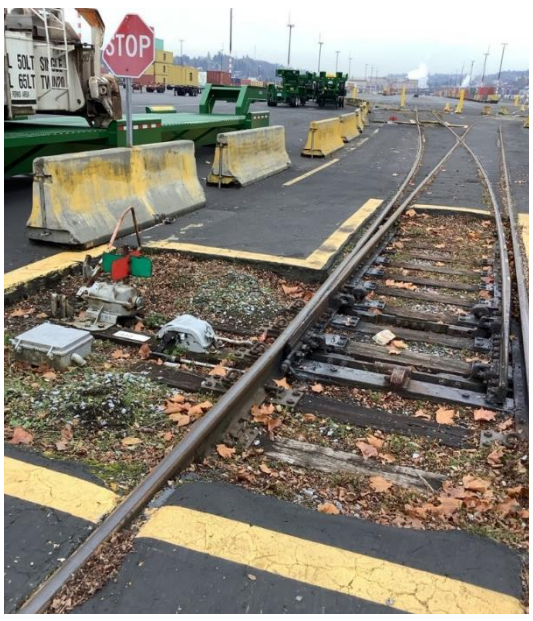
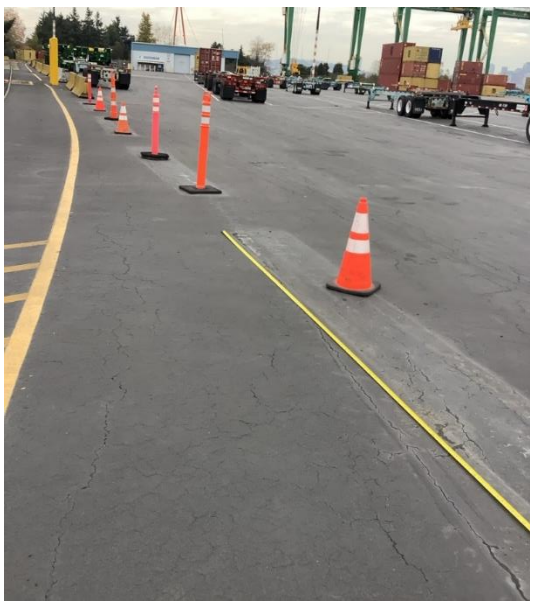
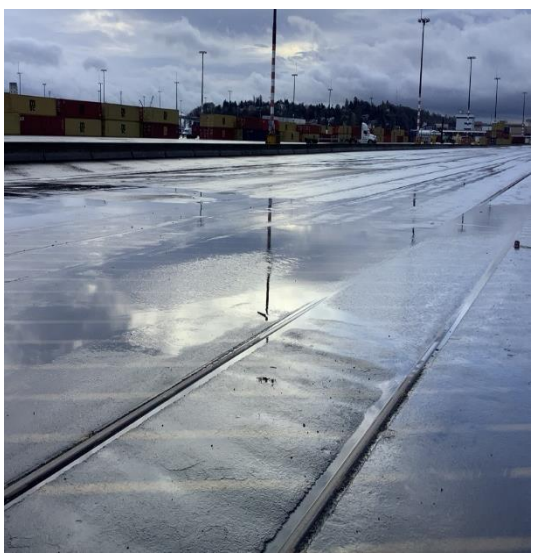
Image	Observation	Recommendation
	Several spidering and linear cracks >0.25” wide. Small holes present in cracks.	Clean and seal cracks, fill and seal holes.
	Light ballast coverage in switch pit.	Replace / restore ballast as needed.
	“Environmental Cap” demarcation present but mostly illegible	Replace the painted “Environmental Cap” label.
	Vegetation in crack next to storm drainage. Settlement <3”.	Remove vegetation, clean and seal crack. Surface patch for area of settlement.

Image	Observation	Recommendation
	Areas of unsealed pavement originally under jersey blocks.	Re-seal areas previously under jersey blocks.
	Alligator cracking around catch basin and debris collecting next to storm drain.	Clean and seal cracks.
	Multiple patched pavement that has not been sealed that extend the length of RA (north – south).	Add seal coat.
	Large area of standing water in tracks <3” deep.	Surface patch.