Cap Inspection Report

Former Cascade Timber No. 3 Log Sort Yard

Port of Tacoma
Tacoma, Washington

Consent Decree No. 94-2-03590-3
Consent Decree Date: April 11, 1994
Inspection Date: August 28, 2014

Prepared for
Port of Tacoma

December 15, 2014
19000-04

HARTCROWSER

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Prepared by
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Cap Inspection Report

Former Cascade Timber No. 3 Log Sort Yard

Port of Tacoma

Tacoma, Washington

INTRODUCTION

This report summarizes the field activities and presents the results of the cap inspection conducted on behalf of the Port of Tacoma (Port) for the Former Cascade Timber No. 3 Log Sort Yard located on the south-southeastern side of Maxwell Way between Port of Tacoma Road and Thorne Road in Tacoma, Washington (site) (Figure 1).

Cap inspection activities were conducted in accordance with the requirements identified in the Consent Decree (94-2-03590-3), dated April 11, 1994, issued by the Washington State Department of Ecology (Ecology) to the Port. A memorandum of understanding (MOU) between Ecology and the Port, updating the cap inspection frequency to 30 months starting with an inspection in February 2012, was issued on September 12, 2011 (Appendix A).

SITE BACKGROUND

The site, situated southwest of the Blair Waterway in the Tacoma tideflats area, is a 10.73-acre section in the southwest portion of an industrially zoned parcel of land (property). The property was leased to the Cascade Timber Company and operated as a log sort yard from 1978 to 1984. In 1982, approximately 500 tons of slag generated by Asarco Incorporated of Tacoma, Washington, was placed on the southwest portion of the property as ballast material. The property is currently leased by Washington United Terminals and is operated as a storage facility for empty shipping containers/ chassis and as a truck queuing area.

Ecology collected stormwater runoff samples at the site between November 1983 and June 1984 (Norton 1985). Results of the sampling and analysis indicated that metals in excess of the US EPA quality standards were leaving the site via stormwater. On October 8, 1991, Ecology and the Port entered into an Agreed Order to complete a remedial investigation/feasibility study (RI/FS). An RI/FS report was submitted to Ecology in June 1993, and Ecology issued a Consent Decree to complete the remedial action. Construction of a low-permeability asphalt cap and stormwater drainage system was completed in 1994. Monitoring wells were installed to monitor the effectiveness of the remedial action. Routine inspection of the cap is being performed to fulfill the requirements of the Consent Decree.

PREVIOUS CAP REPAIRS

In 2012 and 2013, the Port made repairs to the cap based on the recommendations of the 2012 Cap Inspection Report (CRA 2012), in preparation of leasing the space to a new tenant. Repairs included a

section of asphalt overlay and crack sealing as necessary. Crack sealing involved removing debris from cracks, filling with crack sealant, and covering with asphalt slurry sealant.

CAP INSPECTION

On August 28, 2014, Hart Crowser personnel completed an inspection of the cap and stormwater system. Inspection of the cap included observing the concrete/asphalt pavement and pavement edge for the presence of cracks greater than 1/8 inch wide, exposed sub-base material, and pavement edge deterioration, as well as noting general appearance. Inspection of the stormwater system included inspection of six catch basins, one spill containment vessel, and one oil-water separator for structural condition, general appearance, and accumulation of sediment. Stormwater system features are identified on Figure 2.

General inspection observations are noted below. Specific observations and repair recommendations are included in Tables 1 and 2 and are shown on Figure 2. Photos are included in Appendix B and referenced in Table 1.

Observations include:

- Approximately 3,350 linear feet of cracks greater than 1/8 inch wide were observed along the majority of the northeast-southwest trending asphalt seams of the cap. Cracking and potholes in the asphalt cap were observed near the site entrance.
- Areas of the curb around the pavement edge are broken or deteriorated (Appendix B).
- The sediment trap in Catch Basin #2 has deteriorated.
- Oil-water separator access was not found and is suspected to have been under equipment at the time of inspection.
- The central and northern portions of the asphalt cap were under shipping containers or trailers and were not accessible to inspection.

RECOMMENDATIONS

Based on the results of the cap inspection conducted on August 28, 2014, we recommend the following actions:

- Seal approximately 3,350 linear feet of cracks observed along asphalt seams and repair potholes.
- Repair curb damage around pavement edge.
- Replace sediment trap in Catch Basin #2.

See Tables 1 and 2 for inspection details and corrective actions and Figure 2 for the locations of the noted cap damage. The next cap inspection is scheduled for February 2017 based on the 30-month cap inspection frequency set forth in the MOU.

REFERENCES

CRA 2012. Cap Inspection Report, February 2012, Former Cascade Timber No. 3 Log Sort Yard, Port of Tacoma, Tacoma, Washington. Conestoga-Rovers & Associates (CRA). May 2012.

Ecology 1994. Consent Decree 94-2-03590-3. Washington State Department of Ecology. April 1994.

Ecology 2011. Memorandum of Understanding, Former Log Yard Groundwater Monitoring and Cap Inspection. Washington State Department of Ecology. September 2011.

Norton, D., and A. Johnson, 1985. Completion Report on WQIS Project 1 for the Commencement Bay Nearshore/Tideflats Remedial Investigation: Assessment of Log Sort Yards as Metal Sources to Commencement Bay Waterways, November 1983 to June 1984. Washington State Department of Ecology Memorandum. February 27, 1985.

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Table 1 - Cap Inspection Log - Former Cascade Timber No. 3 Log Sort Yard

Date and Time of Inspection: 8/28/14, 18:00

Weather: Sunny, 75°F

Types of Problems	Checked		Detailed Actions Recommended	Corrective Actions and Date Completed
	No Problems	Corrective Action Required		
Presence of cracks greater than 1/8 inch wide		X	Recommend sealing approx. 3,350 linear feet of cracks observed along majority of northeast-southwest trending asphalt seams and in vicinity of site entrance.	
Sub-base material exposed	X			
Pavement edge deterioration		X	Portions of the curb are broken or deteriorated and need repair (see Appendix B).	
Degradation, subsidence, general appearance		X	Repair recommended for potholes near site entrance.	

Comments:
The central and northern portions of the asphalt cap were covered with conex boxes or trailers and were not accessible for inspection.

Table 2 - Stormwater System Inspection Log - Former Cascade Timber No. 3 Log Sort Yard

Date and Time of Inspection: 8/28/14, 18:00

Weather: Sunny, 75°F

Catch Basin/ Manhole	Structural Condition/General Appearance	Sediment Accumulation in Inches	Checked		Detailed Actions Recommended	Corrective Actions and Date Completed
			No Problems	Action Required		
Catch Basin #2	- Structural condition good. - Sediment trap is deteriorated.	0		X	Recommend replacing sediment trap.	
Catch Basin #3	Good	0	X			
Catch Basin #4	Good	Trace	X			
Catch Basin #5	Good	1	X			
Catch Basin #6	Good	1	X			
Catch Basin #7	Good	1	X			

Table 2 - Stormwater System Inspection Log - Former Cascade Timber No. 3 Log Sort Yard

Date and Time of Inspection: 8/28/14, 18:00

Weather: Sunny, 75°F

Catch Basin/ Manhole	Structural Condition/General Appearance	Sediment Accumulation in Inches	Checked		Detailed Actions Recommended	Corrective Actions and Date Completed
			No Problems	Action Required		
Spill Containment Vessel	- Structural condition good. - Could not remove manhole covers. Conditions observed through grated manhole cover.	0	X			
Oil-Water Separator	**Structural Condition/Presence of Oil (describe)**	**Sediment Accumulation in Inches**	**Checked**		**Detailed Actions Recommended**	**Corrective Actions and Date Completed**
			No Problems	**Action Required**		
Oil-Water Separator #1	Oil-water separator access not located -- Suspected under equipment at time of inspection.	Not measured				

Comments:
The Port will be inspecting the stormwater drainage system and all stormwater facilities in the fourth quarter of 2014, as part of their MS4 permit.

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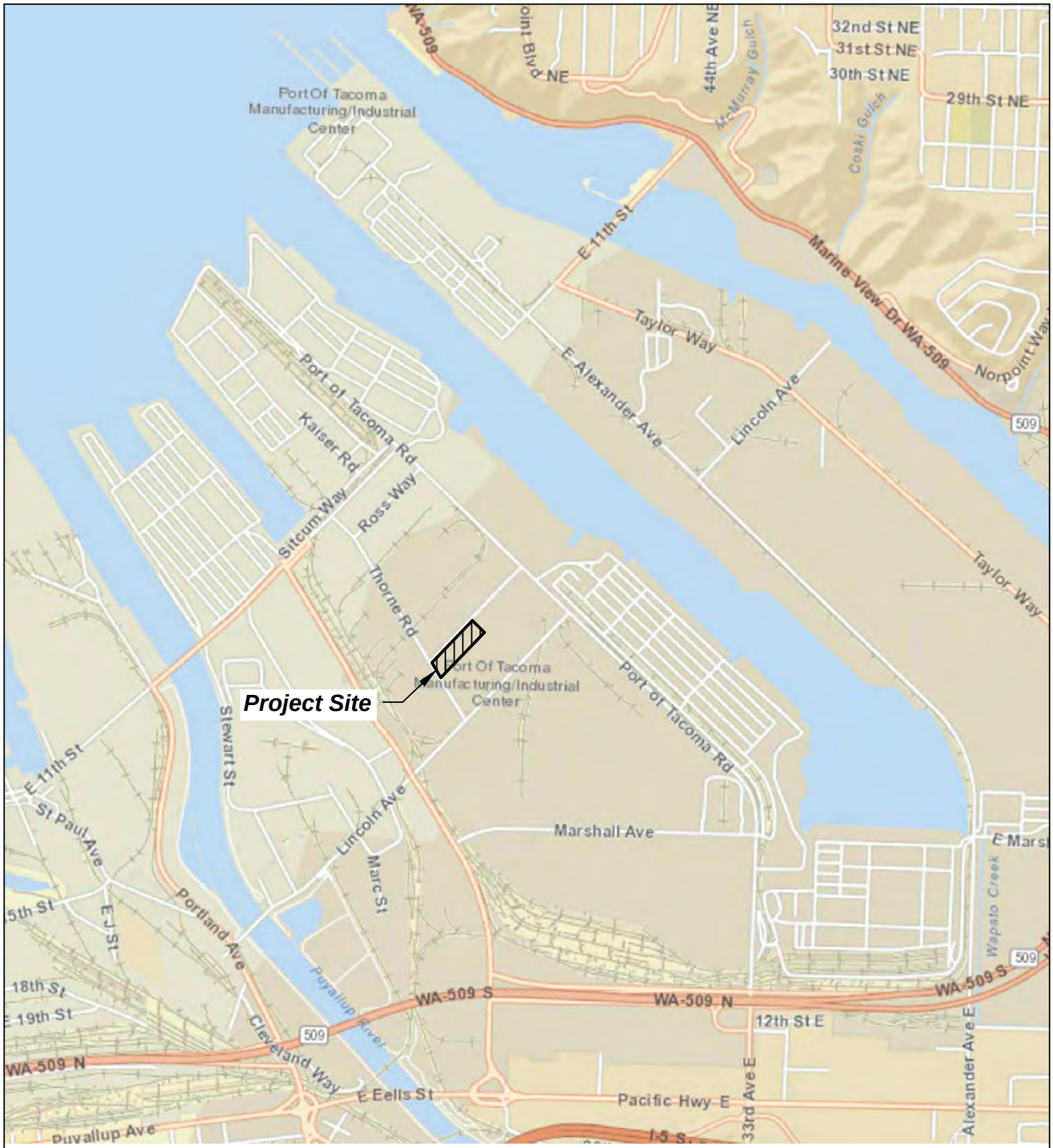

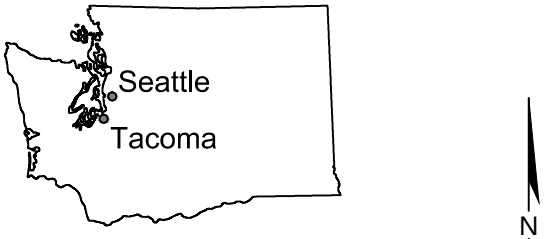

N

0 2000 4000

Scale in Feet

Source: Base map prepared from ArcGIS Online, 2014.

Former Cascade Timber No. 3 Log Sort Yard
Port of Tacoma

Vicinity Map

19000-04 9/14

HARTCROWSER

Figure
1

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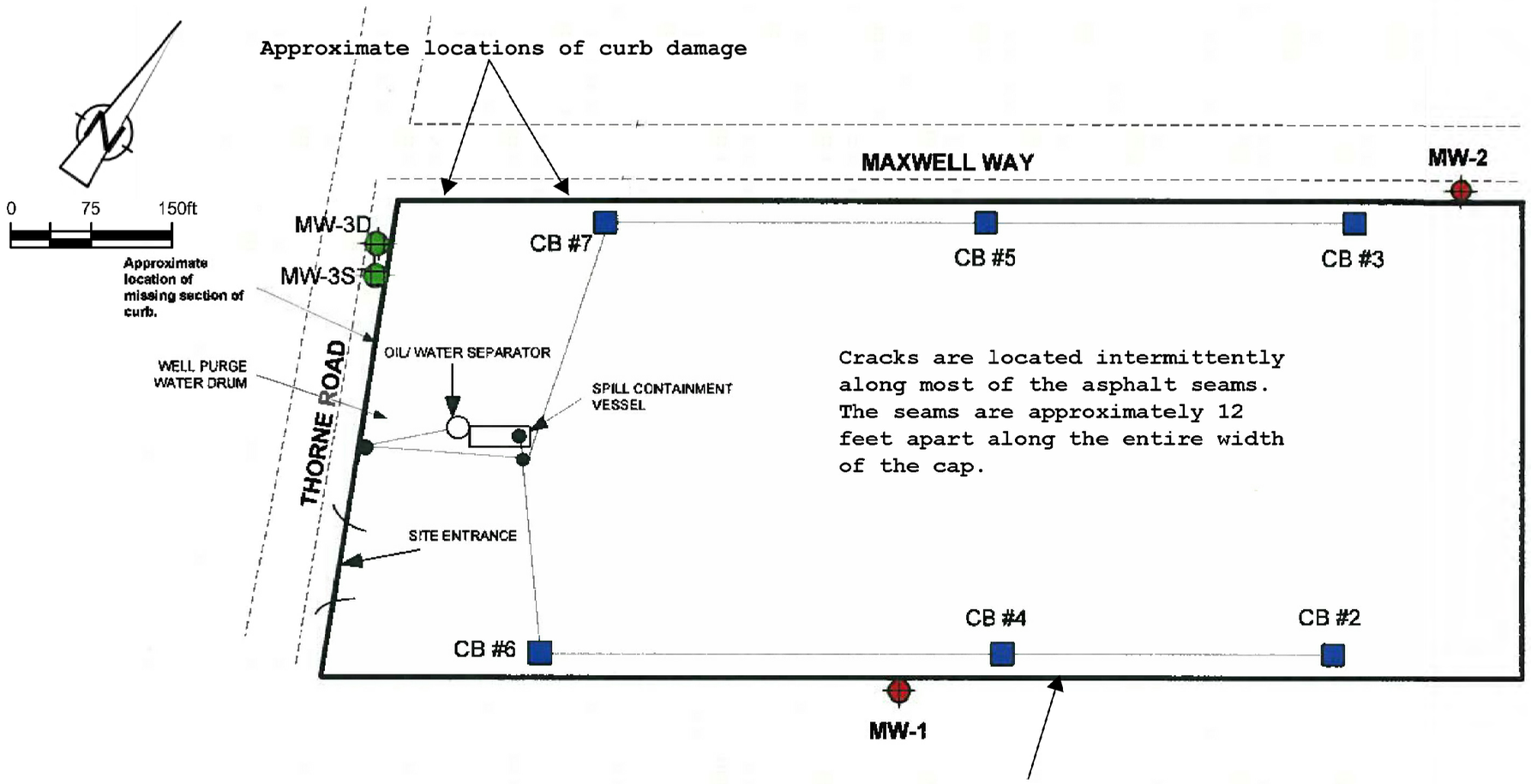

LEGEND

- GROUNDWATER MONITORING WELL (e.g. MW-1)
- CATCH BASIN (e.g. CB# 2)
- MANHOLE
- ABANDONED MONITORING WELL

Source: Kennedy/Jenks Consultants Figure 2.

Former Cascade Timber No. 3 Log Sort Yard Port of Tacoma	
Site Plan	
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HARTCROWSER	Figure **2**

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APPENDIX A
Memorandum of Understanding

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6.4 Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING

Former Log Yard Groundwater Monitoring and
Cap Inspection

This Memorandum of Understanding (MOU) is entered into this 12 day of September 2011 between the Washington State Department of Ecology ("Ecology") and the Port of Tacoma ("Port") (collectively the "Parties") to memorialize the Parties' agreement to modify the requirements for future groundwater monitoring and cap inspection frequencies for five Port sites, as set forth below.

These sites affected by this agreement are Cascade Timber No. 3, Murray Pacific No. 2, Wasser Winters, Portac, and Louisiana-Pacific (aka Pony Lumber) ("Monitored Sites").

Each Monitored Site was cleaned up under an administrative agreement between Ecology and the Port, either as an original party or successor interest, as follows: Cascade Timber No. 3, Murray Pacific No. 2, and Wasser Winters were cleaned up under Consent Decrees, Louisiana-Pacific under an Enforcement Order, and Portac under a pre-Model Toxics Control Act (MTCA) Order On Consent (cumulatively referred to as: "Ecology Orders"). Portac, Inc. was also a respondent to the Portac Order on Consent along with the Port.

Each Monitored Site addressed similar contaminants of concern (COCs), which included arsenic, copper, lead, and zinc. However, each Ecology Order had site-specific requirements with respect to cleanup levels, and cap and groundwater monitoring frequencies.

In Spring 2010, the Port initiated a request to Ecology to standardize the monitoring requirements for the Monitored Sites in an effort to align the timing of the periodic monitoring/ inspections at the sites so that the Port may better align a contractor to do the work all at once, as required.

In August 2010, to supplement the information already provided to Ecology, the Port provided Ecology with a tour of the Monitored Sites. As part of the tour, Ecology inspected the type and condition of the caps; the current site uses, specifically on the capped areas, and the locations and conditions of existing monitoring wells and stormwater basins.

Ecology has reviewed the information provided by the Port, as well as observations made during the site tour, and has chosen to provide a response in the form of this MOU.

This MOU was created for the Parties to understand and agree upon the requirements associated with Ecology's response, and to memorialize the decisions made with respect to each of the Port's requests.

In preparing this MOU, Ecology took into account, for each site, the type and condition of the cap and stormwater collection system, the adequacy of the groundwater monitoring system, and the recent groundwater compliance history.

Based on the above, Ecology and the Port agree as follows:

A. CAP MONITORING FREQUENCY

1. The Port may standardize the cap monitoring (inspection and reporting) frequency for the Monitored Sites to 30 months as requested. However, the following shall also occur:

   - During the site tours, Ecology noted that some of the stormwater basins were in better condition than others. Stormwater basins at each of the Monitored Sites should be inspected quarterly and cleaned out as needed, such that they are continuously operational.

   - Any unanticipated breaches of the cap for any of the Monitored Sites shall be reported to Ecology and repaired as soon as practicable. As per the respective Ecology Orders, the Port shall provide Ecology with a plan for each of the sites that summarizes intended action and reporting by the Port for unanticipated cap breaches.

   - Advance notice shall be provided and prior approval shall be obtained from Ecology for any planned cap breaches and repairs that are not otherwise permitted under the respective Ecology Order for each Monitored Site.

   - Minor cracking and normal wear and tear shall be repaired and reported as anticipated by and according to each Monitored Site's Ecology Order.

   - The appropriate Ecology Site Manager shall be informed, in writing, of any changes in site use on capped areas.

2. The next cap monitoring for the Monitored Sites based on this new 30-month frequency shall be February 2012, which corresponds to the next 30-month groundwater monitoring event for Wasser Winters described below. Unless changed by Ecology, all future cap monitoring for the Monitored Sites shall occur every 30 months beginning February 2012 to coincide with the groundwater monitoring that is intended to target alternating wet and dry seasons.

B. GROUNDWATER MONITORING FREQUENCY

1. The Port may standardize the groundwater monitoring frequency for each of the Monitored Sites as requested, which included the following:

   - Cascade Timber No. 3 – 18 months (formerly 12 months).
   - Murray Pacific No. 2 – 18 months (formerly 6 months).
   - Wasser Winters – No change (currently 30 months).
   - Portac – No change (currently discontinued).
   - Louisiana-Pacific – 30 months (formerly 24 months wet/dry).

2. The next groundwater monitoring for the Monitored Sites shall be conducted in February 2012. Unless changed by Ecology, all future groundwater monitoring for the Monitored Sites shall occur according to the frequency identified above beginning February 2012.

C. EFFECT OF MODIFICATION

1. Except as modified herein, all provisions of the Original Ecology Orders for each Monitored Site as existing and as may have been amended, including addressing any potential data compliance issues, remain in full force and effect.

2. A copy of this MOU shall be filed with the Ecology Project Manager for each of the Monitored Sites.

John Wolfe
Chief Executive Officer
Port of Tacoma

9.1.11
Date

Rebecca S. Lawson, P.E., LHG
Section Manager, Toxics Cleanup Program
Southwest Regional Office
Washington State Department of Ecology

9/12/2011
Date

cc:
Jason Jordan – Port of Tacoma
Mark Rettmann – Port of Tacoma
William Evans – Port of Tacoma
Leslee Connor – Port of Tacoma
Scott Hooton – Port of Tacoma
Dom Reale – Ecology
Marv Coleman – Ecology
Guy Barrett – Ecology
James DeMay – Ecology
Scott Rose – Ecology
Rebecca Lawson – Ecology

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APPENDIX B
Photographs

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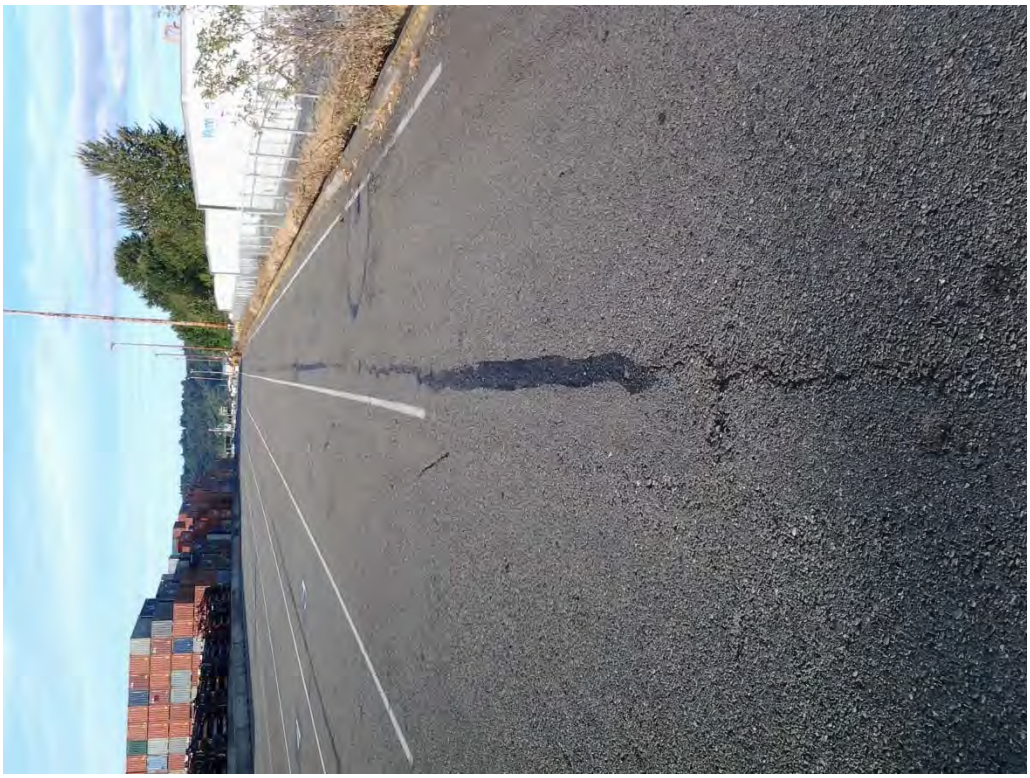

Photograph 1 – Pavement crack and deteriorating seal. (← Up)

Photograph 2 – Exposed pavement sub-base. (← Up)

Photograph 3 – Southern curb damage.

Photograph 4 – Northern curb damage.

Photograph 5 – Northern curb damage.

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