

OPERATIONS, MAINTENANCE, AND MONITORING PLAN

Parcel 15 (Portac) Cleanup Phase 1

Prepared for: Port of Tacoma

Project No. 210158 • June 10, 2022 FINAL



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Aspect Consulting, LLC



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A handwritten signature in blue ink that reads "Delia Massey".

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1 Introduction

Aspect Consulting, LLC (Aspect) has prepared this Operations, Maintenance, and Monitoring Plan (OMMP) on behalf of the Port of Tacoma (Port) for implementation of the Cleanup Action Plan (CAP; Ecology, 2021) at the Parcel 15 (Portac) property (Site). The Port entered Agreed Order No. DE 15816 (Agreed Order) with the Washington State Department of Ecology (Ecology) on June 23, 2021, to implement the Phase 1 Cleanup activities. This OMMP is required by the Agreed Order for the CAP remedy maintenance activities.

The CAP will be implemented in two phases. The Phase 1 Cleanup constructed elements are stormwater conveyance system improvements and a permeable reactive barrier (PRB). The second phase of cleanup will be implemented concurrent with a future development of the Site under an Agreed Order Amendment or Consent Decree. The second phase of cleanup in the CAP will consist of replacement of the existing roller-compacted concrete (RCC) cap with a low-permeability cap. This OMMP only applies to Phase 1 Cleanup.

The CAP identifies remedy maintenance activities to be defined in an OMMP. The permeable reactive barrier (PRB) is a passive treatment technology and requires no operations and maintenance activities. It does require groundwater monitoring activities outlined in the Compliance Monitoring and Contingency Response Plan (CMCRP; Aspect, 2022).

This OMMP defines the remedy maintenance activities for the existing RCC cap. This OMMP is prepared in accordance with the Washington State Model Toxics Control Act (MTCA) operations and maintenance plan requirements in Washington Administrative Code (WAC) 173-340-400.

1.1 Background

The Site is located at 4215 State Routh (SR) 509 – North Frontage Road in an industrial area between Interstate 5 and Commencement Bay in Tacoma, Washington, and is shown relative to surrounding physical features on Figure 1. The Site consists of two historical use areas: the former sawmill area (Sawmill) in the southwestern portion of the property, and the former log yard area (Log Yard) occupying the majority of the Site. The Site, Sawmill, and Log Yard areas are shown on Figure 2. The Log Yard is currently used by Port tenants for parking and storage of new automobiles before transfer to dealerships.

Slag from the former ASARCO smelter was used as a road base to stabilize surface soils in the Log Yard. Studies showed that metals (e.g., arsenic, copper, lead, and zinc) were leaching from the slag and being discharged into Wapato Creek in surface water and groundwater. The Log Yard was capped in 1988 to prevent runoff of contaminated surface water from flowing into Wapato Creek.

Pursuant to the 1988 Order on Consent, State of Washington Department of Ecology Docket No. DE 88-S326 under RCW 90.48 (Order on Consent), Portac and the Port agreed

to cap the Log Yard to abate metals contamination from surface water runoff discharging to the adjacent Wapato Creek. The primary purpose for capping the Log Yard was to mitigate surface water impacts. The capping was also conducted to prevent stormwater infiltration through the slag/wood waste fill and reduce leaching of metals to groundwater. The Site was capped between late 1988 and early 1989, and inspection and maintenance of the cap have been ongoing under the 1988 Order on Consent, Section VI (4).

The cap was constructed with gravel ballast and two layers of RCC and was graded to route stormwater runoff to catch basins and on to Wapato Creek outfalls. The extent of the cap is approximately 29.4 acres and depicted on Figure 2.

During the summers of 2012 and 2013, the Port conducted cap maintenance based on the recommendations of the 2012 Cap Inspection Report (Conestoga-Rovers, 2012). The cap maintenance included overlaying a section of asphalt and crack sealing. Between 2014 to 2017, maintenance on the stormwater conveyance system was carried out based on recommendations from a 2014 report (Hart Crowser, 2014). These maintenance activities included clearing of vegetation and debris from catch basins and replacement of a catch basin filter socks.

Cap maintenance was also conducted in 2018 based on the 2017 Environmental Cap Inspection Report (Windward, 2017). The cap maintenance included sealing cracks in the cap, filling in low areas of the cap where significant surface water ponding had been observed, and sealing the cap to protect underlying crack repairs. Catch basin maintenance performed in 2018 consisted of vegetation and debris removal to improve surface water drainage (GSI, 2018). During 2019, additional crack repairs were conducted, and 300,000 square feet of cap were sealed to protect underlying repairs (GSI, 2019). Drainage improvements in 2019 consisted of surface grinding of pavement to improve functionality of drainage channels, and installation of two additional catch basins to remove ponded water on the cap.

On the Port's behalf, Aspect conducted the first CAP-required RCC cap inspection on December 17, 2021. Observations from the inspection are identified in Appendix A. The next inspection will include mapping areas of ponded water on the cap using methods discussed below.

2 Roller-Compacted Concrete (RCC) Cap

Remedy maintenance activities for the existing RCC cap consist of biennial (every 2 years) inspections, repairs to address areas of concern, and actions that reduce surface water infiltration through the cap. The biennial inspection will document conditions of the RCC cap. The inspection will involve checking the cap concrete and asphalt surfaces for the presence of cracks or other failures that allow surface water runoff to infiltrate the cap. The inspection will also include visual observations and a photo survey using a drone to identify areas of ponded water to be georeferenced. The visual observations will include measuring depth of ponded water to prioritize cap maintenance activities where the greatest infiltration potential exists.

The inspection will consist of observing and recording cracks greater than 1/8-inch wide, gouges, exposed sub-base material, edge deterioration, excessive vegetation, and general appearance. These observations will be compared with areas of ponded water to compile a list of maintenance locations and recommended actions.

Cap maintenance activities will be conducted to address areas of concern identified in the inspection. Maintenance activities and cleaning will be conducted as follows;

- Sweep Cap: The area where seal coating is planned will be swept free of debris.
- Seal Cracks: The cracks will first be cleaned of debris and moisture by using a heat lance with heated compressed air jetting, or other equivalent techniques. When necessary, the edges of cracks will be grinded off to restore grade and ensure integrity of repair. The cracks will then be filled in with rubberized sealant.
- Seal Cap: After clearing debris, the maintenance area will be sealed to reduce the overall leakage through the cap and to protect the underlying crack repairs. The seal coating consists of two thin layers of asphalt emulsion and sand mechanically applied onto the cap.

Cap maintenance will include the evaluation of ponded water and recommendations to reduce the temporary accumulation of water from surface runoff, even if there are no observations regarding the cap integrity. The cap maintenance will prioritize activities where the greatest infiltration potential occurs.

The cap function requires inspection and maintenance of the stormwater conveyance system, which consists of three catch basins, eight catch basin manholes, one oil/water separator, two stormwater vaults, and two outfalls. The biennial inspection will document the condition of the stormwater conveyance system features. Any deficient structural and functional condition of the stormwater system, and the degree of debris/sediment accumulation in stormwater structures, will be recorded.

Stormwater conveyance maintenance activities will be conducted to address areas of concern identified in the inspection. Maintenance activities will include:

- Drainage Improvements: Surface grinding or filling and leveling of the pavement where appropriate will be completed to improve drainage in areas where there is persistent ponding of surface water. The pavement should match finished grade

and sheetflow to catch basins. Existing drainage channels will be cleaned and additional grinding completed to improve functionality, if needed.

- **Catch Basin Maintenance:** Catch basin maintenance standards in Volume V of the Stormwater Management Manual for Western Washington will be followed (Table V-A.5; Ecology, 2019). Vegetation and debris from around the catch basins will be removed to minimize ponding and improve surface water runoff. Vegetation and debris will be removed from catch basin grates. Where they are deployed, booms will be inspected and replaced if there are signs of damage or reduced functionality. Sediment will be removed from around and within catch basins to improve drainage. Damaged components will be replaced (e.g., catch basin grates, booms, oil/water separator lid).

3 Responsibility

The Port is responsible for conducting all activities in this OMMP required by the CAP. The Port's contractor will conduct biennial cap inspections, and support the Port in scoping and implementing cap maintenance activities.

This inspection and maintenance responsibility for the stormwater conveyance system is required by the Port's Phase 1 Municipal Stormwater permit (MS4). The activities required by the MS4 satisfy all stormwater conveyance system OMMP requirements for the CAP. The Port is responsible for conducting all MS4-required activities.

On the Port's behalf, the selected contractor will conduct the inspection of stormwater conveyance system features required by the OMMP. This inspection scope is redundant with the Port's MS4 responsibility. This dual responsibility ensures functionality and maintenance of the stormwater conveyance system, a critical element of the Site CAP.

4 Schedule and Reporting

The inspection of the existing RCC cap and the stormwater conveyance system will be conducted biennially. The timing of the inspection event will be coordinated with the Port's tenant operations to ensure access to all RCC cap and stormwater conveyance system features. The inspection event will be timed to coincide during periods of precipitation to assess ponded water areas. The inspection and maintenance scope of this OMMP will be conducted until the RCC cap is replaced with a low-permeability cap. The next inspection will occur in 2023.

The biennial inspection of the existing RCC cap and the stormwater conveyance system will be reported to Ecology in a Cap Inspection and Maintenance Technical Memorandum (Tech Memo). The Tech Memo will also identify where maintenance is planned and outline the schedule of maintenance activities. The schedule will be determined by the Port's Project Manager assigned to any improvements triggered by the inspection results.

5 References

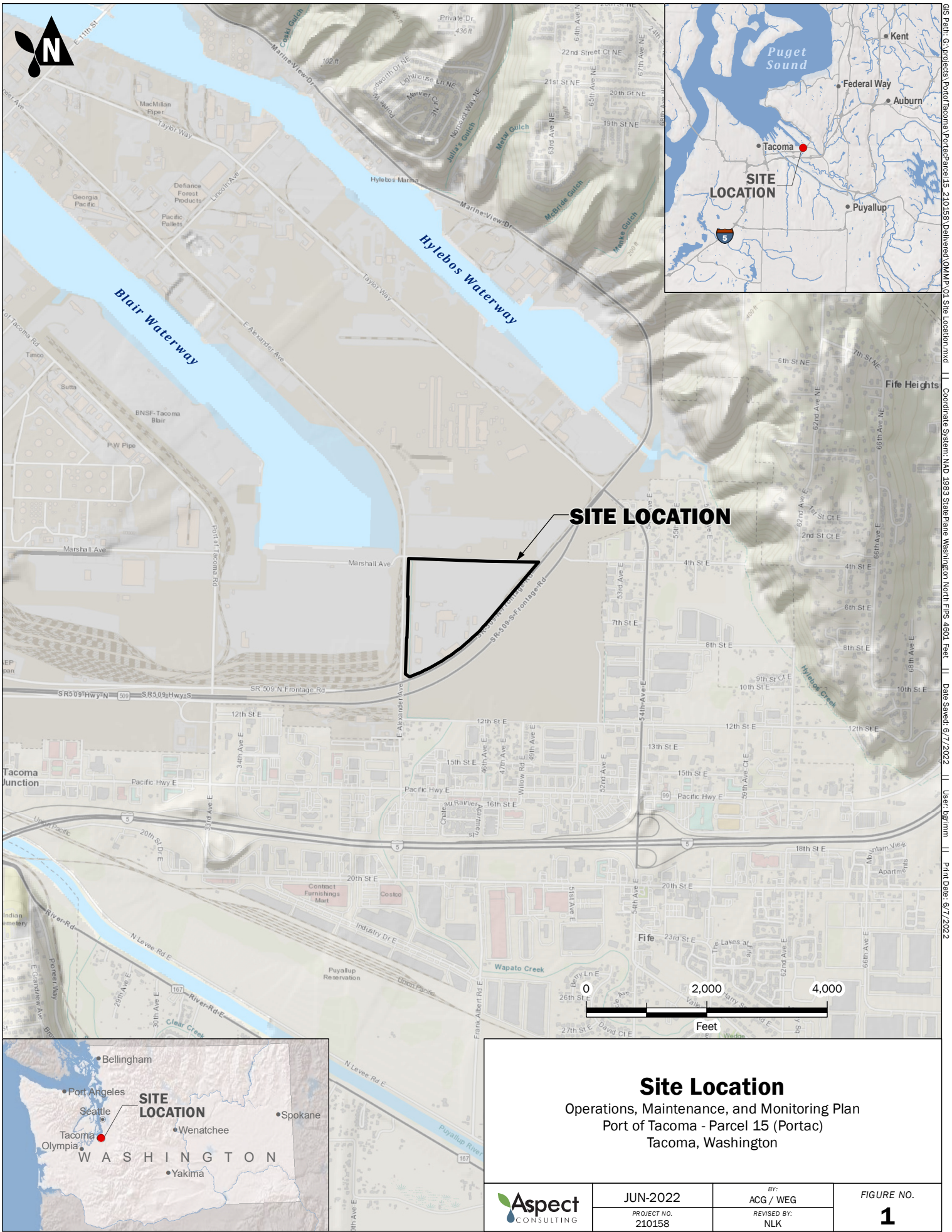
- Aspect Consulting, LLC (Aspect), 2021, Remedial Design Work Plan, Parcel 15 (Portac), Tacoma, Washington, December 9, 2021.
- Aspect Consulting, LLC (Aspect), 2022, Compliance Monitoring and Contingency Response Plan, Parcel 15 (Portac), Tacoma, Washington, June 10, 2022.
- Conestoga-Rovers & Associates (Conestoga-Rovers), 2012. Cap Inspection Report, February 2012, Former Portac facility, Tacoma, WA.
- GSI Water Solutions, Inc. (GSI), 2018. 2018 Parcel 15 Interim Action Cap Maintenance – Summary of Work. Former Portac Facility, Tacoma, WA. Prepared for Port of Tacoma. December 12, 2018.
- GSI Water Solutions, Inc. (GSI), 2019. 2019 Parcel 15 Interim Action Cap Maintenance – Summary of Work. Former Portac Facility, Tacoma, WA. Prepared for Port of Tacoma. November 25, 2019.
- Hart Crowser, 2014. Cap Inspection Report, Former Portac Facility. Hart Crowser, Seattle, WA.
- Washington State Department of Ecology (Ecology), 2019. 2019 Stormwater Management Manual for Western Washington. Publication 19-10-021. July 2019.
- Windward Environmental and Landau Associates (Windward), 2017. Environmental Cap Inspection Report, Former Portac Facility. Prepared for Port of Tacoma. March 30, 2017.

6 Limitations

Work for this project was performed for the Port of Tacoma (Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

FIGURES



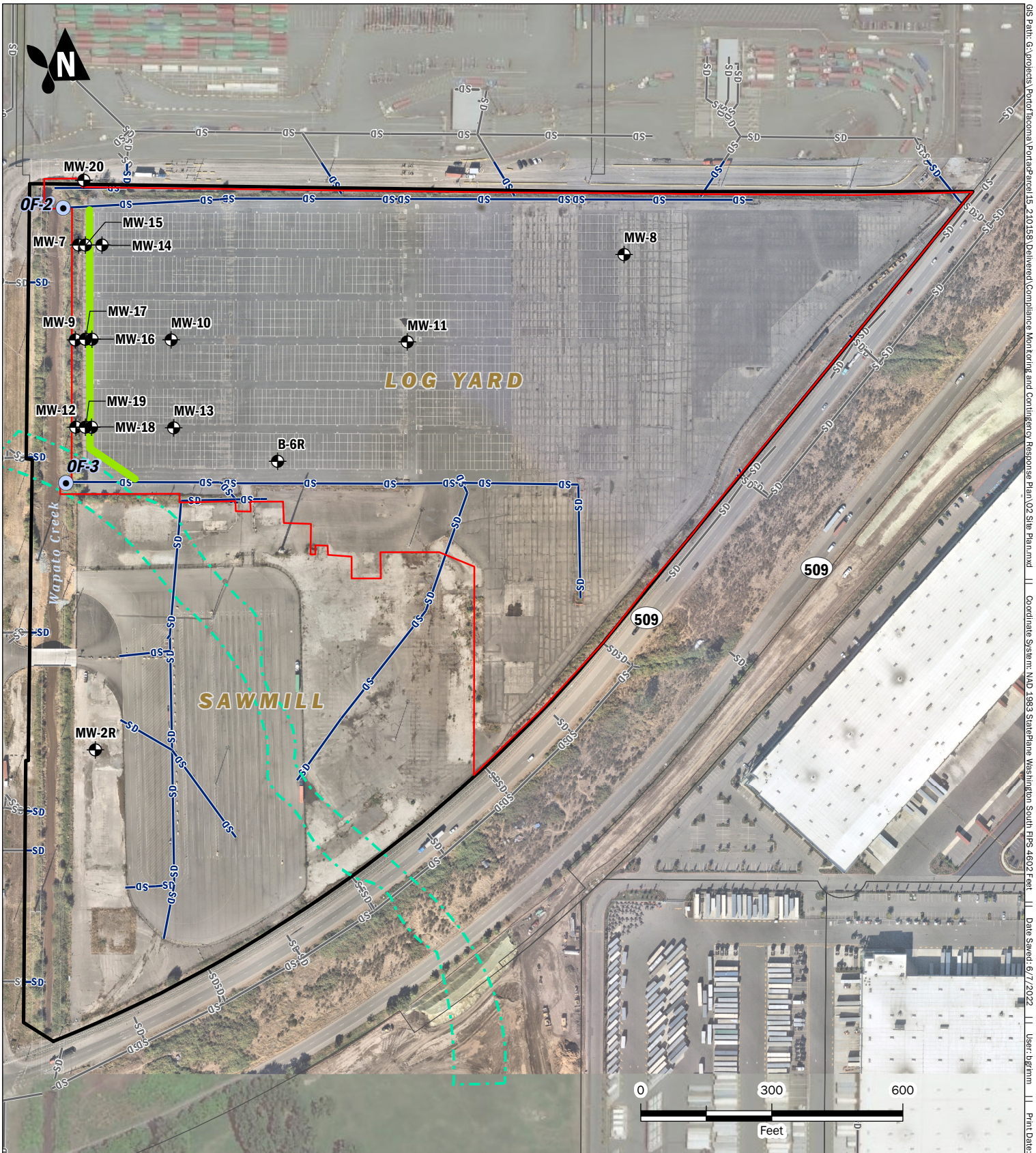
SITE LOCATION

Site Location

Operations, Maintenance, and Monitoring Plan
 Port of Tacoma - Parcel 15 (Portac)
 Tacoma, Washington

	JUN-2022	BY: ACG / WEG	FIGURE NO. 1
	PROJECT NO. 210158	REVISED BY: NLK	

GIS Path: G:\projects\Port Tacoma\PortacParcel15_210158_Delivered_QMMP_OI_Site_Location.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/7/2022 | User: gperim | Print Date: 6/7/2022



GIS Path: G:\projects\Port Tacoma\PortParcel15_210158_Delivered\Compliance\Monitoring and Contingency Response Plan\02 Site Plan.mxd | Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet | Date Saved: 6/7/2022 | User: j.grimm | Print Date: 6/7/2022

	Explorations		PRB Alignment
	Stormwater Outfall		Former Creek Channel
	Storm Pipe		Port Parcel 15
	Cap		

Notes:
 - Tax parcels modified for cartographic purposes.
 - Storm pipes have faded, grey symbology outside area of interest.

Site Plan

Operations, Maintenance, and Monitoring Plan
 Port of Tacoma - Parcel 15 (Portac)
 Tacoma, Washington

JUN-2022 <small>PROJECT NO. 210158</small>	<small>BY:</small> ACG / WEG <small>REVISED BY:</small> DIM / WEG	<small>FIGURE NO.</small> 2
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APPENDIX A

RCC Cap Inspection Technical Memo

MEMORANDUM

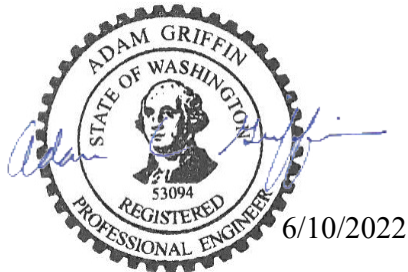
Project No. 210158

June 10, 2022

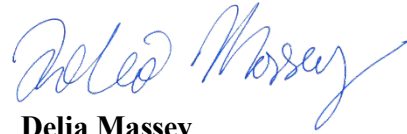
To: Andy Smith, Washington State Department of Ecology

Cc: Norman Gilbert, Stanley Sasser, Rob Healy
Port of Tacoma

From:



Adam Griffin
Associate Engineer
agriffin@aspectconsulting.com



Delia Massey
Project Engineer
dmassey@aspectconsulting.com

Re: RCC Cap Inspection Technical Memorandum (FINAL)

This technical memorandum (Tech Memo) reports the environmental cap inspection conducted by Aspect Consulting (Aspect) on behalf of the Port of Tacoma (Port) for the Parcel 15 (Portac) property (Site). The Site is located at 4215 State Route 509 – North Frontage Road, Tacoma, Washington (Figure 1).

The Port entered Agreed Order No. DE 15816 (Agreed Order) with the Washington State Department of Ecology (Ecology) on June 23, 2021, to implement the Phase 1 Cleanup activities. The Phase 1 Cleanup includes maintenance of the existing roller-compacted concrete (RCC) cap. Cap inspection activities were conducted in accordance with the requirements identified in the Cleanup Action Plan (CAP). The cap was constructed with gravel ballast and two layers of RCC and was graded to route stormwater runoff to catch basins and on to Wapato Creek outfalls. The extent of the cap is approximately 29.4 acres and depicted on Figure 2. The primary purpose for capping the Log Yard was to mitigate surface water impacts. The capping was also conducted to prevent stormwater infiltration through the slag/wood waste fill and reduce leaching of metals to groundwater.

Scope

The purpose of this report is to present the findings of the 2021 inspection of the environmental cap and stormwater conveyance system. The inspection was performed by Aspect on December 17, 2021, and included the following tasks:

- Inspection of the asphalt/concrete pavement for presence of cracks and/or other failures in the pavement that allow surface water runoff to infiltrate the bark/slag surficial fill (e.g.,

cracks greater than 1/8 inch wide, exposed sub-base material, pavement edge deterioration, and general appearance)

- Evaluation of the structural and functional condition of the stormwater conveyance system (including catch basins, manholes, and oil/water separators)
- Evaluation of debris/sediment accumulation in the stormwater structures

Cap Status

Environmental cap

Recommendations for cap maintenance were made in the previous inspection report (Windward, 2017), and the subsequent Cap Maintenance Technical Memorandums (GSI, 2018a; GSI, 2019a), including the repair of all cracks wider than 1/8 inch and gouges in the pavement surface. The most recent cap repairs were made in the summers of 2018 and 2019 (GSI, 2018b; GSI, 2019b). The cap maintenance included sealing cracks in the cap, filling in low areas of the cap where significant surface water ponding had been observed, and sealing the cap to protect underlying crack repairs. During 2019, additional crack repairs were conducted, and 300,000 square feet of cap were sealed to protect underlying repairs (GSI, 2019b). Drainage improvements in 2019 consisted of surface grinding of pavement to improve functionality of drainage channels, and installation of two additional catch basins to remove ponded water on the cap.

Stormwater drainage system

Recommendations in the inspection report included replacing the grate on the oil/water separator in catch basin (CB10) and clearing vegetation from around all catch basins (Windward, 2017; GSI, 2018a). Catch basin maintenance performed in 2018 consisted of vegetation and debris removal to improve surface water drainage (GSI, 2018b).

Field Observations

Aspect completed the inspection on December 17, 2021.

Environmental Cap

At the time of Aspect's inspection, the general appearance of the environmental cap at the Site was good. Completed maintenance of the cap including slurry overlay, caulking, and sealant were observed. However, re-emerging cracks were observed in some of these repaired areas, which are identified in Table 2. Many cracks were narrower than 1/8 inch and therefore do not require immediate repair. Some of the observed cracks, however, were wider than 1/8 inch; these cracks were documented (Figure 2; Table 2). There are gouges in the slurry overlay in two areas identified in Table 2. Three engineered channels (P15, P16, and P17) contained sediment and vegetation that is blocking water from flowing out of areas with ponding.

Moss was observed growing on portions of the caulking used to repair pavement cracks. The edge of the cap was inspected and found to be in good condition. Curbs around the edge of the cap were observed to have been pushed off the edge of the pavement in some places. The condition of the curbs was not observed to be impacting the integrity of the cap or stormwater drainage system.

The cap was inspected for the presence of exposed sub-base material and none was observed.

Table 1 provides a summary of the cap condition observed during the inspection. Table 2 lists the cracks observed on the environmental cap and provides additional details regarding cap condition.

Table 1. Environmental Cap Condition

Required Inspection Elements	Observed Condition	Recommended Actions
Presence of cracks wider than 1/8 inch	Cracks wider than 1/8 inch were observed throughout the cap.	See Figure 2 and Table 2 for the locations of cracks. It is recommended that these cracks are observed at the next inspection, and that channels at P15, P16, and P17 are cleaned out
Sub-base material exposed	No sub-base material was exposed.	None
Pavement edge deterioration	No pavement edge deterioration was observed.	None
Degradation, subsidence, general appearance	No degradation or subsidence was observed.	None

Stormwater Drainage Systems

The stormwater drainage system consists of three catch basins, eight catch basin manholes, one oil/water separator, two spill containment vessels, and two outfalls. Each drainage structure was inspected for structural and functional condition and debris and sediment accumulation. Observations made at each structure are summarized in Table 3.

Recommendations

Environmental Cap

All cracks wider than 1/8 inch and any gouges in the slurry overlay have been identified as specified in Table 2 and shown on Figure 2. Because these cracks are not expected to result in leakage, continued monitoring of the cracks is recommended at the next inspection event. The channels at P15, P16, and P17 should be cleaned out to allow water to flow out of areas with ponding. Pursuant to the Agreed Order with Ecology and the CAP, maintenance activities including regular inspections, periodic crack repair, and resurfacing using a suitable overlay shall be completed.

Stormwater Drainage System

All stormwater structures will continue to be maintained under the Port’s Phase 1 Municipal Stormwater permit (MS4). It is recommended that accumulated sediment and debris be removed from inside and around the catch basins CB10, CB11, CBMH4, CMH6, CBMH7, and CBMH8 before the next inspection (Figure 2; Table 3).

The maintenance identified as necessary in this Tech Memo will be completed after the next inspection scheduled in 2023. The next inspection will include mapping areas of ponded water, and cap maintenance activities will prioritize these areas.

In accordance with the Site OMMP, biennial inspection and maintenance of the existing RCC cap and the stormwater conveyance system will be reported to Ecology in a Cap Inspection and Maintenance Technical Memorandum (Tech Memo).

References

GSI Water Solutions, Inc. (GSI), 2018a. 2018 Parcel 15 Interim Action Cap Maintenance Technical Memorandum. Former Portac Facility, Tacoma, WA. Prepared for Port of Tacoma. August 30, 2018.

GSI Water Solutions, Inc. (GSI), 2018b. 2018 Parcel 15 Interim Action Cap Maintenance – Summary of Work. Former Portac Facility, Tacoma, WA. Prepared for Port of Tacoma. December 12, 2018.

GSI Water Solutions, Inc. (GSI), 2019a. 2018 Parcel 15 Interim Action Cap Maintenance Technical Memorandum. Former Portac Facility, Tacoma, WA. Prepared for Port of Tacoma. May 28, 2019.

GSI Water Solutions, Inc. (GSI), 2019b. 2019 Parcel 15 Interim Action Cap Maintenance – Summary of Work. Former Portac Facility, Tacoma, WA. Prepared for Port of Tacoma. November 25, 2019.

Washington State Department of Ecology (Ecology), 2021, Cleanup Action Plan, Parcel 15 (Portac) – Port of Tacoma, July 6, 2021.

Windward Environmental (Windward), 2017. Environmental Cap Inspection Report. Former Portac Facility, Tacoma, WA. March 30, 2017.

Limitations

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Attachments: Table 1 – Environmental Cap Conditions (in text)
Table 2 – Environmental Cap Field Observations
Table 3 – Stormwater Structure Observations
Figure 1 – Site Location
Figure 2 – Field Observations

TABLES

Table 2. Environmental Cap Field Observations

FINAL

Project No. 210158, Port of Tacoma Parcel 15 (Portac)







Location ID	Observations	Recommended Actions	Photos
P1	crack in slurry overlay; wider than 1/8 in; extends 25 ft. west from recorded coordinates	observe at next inspection	
P2	patch in slurry overlay	none	
P3	crack in slurry overlay; wider than 1/8 in; extends 6 ft. south from recorded coordinates	observe at next inspection	
P4	crack in slurry overlay; wider than 1/8 in; extends 30 ft. south from the recorded coordinates	observe at next inspection	
P5	patch in slurry overlay	none	
P6	gouge in slurry overlay; approximately 36 in. x 6 in.; 2 in. deep	observe at next inspection	

Table 2. Environmental Cap Field Observations

FINAL

Project No. 210158, Port of Tacoma Parcel 15 (Portac)







Location ID	Observations	Recommended Actions	Photos
P7	gouge in slurry overlay; 2 in. circular gouge; intersects 1/8 in. crack in slurry overlay	observe at next inspection	
P8	crack in slurry overlay; wider than 1/8 in.; extends 20 ft. southwest and 10 ft. southeast from the recorded coordinates	observe at next inspection	
P9	crack in slurry overlay; discontinuous; west edge of crack 0.5 - 1 in. higher than east edge; extends from recorded coordinates to north fence line	observe at next inspection	
P10	crack in slurry overlay; wider than 1/8 in.; extends 6 ft. south from the recorded coordinates; with vegetation	observe at next inspection	
P11	patch in slurry overlay	none	
P12	crack in slurry overlay; wider than 1/8 in.; extends 10 ft. north from recorded coordinates	observe at next inspection	

Table 2. Environmental Cap Field Observations

FINAL

Project No. 210158, Port of Tacoma Parcel 15 (Portac)



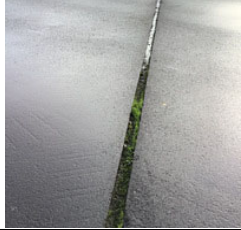




Location ID	Observations	Recommended Actions	Photos
P13	patch in slurry overlay	none	
P14	patches in slurry overlay	none	
P15	channel in slurry overlay; 3 in. wide; extends 30 ft. southeast from recorded coordinates	clear debris and vegetation, observe at next inspection	
P16	channel in slurry overlay; 3 in wide; extends 40 ft. south from recorded coordinates	clear debris and vegetation, observe at next inspection	
P17	channel in slurry overlay; 3 in. wide; extends 30 ft. south from recorded coordinates	clear debris and vegetation, observe at next inspection	
P18	patches in slurry overlay	none	
P19	crack in slurry overlay; wider than 1/8 in.; extends 15 ft. east from the recorded coordinates	observe at next inspection	

Table 2

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RCC Cap Inspection Tech Memo

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Table 3. Stormwater Structure Observations

FINAL

Project No. 210158, Port of Tacoma Parcel 15 (Portac)

Location ID	Type of Structure	Observed Condition	Sediment Accumulation (inches)	Additional Observations	Recommended Actions	Photos
CB9	catch basin	could not locate	nm	none	none	na
CB10	catch basin	functioning normally	less than 1	water level approximately 8 in. from top of structure	remove accumulated debris, continue to maintain catch basin under stormwater permit	
CB11	catch basin	functioning normally	approx. 2	none	remove accumulated debris, continue to maintain catch basin under stormwater permit	
CBMH1	catch basin manhole	functioning normally	nm; none in surface basin	none	continue to maintain structure under stormwater permit	

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Table 3



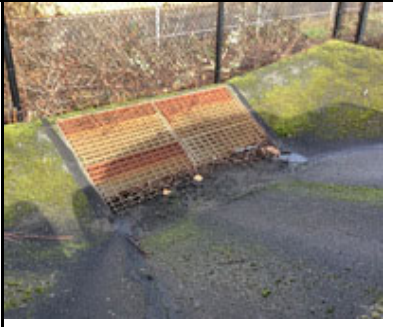
RCC Cap Inspection Tech Memo

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Table 3. Stormwater Structure Observations

FINAL

Project No. 210158, Port of Tacoma Parcel 15 (Portac)

Location ID	Type of Structure	Observed Condition	Sediment Accumulation (inches)	Additional Observations	Recommended Actions	Photos
CBHM2	catch basin manhole	functioning normally	nm, none in surface basin	none	continue to maintain structure under stormwater permit	
CBMH3	catch basin manhole	functioning normally	approx. 3; some debris noted (see additional observations)	organic debris, vegetation, and sediment accumulation in catch basin	remove accumulated sediment and debris; continue to maintain structure under stormwater permit	
CBMH4	catch basin manhole	functioning normally	approx. 2; some debris noted (see additional observations)	organic debris, plastic debris, and sediment accumulation in catch basin; standing water of approximately 1/2 in. depth on south side of basin	remove accumulated sediment and debris; continue to maintain structure under stormwater permit	

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Table 3





RCC Cap Inspection Tech Memo

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Table 3. Stormwater Structure Observations

FINAL

Project No. 210158, Port of Tacoma Parcel 15 (Portac)

Location ID	Type of Structure	Observed Condition	Sediment Accumulation (inches)	Additional Observations	Recommended Actions	Photos
CBMH5	catch basin manhole	functioning normally	nm	minimal sediment accumulation on east side of basin	continue to maintain structure under stormwater permit	
CBMH6	catch basin manhole	functioning normally	approx. 4; some debris noted (see additional observations)	organic debris and sediment accumulation in basin; standing water of approximately 1/2 in. depth on west side of basin	remove accumulated sediment and debris; continue to maintain structure under stormwater permit	
CBMH7	catch basin manhole	functioning normally	none in surface basin	vegetation growing around perimeter of basin	remove vegetation; continue to maintain structure under stormwater permit	
CBMH8	catch basin manhole	functioning normally	none in surface basin; some debris noted (see additional observations)	organic debris in basin; vegetation growing around perimeter of basin; standing water of approximately 1 in. depth on south side of basin	remove accumulated debris and vegetation; continue to maintain structure under stormwater permit	

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Table 3




RCC Cap Inspection Tech Memo

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Table 3. Stormwater Structure Observations

FINAL

Project No. 210158, Port of Tacoma Parcel 15 (Portac)

Location ID	Type of Structure	Observed Condition	Sediment Accumulation (inches)	Additional Observations	Recommended Actions	Photos
OF1	outfall	functioning normally; unable to observe structure due to tide	na	unable to access outfall due to tide	observe structure during next inspection	
OF2	outfall	functioning normally; unable to observe structure due to tide	na	unable to access outfall due to tide	observe structure during next inspection	
OWS	oil/water separator	structurally sound, functioning normally	less than 1	less than 1 in sediment accumulation in center of vault/under lid; no sediment accumulation away from center of vault	continue to maintain structure under stormwater permit	

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Table 3


RCC Cap Inspection Tech Memo

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Table 3. Stormwater Structure Observations

FINAL

Project No. 210158, Port of Tacoma Parcel 15 (Portac)

Location ID	Type of Structure	Observed Condition	Sediment Accumulation (inches)	Additional Observations	Recommended Actions	Photos
SV1	spill containment vessel	appears to be functioning normally	nm (confined space entry required to probe vault bottom)	vegetation growing between manhole and pavement on south side; foam and floatables in east chamber	to be removed during Phase 1 construction, no maintenance required	

Aspect Consulting

6/10/2022

V:\210158 Port of Tacoma Parcel 15 Cleanup Phase 1\Deliverables\OMMP\FINAL\App A\Portac Cap Inspection Tables

Table 3


RCC Cap Inspection Tech Memo

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Table 3. Stormwater Structure Observations

FINAL

Project No. 210158, Port of Tacoma Parcel 15 (Portac)

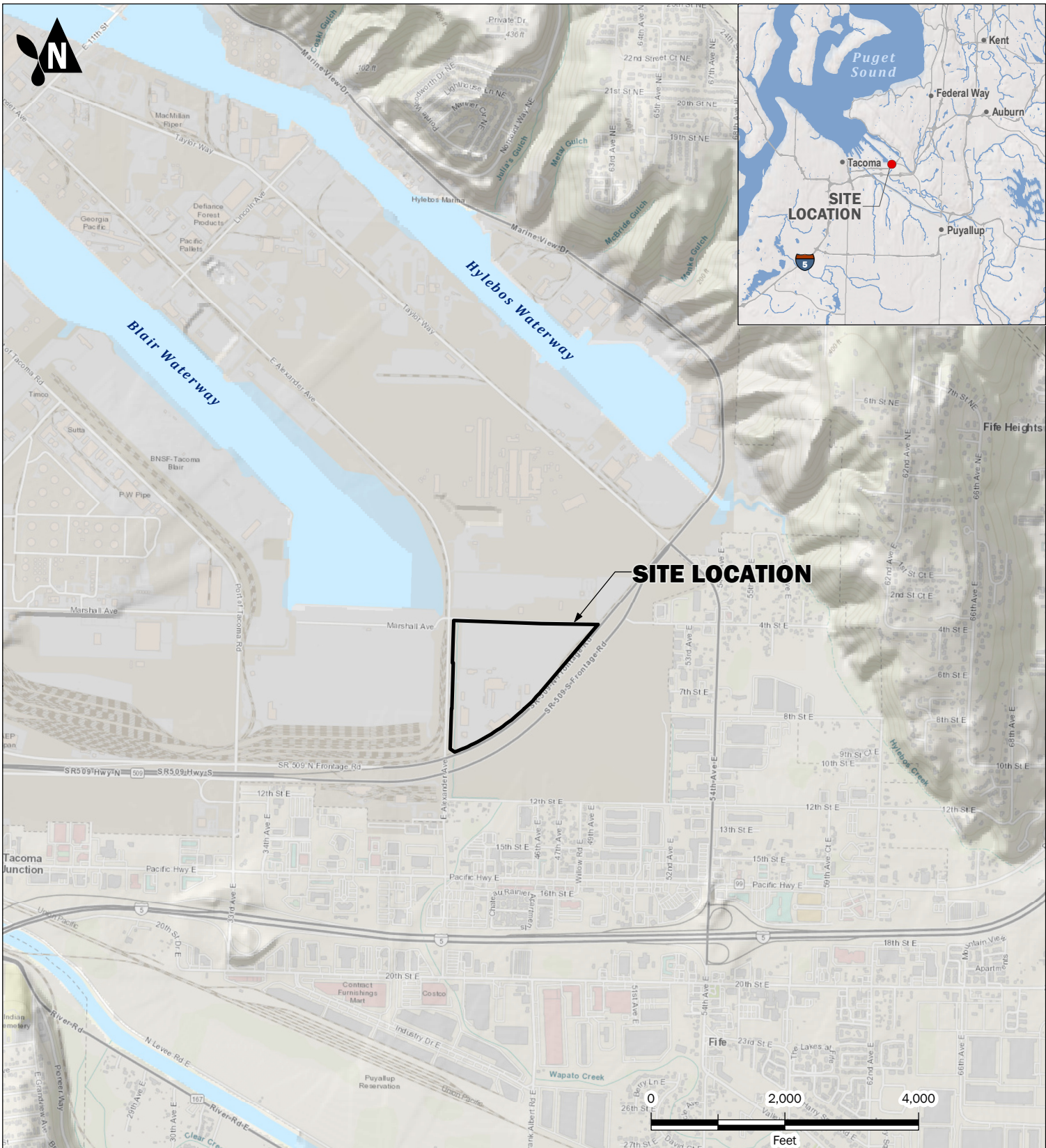
Location ID	Type of Structure	Observed Condition	Sediment Accumulation (inches)	Additional Observations	Recommended Actions	Photos
SV2	spill containment vessel	appears to be functioning normally	nm (confined space entry required to probe vault bottom)	slight foam in west chamber	to be removed during Phase 1 construction, no maintenance required	

Notes:

na - not applicable

nm - not measured

FIGURES



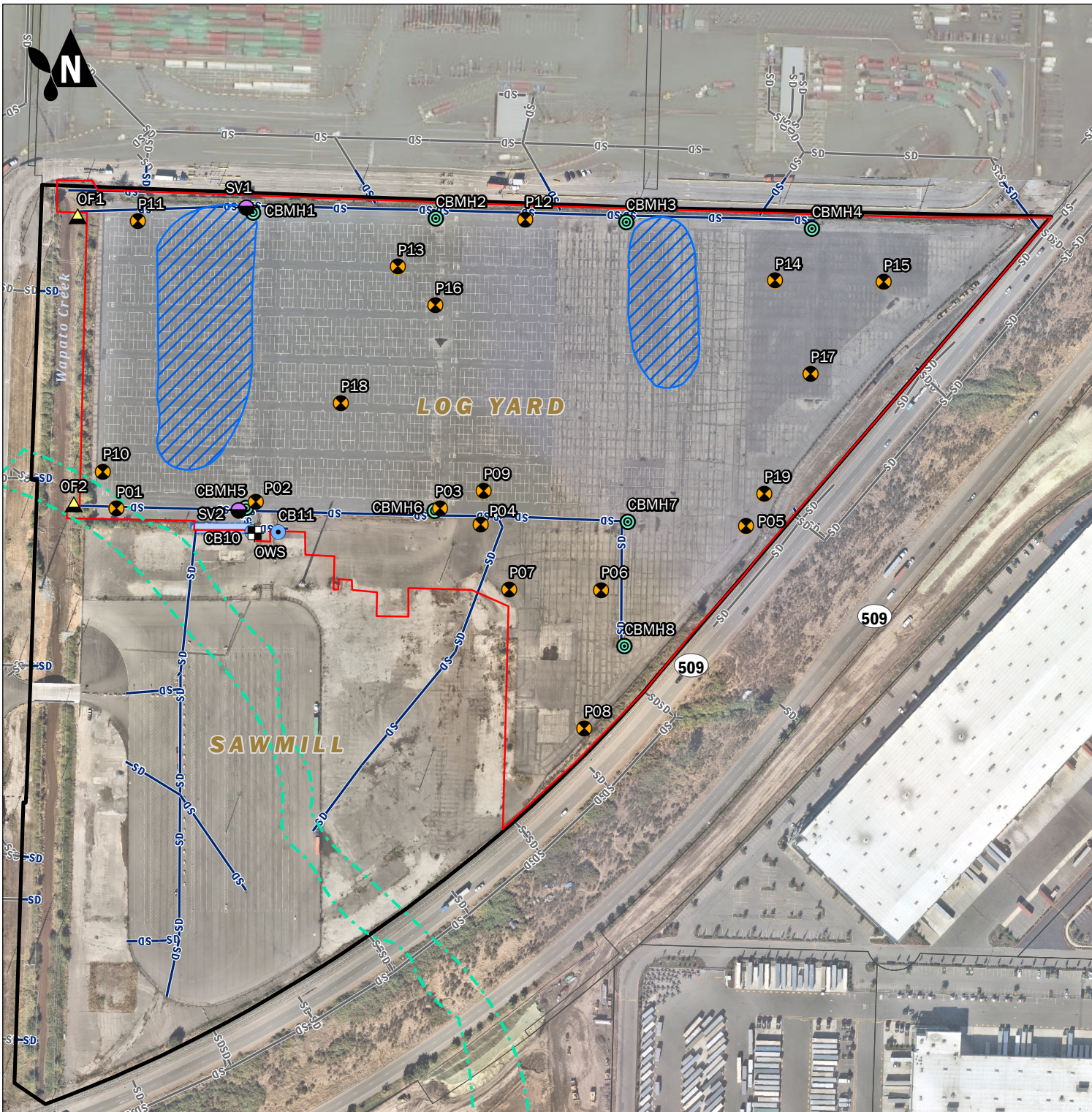
SITE LOCATION



Site Location
 RCC Cap Inspection Tech Memo
 Port of Tacoma - Parcel 15 (Portac)
 Tacoma, Washington

	JUN-2022	BY: ACG / WEG	FIGURE NO. 1
	PROJECT NO. 210158	REVISED BY: NLK	

GIS Path: G:\projects\Port of Tacoma\PortacParcel15_210158_Delivered\RCC Cap Inspection Tech Memo\01 Site Location.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/7/2022 | User: bgdmm | Print Date: 6/7/2022



Cap Inspection Location (Dec 2021)

- Pavement - Field Observation (P)
- Catch Basin (CB)
- Catch Basin Manhole (CBMH)
- Oil/Water Separator (OWS)
- Outfall (OF)
- Spill Containment Vessel (SV)
- Storm Pipe
- Ditch
- Cap
- Former Creek Channel
- Observed Perched Zone
- Port Parcel 15
- Pierce County Tax Parcel

Site Features

- Stormwater Outfall

Notes:
 - Tax parcels modified for cartographic purposes.
 - Storm pipes have faded, grey symbology outside area of interest.

Field Observations
 RCC Cap Inspection Tech Memo
 Port of Tacoma - Parcel 15 (Portac)
 Tacoma, Washington

	JUN-2022	BY: ACG / WEG	FIGURE NO. 2
	PROJECT NO. 210158	REVISED BY: NLK	