

As-Built Report
2013 Interim Action
3009 Taylor Way Interim Action
Ecology Agreed Order DE 6129
Tacoma, Washington

Submitted By: Port of Tacoma

April 6, 2015

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Attachments

Appendix A – Construction Quality Assurance / Quality Control Plan
Appendix B – Monitoring Wells Resource Protection Reports

The following appendices are only submitted electronically in an attached CD

Appendix C – Stormwater Management Documents (Elect. PDF File only)
Appendix D – Construction Project Manual including Specifications and Drawings
(Elect. PDF File only)
Appendix E – Material Testing Results (Elect. PDF file only)
Appendix F – Landfill Tickets (Elect. PDF file only)
Appendix G – As-Built Documentation provided by Contractor (Electronic files only)

**As-Built Report
2013 Interim Action
3009 Taylor Way Interim Action – Ecology Agreed
Order DE 6129
Tacoma, Washington**

1. INTRODUCTION

This as-built report is submitted by the Port of Tacoma (Port) to document the completion of the interim action conducted during 2013 and 2015 at 3009 Taylor Way (Site), Tacoma, Washington (2013 Interim Action) as required by the State of Washington Department of Ecology (Ecology) Agreed Order No. DE 6129 (Agreed Order). The work was completed in accordance with Revised Interim Action Work Plan Addendum (2013 IAWP Addendum), dated January 10, 2013 (DOF 2013), as approved by Ecology. This report was prepared in accordance with WAC 173-340-400(6) (b) Construction Documentation.

1.1. Background

On June 1, 2007, the Port purchased the former Arkema properties along the Hylebos Waterway known as 2901 Taylor Way and 3009 Taylor Way, Tacoma, Washington (Figure 1-1 Vicinity Map). The Port assumed responsibility for remediation requirements associated with those properties, including 3009 Taylor Way.

The Site was formerly a log sort yard that used ASARCO slag as ballast material. The yard was remediated by Arkema in the early 1990s (ENSR 1993). Part of the remediation included consolidating mixed wood waste and slag materials in a lined and covered containment cell on the property.

In 2008, the Port entered into Agreed Order No. DE 6129 with Ecology. The Agreed Order required the Port to remove the containment cell as an interim action (DOF 2008a, 2008b, 2008c, 2008d), to prepare a post-removal remedial investigation (RI) and feasibility study (FS), and to prepare a draft Cleanup Action Plan (DCAP) for the site.

In December 2008, the Port initiated removal of the containment cell with Ecology's December 1, 2008 approval of the Interim Action work plan. The removal action continued through the winter and into the spring of 2009. The final load of woodwaste/slag, containment cell liner and leachate collection system components was hauled to the LRI landfill on March 13, 2009. A total of 95,121 tons of material was disposed of in the landfill. The containment cell removal is documented in the August 2, 2009 As-Built Report (DOF 2009). The site conditions following the removal of the

containment cell remained largely unchanged up to the start of the 2013 Interim Action (Figures 1-2 and 1-3)

Following removal of the containment cell in 2008/2009, a draft remedial investigation report was prepared for the Site and submitted to Ecology in May 2011 (DOF 2011). Testing indicated the presence of approximately 5,000 cubic yards of soils with remnant arsenic at three isolated locations at the site, representing an additional 5 to 10 percent of material to be removed in addition to the 95,000 tons of material that was excavated and disposed of offsite as part of the 2008/09 interim action.

A second interim action work plan was developed to address the remnant arsenic in Site soil, with the removal to be completed prior to the completion of the final remedial investigation of the site. The scope of the second interim action was set forth in the 2013 IAWP Addendum as follows:

1. Remove target impacted soil
 - a. from defined zones that contain soil with arsenic concentrations that exceed 176 mg/kg (twice the 88 mg/kg criteria for industrial workers),
 - b. from defined shoreline areas that contain soil that exceeds the arsenic SQO of 57 mg/kg, and
2. Stabilize the Hylebos shoreline and the East-West Ditch bank.
3. Place a gravel cover across the site to protect against future disturbance of residual soil with elevated arsenic by reasonably anticipated port industrial activities at the property.
4. Install buried utilities to avoid disturbance of the protective gravel cover when the site is redeveloped for future industrial use
5. Decommission the groundwater monitoring wells on site.

The engineering design services and associated construction documents for the 2013 Interim Action were prepared by DOF and Sitts & Hill, and incorporated into the Port of Tacoma Project Manual titled 3009 Taylor Way MTCA Interim Action – Ecology Agreed Order DE6129, Tacoma, Washington, Master ID 096202, Contract 069534 (Port of Tacoma 2013). The design plans and technical specifications are included as Appendix D.

The 2013 Interim Action project was composed of five distinct stages of work to limit the risk of cross contamination of imported materials with onsite arsenic-impacted soils. The first stage of work involved the removal of arsenic impacted soil from the site with the remaining stages focusing on installing utilities and a protective layer to isolate remnant arsenic to reduce the risk of human exposure during future Port industrial land use. The stages of work are outlined below:

- **STAGE 1 REMEDIATION:** Remedial excavation in three areas of the site, designated as the Northwest Corner, P10, and SB7 areas shown on Figure 1-4. The work involved offsite disposal of arsenic impacted soils at Land Recovery Inc. (LRI), an approved and permitted disposal facility. The work also involved the decommissioning of groundwater monitoring wells on site.
- **STAGE 2 OUTFALL, SHORELINE STABILIZATION AND EAST-WEST DITCH:** Shoreline stabilization along the Hylebos Waterway; maintenance of existing concrete ramp on the Hylebos Waterway; construction of a storm-water conveyance channel parallel to Taylor Way and along the East-West Ditch; stormwater treatment system construction consisting of a biofiltration swale; and installation of an outfall pipe to Hylebos Waterway; installation of utilities within the footprint of the storm water treatment system, as shown on Figure 1-5.
- **STAGE 3 BURIED UTILITIES:** Installation of all buried utilities outside of the Stage 2 area which includes storm drain, fire loop, electrical and communications conduit, sanitary sewer, and water (Figure 1-6). This work was completed during drier periods conducive to earthwork operations.
- **STAGE 4 GRAVEL COVER SUBGRADE:** Preparation of the subgrade (grading and proof-rolling) for the gravel cover. This work was completed during drier periods conducive to earthwork operations.
- **STAGE 5 GRAVEL COVER:** Installation of geotextile/geogrid and gravel cover, fencing and gates, and topsoil and plantings (Figure 1-7).

The Port of Tacoma awarded a contract for the 2013 Interim Action to Anderson Environmental Contracting (AEC) on July 26, 2013, and issued a notice to proceed with mobilization in August of 2013. Following mobilization and submittal of approved work plans, AEC initiated soil excavation activities in early September. The interim action was suspended in October 2013 with the onset of wet winter weather that produced wet site conditions that were not conducive to earthwork activities. The status of the work at the October shutdown is shown on Figure 1-8. The work resumed in June 2014 and was completed in February 2015.

1.2. Organization of As-Built Report

The As-Built Report for the 2013 Interim Action is organized as follows:

- Section 2. Construction QA/QC Approach
- Section 3. Construction Activities
- Section 4. Modifications and Conformance with Specifications

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Section 5. As-Built Drawings
Section 6. Permits
Section 7. QA Certification

2. CONSTRUCTION QA/QC APPROACH

The Construction Quality Assurance / Quality Control Plan (QA/QC) for 3009 Taylor Way (DOF 2013) is included as Appendix A. The Port of Tacoma had the primary responsibility of completion of the project and construction quality assurance. The Port assigned staff members Pedro Reyes, P.E. as the project construction quality assurance officer (CQAO) and Lisa Ross as the primary construction quality assurance (CQA) staff on site most working days. The Port retained the design engineering firms, DOF (primarily Rich May, P.E.) and Sitts & Hill (primarily Rick Hand, P.E.) as part of the CQA staff to provide technical support to the CQAO during the on-site construction activities. The Port also retained Construction Testing Laboratories for construction testing services.

The Port's CQAO was responsible for quality assurance during construction and oversight of CQA staff activities. The CQA staff conducted inspections, independent sampling and testing, and monitoring activities to ensure compliance with the terms and conditions of the contract. Responsibilities of the CQA staff included the following:

- Performing inspections and surveillances of construction activities to ensure that project procedures were being followed and project objectives are being achieved.
- Monitoring the Remedial Action Contractor's quality control activities to ensure conformance with authorized policies, procedures, and sound construction practices.
- Recommending contractor quality control (CQC) procedure improvements, as necessary.
- Conducting weekly meetings with site personnel covering the requirements of the CQC procedures and CQAP, as appropriate to ensure project success.
- Identifying and resolving non-conformances in accordance with the requirements of the CQC procedures and CQAP.
- Monitoring corrective action documentation for conditions adverse to quality, verifying implementation of corrective actions, tracking and analyzing corrective action, and providing closeout corrective action documentation upon completion.

The construction oversight services were documented in daily reports prepared by the Port's CQA staff and are on file with the Port's CQAO. Photographs taken during the project execution are attached and described within the report.

3. CONSTRUCTION ACTIVITIES

The purpose of the project was to remove target soil impacted with arsenic for off-site landfill disposal, and construct utilities and a gravel cover across the site in accordance with the Ecology-approved 2013 IAWP Addendum, and the construction plans and specifications (Appendix D).

The work was initiated in August 2013 and completed in February 2015, which included a winter shut down between October 2013 and June 2014. The final inspection and acceptance of the work by the Port occurred on February 24, 2015. The primary construction activities are summarized below.

3.1. Decommissioning of Monitoring wells.

Prior to contractor mobilization, 26 existing groundwater monitoring wells were decommissioned in the project area in August 2013 and April 2014 (Table 2.1). The wells shown on Figure 3-1 were originally installed for groundwater monitoring purposes and considered Resource Protection wells by Ecology. Decommissioning was performed in accordance with the Washington State Minimum Standards for Construction and Maintenance of Wells (Chapter 173-160-381 WAC) by a licensed driller from Cascade Drilling, LLC. Resource Protection Reports documenting the decommissioning of each monitoring well are attached in Appendix B.

3.2. Pre-Construction Meeting

A pre-construction meeting was held on August 8, 2013, at which time construction practices related to the quality of the completed project were discussed. Prior to construction, the Port's CQA staff reviewed with the Contractor the CQC Plan regarding responsibilities and activities to be performed.

3.3. Mobilization and TESC Measures

Prior to beginning Stage 1 remedial excavations, Temporary Erosion and Sedimentation Controls (TESCs) were established for Stage 1 and 2 work per the design. These TESCs consisted of the installation of a floating silt curtain along the Hylebos Shoreline (Photo P-1a), placement of two construction entrances/exits along Taylor Way, installation of a wheel wash at the east construction exit to Taylor Way (Photo P-1b), and placement of silt fence above the Kaiser Ditch along the eastern edge of the property.

On October 18, 2013 the Port issued a Suspension of Work Order to the contractor and instructed him to proceed with installation of winter erosion control measures to ensure site stabilization as outlined by Port Environmental. These measures are illustrated on Figure 3-2 and include:

- Stage 3 TESC silt fence across the project boundary along the Hylebos Waterway just inboard of the shoreline protection area (Photo P-2a).
- Placement of straw over disturbed soils along the conveyance channel excavation (Photo P-2b) to protect side slopes from rain and rill erosion.
- Installation of a temporary culvert under the West construction entrance of the site along Taylor Way to connect the upstream end of conveyance channel with the rest of the channel. (Photo P-3a).
- Installation of straw wattles at the top of the interior side slope of the conveyance channel (Photo P-2b) to provide top-of-slope protection from potential rill erosion.
- Installation of check dams within the conveyance channel (Photo P-3b) to control flow rates and provide sedimentation control during peak rain events.
- Placement of plastic sheeting and sandbag anchors over all remaining on-site soil stockpiles to protect site from erosion and sedimentation during the wet season.

Photo P-4a is an aerial photograph that shows site conditions prior to the start of construction in July of 2013. By comparison, Photo P-4b was taken in late October of 2013 and shows the completed shoreline slope to the new outfall, and completed remedial excavation areas.

The Port's Certified Erosion Sediment Control Lead (CESCL) (Jenn Stebbings) made multiple inspections during the course of the project to verify that the proper TESC measures were effectively implemented, as described in the project's Stormwater Pollution Prevention Plan (SWPPP), per the requirements of the Construction Stormwater General Permit (CSGP). There were no CSGP violations observed or recorded. Appendix C presents copies of the Stormwater/Erosion Control Inspection Forms and Discharge Monitoring Reports as well as the Notice of Termination for the CSGP.

3.4. Intertidal Work.

Portions of the Stage 1 and Stage 2 work are located along the Hylebos Waterway shoreline and the East-West ditch at elevations below the ordinary high water level of Hylebos Waterway (approximately elevation +12 ft. Mean Lower Low Water (MLLW)). The intertidal zone (shoreline generally below +12 ft. MLLW) is submerged under water during high tides and exposed ground during low tides depending upon the shoreline elevation and the tide elevation. The contractor's intertidal work complied with the U.S. Army Corps of Engineers (USACE) permit and Washington Department of Fish and Wildlife (WDFW) Hydraulic Project Approval (HPA) for the project, and the plans and specifications, in accordance with the following criteria:

- Temporary Erosion and Sediment Control (TESC) were installed per the Construction Documents.
- A silt curtain was installed and maintained outboard of the work area.

- Heavy construction equipment (like excavators, dozers, cranes, dump trucks, etc.) were kept off of the intertidal portion of the site and worked from above elevation +12 ft. MLLW. Positioning of construction equipment below elevation +12 ft. MLLW was allowed only upon approval of a detailed Contractor work plan for such activities, and only when not practical otherwise.
- Work located in the intertidal zone between elevation +2 ft. and +12 ft. MLLW was limited to July 16 through February 14 and only when the tides were out and below the elevation of the work such that the work was completed “in the dry”.
- Work below elevation +2 ft. MLLW (at the outfall spill apron and at the toe of stabilization at concrete ramp) was completed when tides were out and below the elevation of the work area when reasonably possible. When not possible, work below elevation +2 ft. MLLW was completed when the work area was submerged by tides, but only between July 16 and February 14.

3.5. Stage 1 Remedial Excavation

All Stage 1 remedial excavation (Northwest Corner, P10, and SB7 areas – Figure 1-4) was completed during the late summer and early fall of 2013 (Photos P-5a through P-6b). Remedial excavation was conducted in accordance with applicable arsenic rules under the Washington Administrative Code including personal air monitoring of personnel and monitoring at static locations at the perimeter of the excavation (Photo P-5a). All excavated soils from Stage 1 remedial excavation were disposed of at LRI which is permitted to accept impacted soils from the site.

Upon completion of remedial excavation, confirmation topographic surveys were completed by a third-party professional land surveyor (PLS). Supplemental excavation was completed at locations that had not achieved the required excavation elevations. Figures 3-3 and 3-4 show the final elevations of the excavations, completed in accordance with the IAWP Addendum. The areas were backfilled in accordance with the construction documents, with the material meeting the physical and chemical standards set forth in the specifications.

The Stage 1 Remedial Excavation achieved the removal of impacted soil that contained arsenic concentrations that exceed 176 mg/kg (twice the 88 mg/kg criteria for industrial workers), as well as shoreline soil that exceeded the arsenic SQO of 57 mg/kg. Figures 3-5, 3-6 (Northwest Corner), 3-7 (P-10 Area) and 3-8 (SB-7 Area) show the arsenic soil sample locations from the draft Remedial Investigation report (DOF 2011). The sample locations that represent material that was removed by the 2013 Interim Action are identified as “no longer in place”, indicated by white shading of the sample

locations. Sample locations that represent soil that was not removed by the 2013 Interim Action and remain in place under the gravel cover are color coded by the highest measured arsenic concentration in soil at the location (green less than 88 mg/kg arsenic, yellow between 89 and 176 mg/kg arsenic) with that concentration posted next to the sample location.

Trucks were loaded with excavated soil and decontaminated prior to leaving the site. A total of 24,561 tons of material was hauled to the LRI landfill in 798 truckloads (truck and trailer). Of the 24,561 tons hauled to LRI, 5,755 tons were from Stage 1 remedial excavation. The balance of 18,806 tons was designated as Unsuitable Soil Material for subgrade use by the Port. The landfill tickets, compiled in Appendix G, are provided only electronically as PDF files in a CD attached to the report. The landfill tickets are also available at Port's office. A weekly summary of tons delivered to the landfill, taken from LRI scale tickets, is summarized in Table 3.2.

3.6. Stage 2 Outfall, Shoreline Stabilization and East-West Ditch Work

3.6.1. Outfall

Two pilings, which support the offshore end of the stormwater outfall (Photo P-9b), were driven using a vibratory hammer. The scour apron pad was excavated and scour riprap placed offshore of these pilings during early fall 2013, after the Northwest Corner remedial excavation was complete.

3.6.2. Shoreline Stabilization

The Shoreline Stabilization was completed prior to suspension of work for the winter in 2013, with the exception of the first 100 feet at the entrance of the East-West ditch conveyance channel. The conveyance channel portion was completed during the summer of 2014, once the stormwater outfall was in place. Sixteen-ounce nonwoven geotextile fabric was placed within the shoreline stabilization footprint and overlain with filter rock. Shoreline Stabilization Material (12" minus angular rock) was placed over the filter rock to maintain a 2H:1V shoreline slope.

Following confirmation of shoreline protection materials placement, Habitat Mix was installed from approximate elevation +12' MLLW upwards to +15.5' MLLW. Habitat Mix was placed at 4H:1V slope and compacted to approximately match existing shoreline (Photo P-7a). Figure 3-9 presents representative cross sections of as-built shoreline stabilization based on confirmation survey data. All shoreline stabilization work was done in the dry following the requirements of nationwide permits issued by USACE. Prior to import on site, shoreline stabilization materials underwent analytical testing to ensure they met project specifications.

3.6.3. East-West Ditch Work

Excavation for the conveyance channel (Photo P-7b) began during the late summer of 2013, and was halted at the onset of significant rainfall in late September, at which time supplemental erosion control BMPs were installed.

The vegetation layer was removed and loaded into trucks for off-site disposal prior to deeper excavation in East-West Ditch. The excavation was completed to design grade during the summer and fall of 2014, with soils unsuitable for on-site reuse loaded into trucks for off-site disposal at LRI. This was followed by placement of topsoil, hydroseeding, erosion control mat, and planting in October and November 2014 (Photo P-8a). Because some of the planting occurred after the specified October 30 deadline for planting, the vegetation will be monitored and repaired as needed in the spring of 2015. Just up slope from the East-West Ditch, a bio-filtration swale was installed to treat stormwater from the entire site. The swale was installed consistent with the Port's MS4 permit for development and redevelopment and it was designed to handle the types and concentrations of pollutants that are typical of the Port industrial area.

3.6.4. Stage 2 Utilities

The purpose of buried utility installation was to provide basic utility infrastructure in the Stage 2 area to avoid future disturbance of the protective cover when the site is redeveloped for industrial use. The work began in June 2015 and continued through Stage 3 work scheduling.

- Buried utility work was completed in accordance with the plans and specifications including:
 - Water Utility: Horizontal boring of the steel casing to house site water and tie-in with the City of Tacoma's water main on Taylor Way (Photo P-8b).
 - Electrical and Communication Utility: Electrical and communications vaults and conduit which were installed in the vicinity of the conveyance channel.
 - Sanitary Sewer Utility: Sanitary Sewer tie-in to the City's sewer main along Taylor Way. This service was run under the portion of the conveyance channel parallel to Taylor Way.
 - Storm Drain Utility: The storm drain utility included the installation of a 36 inch HDPE outfall pipe with tight control check valve at the discharge end and beehive grate at the intake (Photos P-9a and P-9b). In addition, two oil water separators alongside the conveyance channel and bio swale (Photos P-10a and P-18a).

3.6.5. Maintenance of Concrete Ramp

The purpose of maintenance at the existing concrete ramp on the property (Photo P-10b), while not a part of the Order, was to curtail ongoing erosion along the exterior of the ramp. Excavation to grade and placement of geotextile, armor materials, and habitat mix was conducted during nighttime low tides and significantly completed in the early fall of 2013 and finalized during the summer/fall of 2014.

3.7. Stage 3 Buried Utilities

The purpose of buried utility installation was to complete basic utility infrastructure installations to avoid future disturbance of the protective cover when the site is redeveloped for industrial use. A 4" diameter domestic water pipeline was provided through the center of the site to a designated Port location. An 8" diameter fire loop pipeline and fire hydrant facilities were provided around the project perimeter (Photos P-11a, P-11b and P-20b). A 6" and 8" diameter sanitary sewer pipeline and facilities were provided through the center of the site. Electrical power and communication conduit duct banks and vaults were provided through the site (Photos P-12a and P-12b). Storm drainage pipelines and infrastructure facilities were provided through the site (Photos P-13a, P-13b, and P-19a).

The CQA staff observed the Stage 3 buried utility work and determined the following:

- TESC were installed and maintained per the Construction Documents.
- No Gravel Cover within a 3-5 acre sub-area was initiated until all Stage 3 buried utility work was complete within that sub-area in accordance with contract document requirements.
- Suitable soils that were excavated from utility trench excavations were re-used onsite for fills to subgrade in accordance with contract document requirements.
- Unsuitable soils that were excavated from utility trench excavations were loaded into trucks for offsite disposal in accordance with the specifications including proper cleaning of loaded trucks prior to leaving the site.
- Buried utility work was completed in accordance with the plans and specifications including:
 - Water Utility
 - Electrical and Communication Utility
 - Sanitary Sewer Utility
 - Storm Drain Utility

3.8. Stage 4 Subgrade Preparation

The purpose of the subgrade preparation work was to shape or grade the existing soils prior to installation of the gravel cover or cap installation. The subgrade preparation included import of gravel borrow meeting contract specification for gradation and

chemical testing requirements to achieve the required subgrade elevation and contour requirements prior to installation of the gravel cover surfacing (Photos P-14a and P-14b).

The CQA staff observed the Stage 4 subgrade preparation work and determined the following:

- TESC had been installed and were maintained per the Construction Documents.
- Compaction testing and proof roll testing of the entire subgrade area was completed and passed the Contract Document requirements prior to Gravel Cover placement.
- Gravel Cover was placed within a 3-5 acre sub-area after Stage 4 subgrade preparation work was completed within that sub-area.
- Subgrade was constructed to the extents and elevations required by the plans.
- Subgrade was compacted as required by the Contract Documents.
- Import material was placed as required to construct subgrades to required elevations as required by the Contract Documents.

3.9. Stage 5 Gravel Cover Placement

The purpose of the gravel cover installation is to provide a durable and structural surface to protect against future disturbance of residual soil with elevated arsenic by reasonably anticipated Port industrial activities at the property.

The CQA staff observed the Stage 5 Gravel Cover work and determined the following:

- TESC requirements were installed and maintained per the Construction Documents.
- Gravel Cover work was completed in accordance with the Plan and specification requirements.
- Required Geotextile fabric and Geogrid materials were installed within the gravel cover in accordance with the Plan and specification requirements (Photos P-15a and P-15b).
- Gravel Cover was compacted as required by the Contract Documents and confirmed by compaction testing (Photos P-16a and P-16b).
- Final Stormwater Treatment Facility topsoil and seeding was completed (Photo P-17a).
- Site fencing and gate work was completed (Photo P-17b).
- Site asphalt and concrete pavements were installed in accordance with Contract Documents (Photo P-18b).
- Site asphalt entrances were paved in accordance with Contract Documents.
- Site seeding work was completed and established.
- Temporary Erosion Control measures were removed at the end of the project.

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4. MODIFICATIONS & CONFORMANCE WITH SPECIFICATIONS

The project was completed in accordance with the contract specifications and related modifications described in Table 4-1.

Table 4.1 Conformance with Design Specifications

Specification Section	Modification Required		Description of Modification
	Yes	No	
01 57 13 TESC and SWPPP		X	
02 61 00 Removal Arsenic Impacted Soils for Offsite Disposal		X	
02 61 10 Transport and Disposal of materials	X		Contractor did not provide self-tarping trucks per contract requirements due to availability. Instead had a 40-hr certified laborer cover load with truck's tarp.
03 00 00 Concrete	X		Some of the concrete surfacing pads located at catch basin structure grates were revised to asphalt surfacing pads due to vertical elevation clearance reasons.
31 20 00 Earthwork		X	
31 62 00 Steel Piles		X	
32 12 00 Asphalt Paving	X		Some of the concrete surfacing pads located at catch basin structure grates were revised to asphalt surfacing pads due to vertical elevation clearance reasons.
32 31 00 Chain Link Fences and Gates		X	
32 92 00 Planting		X	
33 05 00 Utility Structures		X	
32 10 00 Water Utility System	X		The fire utility pipeline elevation was raised in elevation to match Tacoma Water source connection elevations.
33 30 00 Sanitary Sewer System		X	
33 40 00 Storm Drain System		X	
33 70 00 Electrical and Communications Utilities		X	

Page not used.

5. AS-BUILT DRAWING

Figure 5-1 is the as-built site plan of the constructed project. The site elevations and associated topographic contours are based on a December 29, 2014 post-construction survey of the site completed by T&C Construction Staking, Inc. under direct contract to Anderson Environmental Contracting, LLC.

The As-Built Drawings prepared by the project contractor, Anderson Environmental Contracting, LLC (AEC) and submitted by the Port of Tacoma are included as Appendix G, only as electronic PDF files in the CD included with the report. In preparing the as-built drawings, AEC took the Contract Drawings prepared by Dalton Olmsted Fuglevand or Sitts & Hill Engineers, Inc. from the Project Manual and added notes to reflect the as-built information that AEC was providing. Many of the sheets in the As-Built Drawing set are marked by AEC with the following note: “Disclaimer: This Drawing Does Not Represent The As-Built Condition” while other sheets are marked by AEC as “As-Built” or as “For Confirmation Survey” The last sheets in the as-built drawing set submitted by AEC are the as-constructed surveys prepared by T&C Construction Staking Inc for AEC.

6. PERMITS

Pursuant to RCW 70.105D.090(1), the Port of Tacoma is exempt from the procedural requirements of Chapters 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 RCW and of any laws requiring or authorizing local governmental permits or approvals. The Port of Tacoma is nevertheless obligated to comply with the substantive requirements of these permits or approvals, and Ecology will regulate compliance with these requirements.

Relevant reviews, permits and approvals obtained for the work are described below.

6.1. SEPA

6.2. Ecology conducted SEPA review of the cleanup actions conducted over the last two years. The Determination of Nonsignificance (DNS) was signed March 15, 2013 by Rebecca Lawson. Shoreline Permit

For this interim action and maintenance of the existing ramp, the Port obtained a Shoreline Substantial Development Permit Exemption and Critical Area Review on December 5, 2012 from the City of Tacoma Ecology approval of the IAQP documented the inclusion of stormwater connection facilities as well as conduit for power and communication as necessary elements of this interim action so that remnant contamination will not be disturbed during redevelopment of this site in the future.

This action was considered consistent with the Shoreline Master Program requirements and Critical Area Preservation Ordinance (CAPO) substantive requirements. The area is zoned Port Maritime Industrial. It has been and will continue to be used for industrial purposes.

6.3. Construction Stormwater General Permit

The 2013 Interim Action was covered under the Port of Tacoma's Construction Stormwater General Permit in accordance with Ecology permit number WAR-126929, included in the Permit section of Project Manual (Appendix C). The permit termination letter from Ecology was received by the Port on January 12, 2015.

6.4. Washington Department of Fish and Wildlife

Because this interim action involved work below +11.8 ft. MLLW, which is not directly related to the cleanup (i.e. the ramp maintenance), a portion of the interim action was

under the requirements of the HPA process regulated by WDFW. The HPA was issued for the project on May 6, 2013, and is included in the Permit section of the Project Manual (Appendix C). HPA 128886-3 closed out with required photos to WDFW on December 3, 2014.

6.5. US Army Corps of Engineers Permits

This action included work in the waters of the US by working below elevation +11.8 ft. MLLW on the Hylebos Waterway. The Department of the Army authorized the work under Nationwide Permit (NWP) 38 Clean-up of Hazardous and Toxic Waste, Nationwide Permit 7 Outfall Structures, and Nationwide Permit 3 Maintenance. The authorization included implementation of Endangered Species Act (ESA) requirements. The permit authorization is included in the Permit section of the Project Manual (Appendix C). A Certificate of Compliance will be filed with USACE at the completion of this report.

6.6. Grading and Fill Permit (City of Tacoma)

The Port complied with the substantive requirements for a City of Tacoma Grading and Fill Permit by preparing a SWPPP and SEPA Checklist.

7. CERTIFICATION

The Port of Tacoma's CQA staff provided daily oversight for the 2013 Interim Action under the supervision of the CQAO, Pedro Reyes, P.E. The Port's Lisa Ross was the primary construction quality assurance (CQA) staff on site most working days. DOF engineer Rich May, P.E., provided near full-time construction oversight for Stage 1 Remediation and Stage 2 Shoreline Stabilization, and made regular site visits, usually weekly, to observe the general progress of the work and to participate in the weekly meetings between the Port and the Contractor. Sitts & Hill engineer Rick Hand, P.E. made regular site visits, usually weekly, to observe and review the progress of the Stage 2 outfall construction and East/West ditch work, as well as the Stages 3, 4, and 5 work for buried utility construction and gravel cover work, and to participate in weekly meetings between the Port and the Contractor.

Certification Statement

To the best of the Port's knowledge, based on testing results, on the CQA staff's regular observations of the work, the Port certifies that the 2013 Interim Action at 3009 Taylor Way has been completed in substantial compliance with the plans and specifications and related documents.

8. REFERENCES

- Dalton, Olmsted & Fuglevand, Inc. DOF 2008a. Work Plan, Removal of Woodwaste/Slag Containment Cell.. 3009 Taylor Way, Tacoma, Washington. March 12, 2008.
- Dalton, Olmsted & Fuglevand, Inc. DOF 2008b. Sampling and Analysis Data Report. Woodwaste/Slag Containment Cell. 3009 Taylor Way, Tacoma, Washington. April 3, 2008.
- Dalton, Olmsted & Fuglevand, Inc. DOF 2008c. Engineering Design Report Addendum – 90% Design. Removal of Woodwaste/Slag Containment Cell. 3009 Taylor Way, Tacoma, Washington. May 26, 2009.
- Dalton, Olmsted & Fuglevand, Inc. DOF 2008d. Drawings, Bid Documents. 3009 Taylor Way. E6505 Arkema Mound Removal. Tacoma, Washington. August 28, 2008.
- Dalton, Olmsted & Fuglevand, Inc. DOF 2009. As-Built Report, Removal of Woodwaste/Slag Containment Cell, 3009 Taylor Way, Tacoma, Washington. August 22, 2009.
- Dalton, Olmsted & Fuglevand, Inc. DOF 2011. Ecology Review Draft, Remedial Investigation, Post Removal of Woodwaste/Slag Containment Cell, 3009 Taylor Way, Tacoma, Washington. May 3, 2011.
- Dalton, Olmsted & Fuglevand, Inc. DOF 2013. Revised Interim Action Work Plan Addendum (90% Design), Agreed Order DE 6129, 3009 Taylor Way, Tacoma, Washington. January 10, 2013.
- ENSR Consulting and Engineering. ENSR 1993. Final Construction Quality Assurance / Quality Control Report, 3009 Taylor Way Site, Tacoma, Washington. April 1993.
- Port of Tacoma. POT 2008. Project Manual. Port of Tacoma Arkema Mound Removal, Tacoma, Washington. Contract No. 068054. Project No. E6505. September 2008.
- Port of Tacoma. POT 2013. Project Manual. 3009 Taylor Way MTCA Interim Action – Ecology Agreed Order DE6129, Tacoma Washington, Master ID 096202, Contract 069534. May 2013.