

Cleanup Action Plan

North Marina Ameron/Hulbert Site



Washington State Department of Ecology Toxics Cleanup Program Olympia, Washington

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LIST OF ABBREVIATIONS AND ACRONYMS

AO	Agreed Order
BGS	below ground surface
CAP	Cleanup Action Plan
COC	Constituent of Concern
сРАН	Carcinogenic Polycyclic Aromatic Hydrocarbons
CSL	Cleanup Screening Level
CUL	Cleanup Level
DGI	Data Gaps Investigation
EA	· ·
	Emergency Action Washington State Department of Faclogy
Ecology EPA	Washington State Department of Ecology
	U.S. Environmental Protection Agency Environmental Site Assessment
ESA	
ft	feet Usebaat David Sciel Use
HBU	Highest Beneficial Use
IHS	Index of Hazardous Substances
LLC	Limited Liability Company
mg/kg	milligram per kilogram
MNR	Monitored Natural Recovery
MTCA	Model Toxics Control Act
ng/kg	nanogram per kilogram
ORP	Oxidation Reduction Potential
PCB	Polychlorinated Biphenyls
PLP	Potentially Liable Party
Port	Port of Everett
PQL	Practical Quantitation Limit
RI/FS	Remedial Investigation/Feasibility Study
RME	Reasonable Maximum Exposure
SMS	Sediment Management Standards
SQS	Sediment Quality Standards
SVOC	Semivolatile Organic Compounds
TBT	Tributyl tin
TEE	Terrestrial Ecological Evaluation
TEQ	Toxicity Equivalency Factor
TPH	Total Petroleum Hydrocarbons
TVS	Total Volatile Solids
μg/L	micrograms per liter
UCL	Upper Confidence Level
U.S.	United States
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compounds
WAC	Washington Administrative Code

1.0 INTRODUCTION

This cleanup action plan (CAP) describes the selected cleanup action for the North Marina Ameron/Hulbert (Site) in Everett, Washington. The Site cleanup action will be conducted under a consent decree between the Potentially Liable Parties (PLPs) [Port of Everett (Port); Ameron International Corporation (Ameron); Oldcastle Precast, Inc. (Oldcastle); William G. Hulbert III, David F. Hulbert, Tanauan Hulbert Martin, the William G. Hulbert, Jr. and Claire Mumford Hulbert Revocable Living Trust, and the William Hulbert Mill Company Limited Partnership (collectively known as "the Hulberts")]; and the Washington State Department of Ecology (Ecology). As specified in Washington Administrative Code (WAC) 173-340-380, this CAP:

- Describes the selected cleanup action
- Summarizes the rationale for choosing the selected alternative
- Briefly summarizes other cleanup action alternatives evaluated in the remedial investigation/feasibility study (RI/FS)
- Identifies Site cleanup standards
- Provides the schedule for implementation of this CAP
- Identifies institutional controls required as part of the cleanup action, if applicable
- Identifies applicable state and federal laws
- Specifies the types, levels, and amounts of hazardous substances remaining onsite, and the measures that will be used to prevent migration and contact with those substances.

Sections of this CAP provide information on Site background (Section 2.0), cleanup standards for the Site (Section 3.0), the selected cleanup action (Section 4.0), other cleanup action alternatives evaluated for the Site (Section 5.0), a schedule for implementation of the CAP (Section 6.0), and references (Section 7.0).

The final RI/FS report (Landau Associates 2014a) was submitted to Ecology on April 30, 2014 after undergoing public review. An additional investigation and two emergency actions (EAs) were conducted at the Site following finalization of the RI/FS report. The results of the additional investigation are presented in Section 2.4.4. The results of the EAs are presented in separate reports (Landau Associates 2014b, Floyd|Snider 2014) and are briefly summarized in Section 2.4.3.

2.0 SITE BACKGROUND

This section provides a description of the Site and its historical uses, describes investigations conducted to characterize environmental conditions, and summarizes interim actions previously implemented for Site cleanup.

2.1 SITE DESCRIPTION AND HISTORY

The Site is located in Everett, Washington within the northern portion of the North Marina Area, and consists of approximately 18 acres of uplands and 12 acres of adjacent in-water area, as shown on Figures 1 and 2. The Site is owned by the Port and is part of a larger area referred to as the North Marina Area (Figure 2), which is planned on being redeveloped into a mixed-use development by the Port. The Site is bounded on the north by commercial/industrial property owned by Norton Industries, on the south by Craftsman Way, on the west by Port Gardner Bay/Snohomish River and the North Marine West End Site, and on the east by West Marine View Drive.

The legal description of the Site is SW ¹/₄ and NW ¹/₄ of Section 18, Township 29 North, Range 5 East, Snohomish County, Washington. As a point of reference, the approximate center of the manufacturing building on the current Ameron leasehold is located at 48°00'9.29" North and 122°12'55.55" West. As shown on Figure 3, the Site is divided into four distinct Investigation Areas (designated areas G, I, J, and M).

Between April 2004 and November 2007, the Site was part of the North Marina Redevelopment site managed under Ecology's Voluntary Cleanup Program (VCP No. 1249). Numerous investigations were conducted at the Site prior to and while under the VCP, as well as interim actions that were conducted by the Port in conjunction with redevelopment of a portion of the Site (see Section 2.4 for more detail) in 1991, 1993, and between October 2005 and October 2007 while under the VCP.

An agreed order (AO) between the PLPs (the Port, Ameron International, and the Hulberts) and Ecology was implemented in June 2009. The AO required the PLPs to develop an Interim Action Cleanup Report, an RI/FS work plan to evaluate the nature and extent of Site contamination, an RI/FS Report, and a CAP.

The rest of this section provides a Site description and history, Site development history, historical operations and Site uses, environmental investigations and cleanup actions, and Site environmental conditions. Historical and/or current Site features are shown on Figures 3 and 4.

2.2 SITE DEVELOPMENT HISTORY

The North Marina Area has been used for a variety of commercial, industrial, and marine-related activities since the late 1800s. From about 1890 until about 1950, timber-product operations dominated waterfront industrial activities. Over that period, the shoreline of Port Gardner Bay was near the current location of West Marine View Drive, with shingle and lumber mills either along the shoreline or located on wharfs to the west of the shoreline. The North Marina Area was filled to its current configuration between about 1947 and 1955, using dredge fill from the Snohomish River to create the current Site uplands by filling the tidelands to the west of the original shoreline. After the additional uplands were created, businesses transitioned from primarily the wood products industry to a broader range of light to heavy industries and commercial enterprises, with a large percentage of them oriented toward marine services operations. Although turnover in businesses has occurred over the intervening years, the area is still dominated by businesses with a marine services orientation.

The Port initiated redevelopment of the North Marina Area in 2000, including entry into a development agreement with a private developer, Maritime Trust [doing business as Everett Maritime Limited Liability Company (LLC)]. Extensive building demolition was conducted at the Site in preparation for the planned redevelopment, resulting in the removal of all Site buildings except for those buildings shown on Figure 4. However, the development agreement was terminated due to nonperformance on the part of Everett Maritime LLC, which went bankrupt in 2010 as a result of the downturn in the real estate market. The Port still plans on redeveloping the North Marina Area, including the Site, into a mixed-use development referred to as Waterfront Place. It is anticipated that the Waterfront Place project will be developed in four phases over the next 10 years. The Site is located in the area to be developed during the first phase of the project, and initial development activities could commence as early as 2015.

2.3 HISTORICAL OPERATIONS AND SITE USES

This section identifies and describes the historical uses for properties and leaseholds located within the Site. The Site usage history is based on the Phase I Environmental Site Assessment (ESA; Landau Associates 2001), a Phase I ESA completed in 1991 by Kleinfelder (Kleinfelder 1991), and a Historical Report completed by Pinnacle Geosciences in 2010 (Pinnacle Geosciences 2010). The Site history including historical uses has been summarized in detail in the 2010 Interim Action Report (Landau Associates 2010a), which can be viewed on Ecology's website using the following web link: https://fortress.wa.gov/ecy/gsp/CleanupSiteDocuments.aspx?csid=3546. The original source documents mentioned above are also available for review on Ecology's website. Note that all documents referenced throughout this report as being available on Ecology's website can be accessed using the web link above.

The Site was first developed as a shingle mill in approximately 1914. The majority of the Site, including the existing mill, was purchased by the William Hulbert Mill Company in 1923. Features/operations associated with the mill included a saw mill, shingle mill, lumber sheds and planing mills, electrical plant, boiler house, blacksmith shop, wood refuse burner, water towers, steam dry kilns, and shipping sheds. Based on review of aerial photographs, bottom ash from the wood refuse burner may have been placed to the south and southwest of the burner, the northern portion of Area J (Pinnacle GeoSciences 2010).

Historical information indicates that the Port has owned the eastern approximately 180 feet (ft) of the Site (eastern portion of Area M and a small portion in the southeastern corner of Area G) and approximately the southern 40 ft of Area I and western 100 ft of Area J since at least 1940 (Pinnacle GeoSciences 2010). The Hulberts sold their portion of the Site to the Port in March of 1991, and the Port has remained the owner of the Site since its purchase in 1991.

The Hulbert Mill operated until the early 1960s, though several of the mill features were destroyed in a fire in 1956. The fire destroyed the lumber docks, lumber sheds, planing mills, and part of the kiln. The mill ceased operations in the early 1960s and remaining mill structures were removed in approximately 1962, with the exception of the wood refuse burner, water tower, and boiler stack, which were removed by 1976 (Pinnacle GeoSciences 2010).

The Hulberts leased various portions of the Site to a number of commercial and industrial entities beginning in the early 1970s until they sold the property to the Port in 1991. A number of parcels within the Site are leased (or have previously been leased) by the Hulberts and/or the Port to various tenants. In addition, portions of the Site are or have been subleased to various tenants. The current and former tenants have utilized the leaseholds for a variety of businesses, primarily related to marine repair; concrete products manufacturing; and other marine, commercial, and light industrial activities. In anticipation of redevelopment, starting in about 2004, the Port began relocating tenants within the North Marina Area, and not renewing leases as lease terms ended. Several businesses located in the southern portion of the Site vacated the premises and the buildings were demolished in 2006. The Ameron leasehold was modified in scope and extends to 2017.

The sections below identify and describe the historical uses within each of the Site investigation areas. More detailed information about specific buildings and facilities is included in the RI/FS report (Landau Associates 2014a).

2.3.1 INVESTIGATION AREA G

Investigation Area G roughly consists of the area used as a concrete pole manufacturing facility since 1973. The pole manufacturing plant was originally developed by Centrecon for the purpose of making

concrete utility poles. The facility began manufacturing decorative concrete utility poles in 1976. Over the period from 1986 to 1994, Centrecon ownership names changed from Centrecon to Utility Vault Company to Oldcastle Precast Company. In late 1988, Ameron purchased the assets of Centrecon from Utility Vault and has continued making decorative poles.

The manufacturing facility includes four buildings and one covered work area on the current leasehold: the manufacturing building, a laboratory/storage building, a pole polishing building, and a pole finishing/dry storage building (Figure 4). Along with the four buildings, there is a covered work area located over the loading and unloading area between the manufacturing building, pole polishing building, and pole finishing/dry storage area. Based on review of available records, the manufacturing building, laboratory/storage building, and pole polishing building were built in approximately 1972. The pole finishing/dry storage building was added in approximately 1985, and the covered area was added in the early 2000s.

2.3.2 INVESTIGATION AREA I

Investigation Area I comprises the property between the 12th Street Channel Waterway (now the 12th Street Yacht Basin) and Investigation Area G to the east, the property line that separates Port property from Norton Industries property to the north, and Investigation Area J to the south. This portion of the Site has been redeveloped as part of the Craftsman District, and currently contains a large building occupied by Bayside Marine at the north end, the Port Marina Operations Center near the center, a concrete esplanade along the shoreline, and asphalt pavement covering on the rest of the area.

The first development, prior to the recent redevelopment, was related to the Hulbert Mill, which operated in this area from approximately 1920 to 1962 before Area I was filled. The mill fire destroyed much of the Hulbert Mill operations in 1956; however, log rafting operations continued in this portion of the property until about 1962. Subsequently, several lessees and operations were present in this area.

Between 1982 and 1990, Jensen Reynolds Construction subleased the majority of Areas I and J and a portion of Area M from Centrecon. Jensen Reynolds was a waterfront construction company and used the property as an administrative base of operations (office building in southwest corner of Area M) as well as a lay-down and fabrication yard for numerous projects (ECI 1987). Previous reports on the Jensen Reynolds lease identified numerous environmental conditions including drums of varying contents and condition scattered throughout the entire leasehold, leaking drums, areas of paint chips and discolored soil, black sand-blasting waste deposited on soil, and demolished building debris.

The Port conducted various operations in Investigation Area I subsequent to purchase of the Site in 1991 and prior to the start of recent redevelopment in 2006. Identified operations consisted of conducting petroleum hydrocarbon treatment (landfarming), the disposal of brush and landscape trimmings in the northeast portion of the area in contemplation of a composting operation (Webber 2010), boat impound storage, and the storage of used creosote-treated piles in the central-eastern portion of the area.

2.3.3 INVESTIGATION AREA J

Most of Investigation Area J was also formerly part of the Jensen Reynolds lease area (see Area I discussion above) until the Port bought the property in 1991 (Hart Crowser 1991). The area includes a former open-sided warehouse and the former MSRC leasehold whose building currently remains. In 1993, a buried concrete structure filled with wood debris, soil, and drums containing oil was discovered during the construction of a drainage swale (Kleinfelder 1993). Investigation and cleanup of the historical structure and surrounding soil are discussed in the Interim Action Report, which can be viewed on Ecology's website (Landau Associates 2010a).

2.3.4 INVESTIGATION AREA M

Investigation Area M borders West Marine View Drive in the eastern portion of the Site. The northern section of Area M is narrow and consists primarily of a long building leased by Ameron for their office operations and partially subleased to various businesses. The southern section of Area M stretches farther to the West and historically consisted of several buildings, including the Hulbert Mill company office, Sandy's Boathouse, Washington Belt and Drive Systems, the Collins building, the Collins warehouses and employee "smoke shack", a warehouse occupied by Nalley Foods, the Port Marina Maintenance Facility, a warehouse occupied by the Port and Veco, Inc., and two office buildings facing 13th street. The number and locations of some buildings have changed over the operational history of this area. With the exception of the former Washington Belt and Drive Systems building in the southeastern corner of Area M, the buildings in the southern portion of Area M have been removed.

The majority of the southern portion of Area M was recently redeveloped into an extension of the Port's Craftsman District, which required an EA in 2011 to address petroleum hydrocarbon contamination present at the location of the former Collins building.

2.3.5 IN-WATER AREA

The 12th Street Yacht Basin is located in the 12th Street Channel, and constitutes the aquatic portion of the Site. The estimated Site boundary prior to conducting the RI/FS extended from the western shoreline of Area I to the point where the channel intersects the Snohomish River, and from the north shoreline of the channel to the estimated north boundary of the North Marina West End site (about 200 ft north of the Channel's south shoreline). The Yacht Basin was heavily used for log rafting and other saw

milling activities until the Hulbert Mill ceased operations in the 1960s. A navigation channel was dredged along the south side of the channel in the early 1970s to provide adequate vessel draft for both Port and Hulbert operations.

The entire Site aquatic area was dredged to about elevation -16 ft mean lower low water (MLLW) in 2005 as part of the Yacht Basin development, and the Yacht Basin floats and upland infrastructure were built between 2005 and 2007. Sediment quality characterization conducted during the RI did not detect hazardous substances in marine surface sediment at concentrations above the sediment cleanup standards. As a result, the Site boundary does not extend into the aquatic area to the west of the Site uplands.

2.3.6 STORMWATER TRUNK LINE

A stormwater trunk line runs along the north Site boundary easterly from an outfall in the northeast corner of the 12th Street Yacht Basin to businesses that front on West Marine View Drive (Figure 5). The original trunk line appears to have been constructed in the mid-1970s in association with the construction of the Centrecon facility and filling of Area I. The trunk line along the north property line of Area G is interpreted to have been installed between 1980 and 1982 during the filling and construction of the property to the north (Pinnacle GeoSciences 2010). Numerous laterals drain into the main trunk line, including laterals from the majority of the Ameron leasehold and the Norton Industries property to the north of the Site [including the TC Systems (ceased operations in May 2010), Dunlap Industrial Hardware, and O&W Glass businesses]. Stormwater conveyance from the northern portion of the Bayside Marine leasehold and the access roadway to the west of the Bayside building was recently added to the trunk line during the development of the Craftsman District. The stormwater system at the TC Systems site was reconfigured in 2011, but still drains to the trunk line.

The stormwater trunk line was constructed of 24-inch-diameter corrugated metal pipe and, historically, failed on two occasions. Replacement of failed sections of the main trunk line was conducted by Ameron in 2005 and the Port in the spring of 2008 (Landau Associates 2010b). Sink holes developed as a result of failure of the trunk line and observations made during subsequent repair of the failed sections indicated that significant corrosion of the trunk line had occurred. In addition, camera surveys in 2008 and 2009 could not be completed because of sediment accumulation in the trunk line.

The poor condition of the trunk line provided a potential conduit for contaminated soil or groundwater from the Site and the adjacent TC Systems site to the north to impact marine surface water or marine sediment. An EA was conducted in 2013 to first clean out the existing trunk line and then construct a new trunk line to replace a portion of the existing trunk line (roughly the portion of the trunk line location north of Area I). The EA is discussed further in Section 2.4.3.

2.4 ENVIRONMENTAL INVESTIGATIONS AND CLEANUP ACTIONS

A number of environmental investigations were conducted at the Site, including the RI/FS and several earlier investigations conducted while the Site was under the VCP. The investigations conducted prior to the RI included a Phase I ESA conducted in 2001 (Landau Associates 2001) and several subsequent investigations including a Phase II ESA conducted in late 2003 and early 2004 (Landau Associates 2004) and a data gaps investigation (DGI) conducted in late 2004 and early 2005 (Landau Associates 2005). The documents referenced above can be viewed on Ecology's website. The RI field activities were conducted between 2010 and 2013 (Landau Associates 2014a). Site investigation activities are discussed in Section 2.4.1.

Three interim actions were conducted at the Site prior to implementation of the RI/FS, and three EAs were conducted during implementation of the RI/FS. The interim actions are discussed in Section 2.4.2 and the EAs are discussed in Section 2.4.3.

2.4.1 INVESTIGATION ACTIVITIES

Over 500 soil samples have been collected throughout the Site and submitted for laboratory analysis. Laboratory analysis of the soil samples included volatile organic compounds (VOCs); semivolatile organic compounds (SVOCs) including carcinogenic polycyclic aromatic hydrocarbons (cPAHs); polychlorinated biphenyls (PCBs); dioxins/furans; pH; total organic carbon (TOC), organotins [e.g., tributyl tin (TBT) ion]; metals; and petroleum hydrocarbons.

Investigation of groundwater quality at the Site has consisted of laboratory analysis of groundwater samples collected from 21 monitoring wells and 33 soil boring locations (temporary well points). In addition, groundwater samples were collected from a concrete settling basin sump and former settling pond associated with the concrete products manufacturing business. Groundwater samples were analyzed for VOCs, SVOCs including cPAHs, PCBs, metals, and petroleum hydrocarbons.

A total of 12 surface sediment samples and 18 composite samples from subsurface (core) samples were collected from marine sediment in the 12th Street Yacht Basin. Sediment samples were selectively tested for metals; VOCs; SVOCs; PCBs; petroleum hydrocarbons, pesticides, herbicides, dioxns/furans, and conventional parameters [grain size, TOC, total volatile solids (TVS), total solids, ammonia, and total sulfides].

As part of the RI, one surface water sample was collected from the 12th Street Yacht Basin. The surface water sample was analyzed for dissolved arsenic and dissolved copper. In addition, solids samples were collected from seven catch basins and selectively analyzed for metals, SVOCs, petroleum hydrocarbons, PCBs, TOC, pH, and dioxins/furans.

2.4.2 INTERIM ACTIONS

Three interim actions were conducted at the Site by the Port. In 1991, the Port conducted an interim action to address petroleum hydrocarbon contamination encountered during decommissioning of three underground storage tanks (USTs) at the south end of Site. In 1993, an interim action was conducted in conjunction with construction of the MSRC facility in the southwest portion of the Site (Figure 6).

The most extensive of the three interim actions was conducted by the Port between 2005 and 2007 in conjunction with the North Marina Redevelopment project to address contaminated soil and groundwater at interim action areas identified based on previous Site characterization activities (Area I subareas I-1 through I-11, G-1, G-1a, J-1 and J-3, and M-1; see Figure 6). The 2005 to 2007 interim action included excavation and offsite disposal of impacted soil and the collection and analysis of compliance monitoring samples to verify that interim action screening levels were achieved. Planned and final interim action areas are shown on Figure 6 and the interim actions (including the 1991 and 1993 interim actions) are summarized in Table 1. As shown in Table 1, about 33,000 tons of contaminated soil, or about 22,000 cubic yards, were removed as part of the interim action. A detailed description of the interim action is provided in the Interim Action Report (Landau Associates 2010a), which can be viewed on Ecology's website.

2.4.3 EMERGENCY CLEANUP ACTIONS

Three EAs were conducted at the Site between 2011 and 2014. An EA was conducted in the area of the former Collins building in 2011 (Figure 6) to address petroleum hydrocarbon contamination in shallow soil in two areas (East Area and West Area) within the Port's Craftsman District boatyard expansion area. Approximately 79 cubic yards of soil were removed from the two areas and transported offsite for treatment and disposal. Details regarding the implementation of the EA are presented in a Construction Documentation technical memorandum (Landau Associates 2011) presented in Appendix A. This EA was completed while the RI was in progress and the results are also reported in the RI/FS Report.

An EA was completed in 2013 to clean out and repair the western portion of the stormwater trunk line along the northern Site boundary. The degraded condition of the trunk line provided a potential conduit for contaminated soil or groundwater from the Site and the adjacent TC Systems site to the north to enter the storm drain and a possibility of impact on marine surface water or marine sediment. The EA was implemented in two phases. The first phase consisted of removing solids accumulated in the existing trunk line. Approximately 13 tons of accumulated sediments were removed from the trunk line between April 15 and May 30, 2013. The second phase consisted of replacing the western portion of the existing trunk line, which was completed in December 2013. The new trunk line was completed parallel to, and north of, the existing trunk line between catch basin CB-111 and eastward to the point where the SD-8 lateral connects to the trunk line. Details regarding the implementation of the EA are presented in a Construction Documentation technical memorandum (Landau Associates 2014b) presented in Appendix B. Replacement of the eastern portion of the trunk line will be completed as part of the final cleanup action for the Site (Section 4.0).

An EA was conducted in the western portion of Area G (Area G-1b and G-3; Figure 6) in early 2014. In 2013, the SD-8/SD-9 storm drain lateral on the Ameron leasehold was found to be partially plugged and required maintenance per an inspection report from Ecology's Water Quality Program. The storm drain was partially located in Cleanup Area G-1b identified in the RI/FS, where impacted surficial soils impeded replacement of the storm drain. The EA was conducted to be consistent with a final cleanup action with the goal of removing all soil with concentrations of metals exceeding the Site cleanup levels (CULs) as well as replacing the damaged storm drain lateral. The EA also included removal of metals-impacted soil from three former concrete settling basins (Area G-3) located on the east side of the Ameron pole polishing building (identified as Cleanup Area G-3 in the RI/FS) and mapping and inspection of the SD-10 lateral pipe to determine the discharge point and condition of the pipe.

The results of the Cleanup Areas G-1b and G-3 EA were reported to Ecology in a technical memorandum (Floyd|Snider 2014). A copy of the memorandum is included in Appendix C and the results are briefly summarized below:

- Approximately 3,178 tons of contaminated or potentially contaminated soil, along with debris from the demolition of the existing storm drain system, were transported offsite for disposal.
- Concrete-like waste material was observed within the western sidewall at the south end of the G-1b excavation, west of the Ameron pole finishing/dry storage building and beneath a row of ecology blocks. A soil confirmation sample (G1B-C2) collected from this area indicated an arsenic concentration greater than the Site cleanup level of 20 milligrams per kilogram (mg/kg). Further excavation could not be completed in this area without destabilizing the ecology block wall.
- Soil confirmation samples were collected from 61 locations within the base and sidewalls of the main G-1b excavation. Arsenic was detected in three samples at concentrations greater than the Site cleanup level of 20 mg/kg. However, statistical analysis indicates that the 95 percent upper confidence level (UCL) for soil remaining in Cleanup Area G-1b is 11 mg/kg which is below the Site cleanup level of 20 mg/kg.
- EA activities in Cleanup Area G-3 included removal of fill material from two of three former concrete settling ponds. Fill material was removed from the middle and eastern vaults and the concrete sides and bases of the ponds were swept. The western pond appears to be filled with pea gravel and concrete rubble and has been covered with a substantial concrete foundation. The material was not removed from the western vault. Although it is likely that any contaminated soil present in the western vault was removed prior to filling with pea

gravel to improve support for the overlying foundation, it was not possible to verify soil quality to the full depth of the pond because of the presence of pea gravel and concrete debris; the two soil samples that were tested from the western pond during the EA were below the Site cleanup levels. As a result, it is assumed that contaminated soil could be present in the western vault and it will be addressed in the same manner as the other, small, isolated cleanup areas, as discussed in Section 4.1.2.

- SD-10 was determined to have previously connected to a portion of the trunk line along the northern Site boundary that had been decommissioned and replaced during the 2013 EA. SD-10 was reconfigured to drain to SD-9 during the G-1b EA.
- In addition to the planned activities, additional tasks were completed during the EA to address conditions encountered during excavation. These activities included removal of a roof drain system, over-excavation of impacted soil in the vicinity of the former SD-8 catch basin, removal of piping associated with a former UST from the north side of lab building, and investigation of sandblast grit observed beneath the lab building.
- The cleanup area was backfilled using imported soil and crushed rock. Imported material was tested prior to placement.

Additional investigation was completed following completion of the G-1b/G-3 EA to further define the extent of sandblast grit beneath the lab building and to collect final confirmation samples from the SD-8 excavation area. The investigation was completed concurrent with a planned investigation to further define the southern boundary of Cleanup Area G-2 and is discussed in more detail in the following section.

2.4.4 POST-RI SUPPLEMENTAL SOIL INVESTIGATION

Additional investigation was completed following the finalization of the RI/FS and G-1b/G-3 EA to further delineate the southern boundary of Cleanup Area G-2 identified in the RI/FS report; confirm that contaminated soil identified in the former SD-8 area during the EA was removed; define the extent of the sandblast grit observed under the Ameron lab building footprint during the EA; and evaluate whether petroleum hydrocarbon contamination is associated with the fuel lines identified on the north side of the Ameron lab building during the EA, which apparently terminate under the building. This investigation was conducted in accordance with the June 4, 2014 Post-RI Supplemental Soil Investigation final work plan approved by Ecology.

Soil analytical results for the Post-RI Supplemental Investigation area are summarized in Table 2 and presented on Figure 7. Final compliance monitoring results are incorporated into Figure 8. The investigation results are summarized by area in the following sections.

Southern Boundary of Cleanup Area G-2

No indications of potential contamination were observed during field screening in any of the eight borings (G-FA-101h to G-FA-101o) completed along the southern boundary of Cleanup Area G-2.

Detected concentrations of arsenic were below the Site CULs in the three eastern samples (G-FA-101i to G-FA-101k) tested along the south edge of Cleanup Area G-2. The westernmost boring (G-FA-101h) had a slight exceedance of the arsenic cleanup level (30.5 mg/kg) at 2.5 to 3.5 ft. A deeper sample was not collected at this location due to lack of recovery. Two soil samples collected from the step-out boring to the south of G-FA-101h (G-FA-101l) were analyzed for arsenic. The detected concentration of arsenic in the sample from 3 to 4 ft was below the CUL and the detected concentration of arsenic in the sample from 5 to 6 ft slightly exceeded the CUL at a concentration of 23 mg/kg. Boring G-FA-101l will be used as the southern limit at the western end of Cleanup Area G-2. As described in the RI/FS, the pavement line north of the manufacturing building is the southern limit of the remainder of Cleanup Area G-2.

Former SD-8 Area

Detected concentrations of metals in the samples collected from two borings (G-FA-116 and-117) completed in the vicinity of the former SD-8 catch basin were all below the Site CULs. One of the locations (G-FA-116) was a bottom sample collected the location of the former SD-8 catch basin, and the other location (G-FA-117) was at the south end of the area that was excavated using the trench box. The two samples collected from the south end of the excavation are representative of sidewall samples for that excavation. These results, in conjunction with the compliance monitoring samples collected during the G-1b EA, confirm that CULs were achieved in the former SD-8 area during the EA.

Lab Building

Five borings were completed in the lab building. One boring (G-FA-118) was advanced in the vicinity of piping associated with a former UST. No indications of petroleum hydrocarbon contamination were observed at this location during field screening. Diesel-range petroleum hydrocarbons were detected at a concentration well below the CUL in the soil sample tested from this location.

Three borings (G-FA-119, G-FA-119a, and G-FA-119b) were advanced in the lab building using a hand auger to evaluate the extent of sandblast grit observed to extend below the lab building during the G-1b EA. Evidence of sandblast grit was not observed at these locations and no samples were collected for laboratory analysis.

An additional boring (G-FA-119c) was completed through a concrete patch in the concrete floor slab, near the northeast corner of the building. Sandblast grit was observed in Boring G-FA-119c and it appears to be contained within a concrete structure that underlies the concrete patch in the floor slab. The blasting sand was encountered just below the concrete floor slab [at 0.4 ft below ground surface (BGS)] and extended to the concrete bottom of the structure (at 1.2 ft BGS). The patched area where the concrete structure is present is about 2.3 ft wide by 7 ft long and the volume of the structure is estimated to be approximately 8 cubic ft (or 0.3 cubic yards). High concentrations of arsenic and lead were detected in the

sample, consistent with previous results for sandblast grit encountered in Cleanup Area G and Cleanup Area M during the RI. The area associated with the sandblast grit was designated Cleanup Area G-4 for the final cleanup action, as discussed in Sections 2.5.1 and 4.1.

2.5 ENVIRONMENTAL CONDITIONS

This section summarizes current Site environmental conditions for affected media based on the results of the RI, on data from the post-RI/FS investigation and data collected during the EAs. The EAs technical memorandums are included as appendices to this document.

Current soil and groundwater analytical data were compared to applicable Model Toxics Control Act (MTCA) criteria for unrestricted site use to evaluate Site environmental conditions in the RI/FS. In general, the Method B approach was used for the evaluation of soil and groundwater. However, Method A CULs were applied to certain constituents for which Method B CULs have not been promulgated (e.g., lead and petroleum hydrocarbons); and for constituents with unique considerations addressed by Ecology in development of the Method A values (e.g., arsenic).

Sediment analytical data were compared to the Sediment Management Standards (SMS; WAC 173-204) Sediment Quality Standards (SQS) and Cleanup Screening Levels (CSL) to support evaluation of the nature and extent of contamination. The two SMS criteria are promulgated by Ecology as follows:

- The marine SQS (WAC 173-204-320), the concentration below which effects to biological resources and human health are unlikely
- The marine CSL (WAC 173-204-520), the concentration above which more than minor adverse biological effects may be expected.

2.5.1 SOIL QUALITY

The evaluation of the nature and extent of Site soil contamination is based on soil samples collected from the Site that are representative of soil that remains at the Site following completion of the previously described interim actions and EAs. The locations for samples representing soil remaining onsite are shown on Figure 8. Due to the interim actions conducted at the Site prior to implementation of the Agreed Order as well as the EAs completed between 2011 and 2014 (discussed in Section 2.4.3), the extent of soil contamination at the Site is limited. Soil contamination remaining at the Site is described in the following sections.

Northern Site Boundary – Cleanup Area G-2

Arsenic is present at concentrations greater than the CUL in samples collected from different zones within the fill along the northern parcel line. The area of impacted fill material generally extends south to the location of the pavement section placed along the north side of the manufacturing building in approximately 1976. Soil borings advanced in this area encountered mixed fill, including white and colored silt-like material with a concrete-like odor, organics and wood debris, concrete chunks, occasional voids, and other fill material. The maximum detected concentration of arsenic in this area was 109 mg/kg. Soil samples consisting of soft, white or green, silt-like material also exhibited elevated pH (11.9 to 12.4), which appears to be concrete slurry waste material. Organic compounds [including PCBs, total petroleum hydrocarbons (TPH), and cPAHs] were not detected at concentrations greater than the CULs in soil samples collected from this portion of the Site, with the exception of gasoline-range petroleum hydrocarbons at one location.

Lab Building – Area G-4

A small amount of sandblast grit is present beneath the northeast portion of the lab building and was identified as cleanup area G-4 during the Post-RI supplemental soil sampling investigation. The material was discovered during the excavation activities in Cleanup Area G-1b (see Section 2.4.3) and further investigated during the Post-RI Cleanup Area G-2 soil investigation (see Section 2.4.4). The sandblast grit exhibits elevated concentrations of heavy metals (arsenic and lead) and appears to be contained within a below-grade concrete structure.

Northern Site Boundary – Area I-5

Area I was subject to an interim cleanup action that was completed in 2006/2007. At the location of Interim Action Area I-5, arsenic is present in soil remaining at concentrations exceeding the CUL at three locations, and copper and lead are present at concentrations greater than the CUL at one location along the northern Site boundary. The Interim Action Area I-5 excavation was limited to the north by the fence separating Port and Norton Industries property. Arsenic was detected at these fenceline locations at concentrations ranging from 130 mg/kg to 1,730 mg/kg, and copper and lead were detected at concentrations of 3,070 mg/kg and 2,270 mg/kg, respectively. The extent of contamination was bounded to the north during the RI and to the south, east, and west by compliance monitoring samples collected following interim actions completed in Investigation Area I.

Crushed Rock Fill Under Esplanade – Area I-12

Crushed rock base course material imported as subgrade support in 2006 for the esplanade at the head of the 12th Street channel (western edge of Area I) was determined to contain arsenic exceeding the CUL at concentrations ranging from 29 mg/kg to 126 mg/kg. Accessible portions of the base course material were removed; however, about the western 20 ft of the affected base course material was already covered by the concrete esplanade constructed for public access along the shoreline and, as a result, the

affected base course beneath the esplanade was left in place and is contained by this structure. The affected material extends to approximately 1 ft below the concrete.

Eastern Boundary of Area J – Area J-3a

Interim action was conducted at Area J-3 during the North Marina Redevelopment interim action conducted in 2006. The purpose of the interim action was to remove metals (arsenic, lead, and antimony) and cPAH-contaminated soil, and buried construction debris encountered within the upper 6 ft to provide a clean soil unit for the installation of utilities constructed during the Craftsman District development. Explorations in Area J-3 indicate that the affected material remaining following the interim action is similar in appearance to the material removed. Consequently, although many of the characterization and compliance monitoring samples in Area J-3 were collected from the 0- to 6-ft depth interval excavated during the 2006 interim action, the remaining Area J-3 soil is anticipated to be similar in soil quality to that removed with sporadic exceedances for arsenic and cPAHs.

In addition, approximately 470 cubic yards of arsenic-affected crushed rock was removed from the area of the esplanade along the shoreline in Area I and was placed in the eastern portion of Area J-3, at a depth of approximately 6 ft BGS.

Area J-3 was expanded to the north to include a small area to the west of the Area G-1b EA that could not be addressed during the EA because it extended beneath ecology blocks along the Area J/Area G fence line. Revised Area J-3 was designated Cleanup Area J-3a to avoid any confusion with the original Area J-3.

Shallow soil in Area M

Shallow soil (0 to 1 ft below the base course or approximately 0 to 2 ft BGS as indicated below) contains detections of arsenic at concentrations greater than the CUL (33 mg/kg to 76 mg/kg) in three areas: the northern portion of Area M in the Dunlap paved storage yard to the north of the Ameron sublease building along West Marine View Drive (Area M-5), east of the Ameron sublease building in the paved access road/parking area (Area M-3), and near the southeastern corner of the former Collins building (Area M-2). With the exception of soil to the east of the Ameron sublease building, exceedances for arsenic in shallow soil in Area M appear to be isolated occurrences.

Another isolated exceedance of the arsenic CUL occurred near the southeast corner of the former Collins building. At this location, arsenic was detected in one shallow soil sample at a concentration greater than the CUL (35 mg/kg). Based on a statistical evaluation of arsenic in the southern half of Area M, excluding Area M-2 because it contained black sand blast grit and has be designated a cleanup area (see Figure 8 and discussion on Area M-2 below), arsenic concentrations remaining in soil within

this area comply with the CUL for arsenic. Details of the statistical evaluation are in Section 7.1.1.7 of the Final RI/FS report which is located on Ecology's website.

Lead is present at a concentration greater than the CUL in shallow soil (0 to 1 ft below the base course, or 1 to 2 ft BGS) at one location in the southeastern portion of Area M (directly east of Area M-2). No evidence of contamination was observed at this location during field screening. All metals CUL exceedances occurred in general fill, and no exceedances were detected in samples collected from hydraulic fill with the exception of one location beneath the former Collins building where hydraulic fill was present at the ground surface. Based on a statistical evaluation, lead concentrations remaining in soil in the southern portion of Area M, excluding Area M-2 because it contained black sand blast grit and has been designated a cleanup area (see Figure 8 and discussion on Area M-2 below), comply with the CUL for lead. Details of the statistical evaluation are in Section 7.1.1.7 of the Final RI/FS report, which is located on Ecology's website.

cPAHs are present in soil remaining at concentrations exceeding the CUL at one location (M1-S1) along the northern sidewall of Interim Action Area M-1a. The detected concentration of cPAHs at this location is 1 mg/kg. The extent of contamination was bounded in all directions by previous investigations and this exceedance appears to be an isolated occurrence.

Petroleum hydrocarbons [by U.S. Environmental Protection Agency (EPA) Method 418.1] were detected at a concentration greater than the CUL in one surface soil sample (ECI-B-1) collected in 1992 from along the west side of the Ameron sublease building (Area M-4). ECI (1992) describes the area of affected soil as limited to "a strip two inches wide and about three feet long". This area has since been developed by Ameron into paved holding bins for concrete slurry waste. RI boring G-FA-113 was advanced as close as practicable to the west and downgradient of ECI-B-1. Evidence of petroleum hydrocarbons was not observed during field screening and petroleum hydrocarbons were not detected in the groundwater sample from this location at concentrations greater than the laboratory reporting limit. This area appears to be very limited in extent based on sampling data and observations made by ECI at the time of the 1992 sampling, as well as the soil and groundwater data collected down gradient during this RI.

Based on the limited vertical extent of contamination, CUL exceedances in shallow soil in Area M may likely be attributable to limited releases associated with activities that occurred prior to Site paving, or possibly to impacted fill material placed for trafficking surfaces.

South of the Former Collins Building (Area M-2)

Heavy metals (arsenic and lead) and cPAHs were detected at concentrations greater than the CULs at four locations south of the former Collins building and potentially extending under a newly

constructed roadway. Butyl benzyl phthalate was also detected above its CUL at location M-FA-102. Blue-black sand (apparent sandblast media) and brick fragments were observed in this area at depths ranging from approximately 6 to 8.5 ft BGS. Hydraulic fill was observed at a depth ranging from approximately of 8.5 to 10.5 ft BGS. Chemical constituents were not detected at concentrations greater than the CULs in the hydraulic fill.

2.5.2 GROUNDWATER QUALITY

The evaluation of the nature and extent of Site groundwater contamination is based on postinterim action (RI) groundwater monitoring at 10 monitoring well locations, 18 soil boring locations (temporary well points), and one groundwater sump. The sampling locations are shown on Figure 9. Dissolved arsenic; dissolved copper; dissolved lead; dissolved mercury; diesel- and oil-range petroleum hydrocarbons; 1,1-dechloroethene (1,1-DCE); and bis 2-Ethylhexyl phthalate (BEHP) were detected in one or more groundwater samples at a concentration greater than the CULs during the RI. Analytical results for dissolved mercury and dissolved lead from the first round of groundwater sampling are considered anomalous and lead and mercury are not considered groundwater constituents of concern (COCs; see Section 6.5.1 of the RI/FS for more discussion of lead and mercury in groundwater). Dieseland oil-range petroleum hydrocarbons and 1,1-DCE were detected in the initial round of groundwater sampling, but were not detected at concentrations greater than the CULs during subsequent sampling. Dissolved copper in established monitoring wells only exceeded its CUL during the initial round of groundwater monitoring. BEHP was detected at concentrations greater than the CUL in two of three samples collected from one monitoring well during the RI. The exceedances of BEHP are suspected to be the result of laboratory contamination. The elevated concentrations of diesel- and oil-range petroleum hydrocarbons; 1,1-DCE; dissolved copper; and BEHP identified during RI groundwater sampling do not appear to be representative of groundwater quality. Additional groundwater monitoring is needed as part of the post-construction compliance monitoring activities to confirm that the concentrations of these constituents are below the cleanup levels (see Section 4.1.3).

Dissolved arsenic is the only constituent with confirmed multiple exceedances of the groundwater CULs. Detected concentrations of arsenic in groundwater are shown on Figure 9. Dissolved arsenic concentrations detected in groundwater may be influenced by reducing conditions in groundwater. This conclusion is supported by:

• The inconsistent correlation between locations exhibiting high concentrations of arsenic in soil with corresponding high concentrations in groundwater. However, it is noted that the majority of dissolved arsenic exceedances above the CUL in groundwater occurred in the northern half of the Site, which exhibited most of the arsenic exceedances in soil.

- The wide-spread distribution of organic material, including wood debris, in the shallow aquifer matrix, which typically causes reducing conditions in groundwater.
- The presence of reducing conditions [low to negative oxidation reduction potential (ORP) values] throughout much of the shallow aquifer.

Based on the considerations above, dissolved arsenic in groundwater is considered a groundwater COC. An EA was completed to remove soil containing apparent sandblast grit and exhibiting high concentrations of heavy metals, including arsenic (see Section 2.4). Dissolved arsenic groundwater concentrations in the northern half of the Site are anticipated to decrease now that the EA is completed.

To evaluate the extent of contamination in groundwater at the Site, groundwater quality at the point of groundwater discharge to the 12th Street Yacht Basin was evaluated during the RI. Dissolved mercury, dissolved copper, and BEHP are the only constituents that were detected in the shoreline monitoring wells (RI-MW-1 through RI-MW-3) at concentrations greater than the CULs, and BEHP is the only constituent that was detected at concentrations greater than its CUL in more than one sampling event (February 2011 and October 2011). As discussed in the RI/FS, analytical results for dissolved mercury from the first sampling event are considered anomalous and were not repeated during subsequent monitoring events. As discussed previously, BEHP was detected at concentrations greater than its CUL at one location (RI-MW-3) during two sampling events. Although it is suspected that BEHP is present as the result of lab contamination, additional monitoring is needed as part of post-construction compliance monitoring to confirm that concentrations of BEHP are below the CUL (see Section 4.1.3).

Dissolved copper was detected in shoreline well RI-MW-1 at a concentration of 4.35 micrograms per liter (μ g/L), which is slightly greater than the CUL (3.1 μ g/L), during the December 2010 round of sampling, and at a concentration of 2.9 μ g/L, which is below the CUL, during the October 2011 round of sampling. In both cases, the detected concentrations are less than the concentration of dissolved copper detected in the surface water sample collected from the 12th Street Yacht Basin in the vicinity of RI-MW-1 (7 μ g/L), which indicates that there is a potential for surface water quality to affect groundwater quality at the Site. Additional monitoring is needed during post-construction compliance monitoring to confirm that concentrations of dissolved copper are below the cleanup level (see Section 4.1.3).

It is also important to note that significant hydrodynamic dispersion occurs between groundwater at the location where it is monitored in vertical monitoring wells as close as practicable to the shoreline and the actual point of groundwater discharge to surface water. At the nearby North Marina West End site, it was originally determined that the estimated concentration of contaminants at the point of discharge to surface water was 25 times less than the concentration measured in the vertical shoreline well (Ecology 2011). During subsequent monitoring events, the estimated concentration reduction at the shoreline averaged about 3.5 times less than the concentration measured in the vertical shoreline well for arsenic and 22 times less for vinyl chloride. Given that the highest concentration of dissolved copper measured in RI-MW-1 was less than 2 times the CUL and the highest concentration of BEHP measured in RI-MW-3 was about 3 times the CUL, it is reasonable to conclude that, even if the maximum concentrations of dissolved copper and BEHP detected during the RI in the shoreline wells are confirmed, the concentrations at the point of discharge to surface water would be significantly below the CULs.

2.5.3 SEDIMENT QUALITY

The evaluation of the nature and extent of Site sediment is based on analytical results for surface sediment samples collected at 8 locations during the RI. The sampling locations are shown on Figure 5. Sediment quality data were compared to the SQS and CSL and the dry weight equivalent to these criteria. Comparison of the marine sediment sample analytical results to the SMS criteria indicates that no concentrations exceed the CSL or SQS criteria. In addition two sediment samples were analyzed for dioxins and furans. Dioxins and furans were detected in the samples at low concentrations [toxicity equivalency factor (TEQ) = 2.41 nanograms per kilogram (ng/kg) and 1.77 ng/kg, respectively]. Dioxins and furans do not have promulgated SQS and CSL values. However, based upon review of the concentrations and overall distribution of both the Site data, as well as the available natural background data throughout Puget Sound, the Site-specific data reflect levels substantially below generally recognized natural background levels. Therefore, sediment is not considered a media of concern at the Site and is not included in the cleanup action.

2.5.4 CLEANUP AREA IDENTIFICATION

Cleanup Action Areas were defined based on areas where soil CULs (see Section 3.0) are exceeded in soil remaining following completion of Site interim actions and EAs. The cleanup areas are shown on Figure 10. Cleanup Areas were labeled consistent with the previous 2005-2007 interim action. Each cleanup area is designated by the investigation area label (e.g., G, I, J, M) followed by a sequential number within each investigation area (e.g., 1, 2, 3, etc.). Cleanup Areas that are an extension of a previous Cleanup Area have a sequential letter appended to the number (e.g., M-1a). The numbers for new cleanup areas are sequential to the numbers used during the 2005-2007 interim action to avoid any confusion created by duplicate Cleanup Area designations (e.g., the first Cleanup Area identified in Area I is I-12).

As shown on Figure 10, there are a total of 12 cleanup areas to be addressed during the final cleanup action. These areas were identified in the RI or during Post-RI investigation and were not addressed during previous interim actions or EAs. The cleanup areas include:

• Two in Area G [two new areas (G-2 and G-4)]

- Four in Area I [two new areas (I-12 and I-13) and two expansions of previous areas (I-5a and I-5b)]
- One in area J [an expansion of Cleanup Area J-3 (J-3a)]
- Five in Area M [four new areas (M-2, M-3, M-4, M-5) and one expansion of a previous area (M-1a)].

Areas I-5a, I-5-b, M-1a, M-4 and M-5 are isolated cleanup areas resulting from a single cleanup level exceedance. Each of these exceedances is bounded by soil sampling locations exhibiting concentrations below the CULs. At all of these locations, either an insufficient number of relevant data are present in the sample vicinity or the concentration is too high (more than twice the CUL) to use the provisions of WAC 173-340-740(7) to demonstrate compliance with the CULs. As a result, these locations are identified as isolated cleanup areas. Isolated cleanup areas are not considered of sufficient mass to pose a significant threat to human health or the environment and so will be managed through institutional controls.

Areas G-1b and G-3 were identified in the RI/FS, but were addressed during the 2014 EA discussed in Section 2.4. The EA is considered the final cleanup action for these areas. Area J-3a was expanded slightly from the area presented in the RI-FS to address apparent concrete waste material observed in the western sidewall at the southern end of the G-1b excavation.

3.0 DISCUSSION OF CLEANUP STANDARDS

This section discusses the Site cleanup standards that were chosen for the chemical constituents that were detected in affected Site media at concentrations above CULs developed for the RI/FS. The affected media include soil and groundwater. As discussed previously in Section 2.5.3, sediment is not considered a media of concern for the Site. Cleanup standards consist of: 1) CULs defined by regulatory criteria that are adequately protective of human health and the environment, and 2) the point of compliance at which the CULs must be met.

CULs developed under the MTCA represent the concentration of COCs that are protective of human health and the environment for identified potential exposure pathways, based on the highest beneficial use (HBU) and the reasonable maximum exposure (RME) for each affected media. The process for developing CULs consists of identifying the HBU and RME for affected media, determining those that represent the greatest risk to human health or the environment, and determining the CULs for the COCs in affected media.

3.1 GROUNDWATER

Site groundwater is considered non-potable given its shallow depth and proximity to Puget Sound. Therefore, the HBU for groundwater is considered to be discharge to marine surface water (the 12th Street Yacht Basin). Based on a groundwater HBU of discharge to marine surface water, the RME for groundwater is the more conservative of: 1) uptake by aquatic organisms based on aquatic water quality criteria, and 2) ingestion of affected aquatic organisms by humans. As a result, federal [National Toxics Rule (40 Code of Federal Register (CFR) 131.36 and National Recommended Water Quality Criteria (EPA 2006)] and state (MTCA Method B formula values and Chapter 173-201A) surface water criteria based on human consumption of fish and federal ([EPA 2006) and state (MTCA Method B formula values and Chapter 173-201A) surface water quality criteria protective of aquatic life were evaluated as potential CULs for groundwater. The most stringent of the applicable criteria, adjusted to the practical quantitation limit (PQL) or background concentrations, if appropriate, is identified as the Site groundwater CUL, shown in Table 3.

At least one sample exceeded the groundwater CULs for arsenic, copper, mercury, lead, BEHP, diesel- and oil-range petroleum hydrocarbons, and 1,1-DCE. As discussed in Section 2.5.2, the results for lead and mercury for the initial round of groundwater sampling are considered anomalous and these constituents are not carried forward as a COC for Site groundwater. The remaining constituents that exceeded the groundwater CULs are carried forward as COCs for Site groundwater, as summarized in Table 3.

Under MTCA, the point of compliance is the point or location on the Site where the cleanup levels must be attained. The point of compliance for groundwater is typically throughout the Site when groundwater is considered a potential source of potable drinking water. If groundwater discharge to surface water represents the HBU, the MTCA provides for a conditional point of compliance at the point of discharge of groundwater to the surface water receiving body. As a result, the point of entry of groundwater to the 12th Yacht Basin is the conditional point of compliance for Site groundwater.

3.2 SOIL

Unless an exclusion applies to a site, a terrestrial ecological evaluation (TEE) is required. A TEE determines whether a release of hazardous substances to soil may pose a threat to the terrestrial environment; characterizes threats to terrestrial plants or animals; and establishes site-specific cleanup standards for the protection of terrestrial plants and animals. The Site is almost entirely asphalt, concrete, gravel paved, or occupied by buildings and will continue to be throughout implementation of the cleanup action, except for portions that will be temporarily exposed during remedial excavation activities. The Site is subject to commercial and industrial use and is zoned "waterfront-commercial." There is less than 1.5 acres of contiguous undeveloped land on the Site or within 500 ft of any area of the Site. Therefore, the Site qualifies for an exclusion under WAC 173-340-7491(1)(c)(i). Per WAC 173-340-7491(1), no further evaluation is required if a site meets any of the exclusion criteria under WAC 173-340-7491(1)(a) through (d). Because the Site meets at least one of these criteria, Ecology has determined that the cleanup standards for the Site do not include any terrestrial ecological considerations.

Therefore, soil CULs protective of human health were developed using applicable human health risk assessment procedures specified in WAC 173-340-708. Ecology has determined that residential land use is generally the site use requiring the most protective cleanup levels and that exposure to hazardous substances under unrestricted land use conditions represents the RME scenario. While residential development of the Site is unlikely, hospitality services (restaurant), public access, and office space are present in the southern portion of the Site, and future development could include additional hospitality services (hotel/restaurant). Therefore, soil CULs protective of human health were developed based on the requirements under WAC 173-340-740 for unrestricted (residential) land use. The COCs for Site soil are antimony, arsenic, lead, cPAHs, and gasoline- and diesel-range petroleum hydrocarbons. CULs for Site soil Indicator Hazardous Substances (IHS) are presented in Table 3.

The point of compliance for soil in WAC 173-340-740(6) is throughout the Site if based on protection of groundwater or to a maximum depth of 15 ft BGS if based on direct contact. The MTCA recognizes that, for those cleanup actions that involve containment of hazardous substances, the soil CULs will typically not be met throughout the Site [WAC 173-340-740(6)(f)]. However, such cleanup

actions are considered to comply with cleanup standards if the remedy: 1) is permanent to the maximum extent practicable, 2) is protective of human health, 3) is protective of terrestrial ecological receptors, 4) includes institutional controls to protect the long-term integrity of the containment system, and 5) includes compliance monitoring and periodic reviews to ensure the long-term integrity of the containment system.

4.0 SELECTED CLEANUP ACTION

This section describes and evaluates the selected cleanup action for the Site. The other cleanup alternatives considered for the Site and evaluated in the RI/FS are also summarized

4.1 DESCRIPTION OF THE SELECTED CLEANUP ACTION

As discussed in Section 2.5, the nature and extent of contamination at the Site consists of upland areas of soil and groundwater contamination. As a result, the selected cleanup action will consist of excavation of the contaminated soil in areas that are subject to future redevelopment and that pose a potential threat of discharge to marine surface water and sediment. Other areas of contaminated soil and groundwater would be addressed through containment with institutional controls.

Cleanup Areas G-2 and G-4 are the only two areas that will be excavated as part of the cleanup action. Area G-4 (not identified in the Final RI/FS report) was identified as a cleanup area based on the presence of black sandblast grit identified underneath the Ameron lab building during the Post-RI supplemental soil investigation as discussed previously in Section 2.4.4. Cleanup areas G-1b and G-3, identified as excavation areas under the preferred alternative (Alternative 3) in the Final RI/FS report, were addressed as part of the EA conducted in Spring 2014 as discussed previously in Section 2.4.3 (Floyd|Snider 2014). The remaining cleanup areas will be contained with the requisite institutional controls to ensure that any contaminated soil disturbed during future Site redevelopment or other intrusive activities is properly managed and subject to appropriate worker health and safety protection. The cleanup areas are shown on Figure 10 and discussed in the following sections.

4.1.1 **REMEDIAL EXCAVATION**

Cleanup Area G-2 is located along the north Site boundary and contains soft, colored, silt-like material (apparent concrete slurry waste) with arsenic concentrations up to 109 mg/kg (about 5 times the CUL) immediately adjacent to the stormwater trunk line along the northern property boundary that discharges to the 12th Street Marina. Because the trunk line represents a potential conduit for migration of contaminants to the Puget Sound and may be impacting groundwater quality, removal of this material and replacement of the trunk line in this area is included in the selected cleanup action.

The lateral limits of the Cleanup Area G-2 remedial excavation will extend to the property line to the north and generally to the northern boundary of the 1976 pavement section to the south. At the west of Cleanup Area G-2, the excavation will extend south of the 1976 pavement line based on the results of the Post-RI soil investigation (see Section 2.4.4). The trunk line straddles the property/Site boundary separating the Site from the TC Systems site. Implementation of the remedial excavation in Cleanup Area G-2 will require concurrent and coordinated cleanup on the adjacent TC Systems site.

Cleanup Area G-4 is located in the western portion of Area G, beneath the northeast portion of the Ameron lab building. Sandblast grit encountered in this area exhibits high concentrations of arsenic (2,580 mg/kg) and lead (1,700 mg/kg) and appears to be contained within a concrete structure that underlies the concrete patch in the floor slab. The blasting sand was encountered just below the concrete floor slab (at 0.4 ft BGS) and extended to the concrete bottom of the structure (at 1.2 ft BGS). The patched area where the concrete structure is present is about 2.3 ft wide by 7 ft long and the volume of the structure is estimated to be approximately 8 cubic feet (or 0.3 cubic yards).

4.1.2 CONTAINMENT AND INSTITUTIONAL CONTROLS

The other areas of the Site with soil exceeding the CULs are currently paved and will rely on existing surface features (e.g., asphalt pavement and buildings) to act as a surface cap and containment system. Note that an area in the northeast portion of Area J-3a between the current fence line and the southern portion of the pole-finishing building is not currently paved (Figure 10), but will be paved as part of Site redevelopment. Institutional controls will be used to ensure the integrity of the cap, including periodic inspections, mandatory maintenance of the cap, and documentation through an environmental restrictive covenant to prevent unauthorized disturbance of the cap and provide for mandatory health and safety procedures, soil and groundwater management procedures, and specifications for replacement and repair of the cap in the event that disturbance of the cap is necessary.

The environmental restrictive covenant will have the following elements to address activities that could compromise the integrity of the cleanup action:

- Groundwater use for potable water will be prohibited.
- Groundwater extracted for construction dewatering or other nonpotable purposes will be managed, treated, and discharged in conformance with an Ecology-approved soil and groundwater management plan. The soil and groundwater management plan will be prepared following entry of the consent decree for the final cleanup action.
- Intrusive activities that involve worker contact with contaminated soil and groundwater will be conducted by individuals that have the appropriate training and certifications for working on hazardous waste sites and in conformance with a Site-specific health and safety plan.
- Any contaminated soil removed during intrusive activities will be managed and disposed of in conformance with an Ecology-approved soil and groundwater management plan.

The institutional controls will be placed over the entire Site to prevent the use of groundwater for potable purposes, and over the areas of residual contamination shown on Figure 10 for other purposes (e.g., contaminated soil management and construction worker protection). A restrictive covenant that identifies the lateral limits and approximate depth of residual soil contamination will be placed on the larger cleanup areas (Cleanup Areas G-3, I-12, I-13, J-3a, M-2, and M-3). Small, isolated cleanup areas (Cleanup Areas G-3, I-5b, M-1a, M-4, and M-5) will also be identified on the restrictive covenant and addressed in the soil management plan.

4.1.3 GROUNDWATER COMPLIANCE MONITORING

Additional rounds of groundwater compliance monitoring will be collected to verify that all CULs have been achieved and maintained at the proposed conditional point of compliance. Groundwater compliance monitoring will consist of at least four consecutive quarters of groundwater quality monitoring for one year for selected constituents at locations where compliance with CULs needs to be verified, and at all shoreline wells to verify that CULs are being achieved at the conditional point of compliance for the Site. If any of the quarterly groundwater monitoring results show exceedances of the CULs, additional groundwater monitoring will be required, as determined by Ecology, to show compliance. The following wells will be monitored for the constituents indicated:

- RI-MW-1 dissolved arsenic, dissolved copper
- RI-MW-2 dissolved arsenic, dissolved copper
- RI-MW-3 dissolved arsenic, dissolved copper, BEHP
- RI-MW-4 diesel- and oil-range petroleum hydrocarbons
- RI-MW-6 dissolved arsenic, diesel- and oil-range petroleum hydrocarbons
- RI-MW-7 BEHP
- P-10 dissolved arsenic, dissolved copper
- SEE-EC-3 dissolved arsenic
- ECI-MW-3 dissolved arsenic, 1,1-DCE.

4.2 EVALUATION OF SELECTED CLEANUP ACTION

The selected cleanup action was evaluated to determine whether it meets the minimum requirements to be considered compliant with MTCA regulations, as specified in WAC 173-340-360(2). The MTCA minimum requirements include threshold requirements and other requirements. The threshold requirements are:

- Protection of human health and the environment
- Compliance with cleanup standards
- Compliance with applicable state and federal laws
- Provision for compliance monitoring.

In addition to the threshold requirements, the selected cleanup action must also meet the following requirements:

- Use of permanent solutions to the maximum extent practicable
- A reasonable restoration timeframe
- Consideration of public concerns.

The selected cleanup action is evaluated against these criteria in the following sections.

4.2.1 THRESHOLD REQUIREMENTS

In order for a cleanup action to meet the threshold requirements it must adequately protect human health and the environment, comply with cleanup standards, comply with state and federal laws, and provide for compliance monitoring. The selected cleanup action meets these requirements. Much of the contaminant mass was removed from the Site during the interim actions and EAs, and the additional focused remedial excavation will remove remaining areas where there is potential for direct human contact with soil containing COC concentrations above the CULs. Institutional controls will prevent direct contact with or ingestion of contaminated groundwater, and groundwater and compliance monitoring will confirm that cleanup standards are achieved and maintained at the conditional point of compliance for Site groundwater, which is the groundwater/surface water interface at the shoreline. The selected cleanup action will comply with MTCA, all other applicable state laws, and all applicable federal laws.

4.2.2 PERMANENCE

MTCA requires that cleanup actions be permanent to the maximum extent practicable, and identifies a number of criteria to evaluate whether this requirement is achieved. The remainder of this section provides an evaluation of the selected cleanup action against the permanence criteria.

Overall Protectiveness

The selected cleanup action will provide a high level of overall protectiveness of human health and the environment. Previous interim actions combined with additional focused remedial excavations will remove most of the Site contaminant mass. Long-term groundwater compliance monitoring and implementation institutional controls will reduce the risk that human or ecological receptors are exposed to groundwater or soil with chemical concentrations exceeding the CULs. Additionally, risks during implementation will be minimal because the selected cleanup action includes limited construction activities.

Long-Term Effectiveness

The selected cleanup action provides a high degree of certainty that it will be successful. Because contaminant mass and potential future sources of contamination have or will be mostly removed from the Site, compliance with the groundwater cleanup standards has been demonstrated at the proposed conditional point of compliance at the shoreline, and institutional controls will ensure protection against the minor residual risk of human contact with residual contamination, the potential for the selected cleanup action to not be effective is negligible.

Management of Short-Term Risks

Because the selected cleanup action involves limited new active remediation and construction activities, protection of human health and the environment during construction and implementation is easily achieved, resulting in minimal short-term risk. Furthermore, these risks are manageable with proper health and safety procedures, planning, identification and management of underground utilities, and careful monitoring during excavation.

Permanent Reduction of Toxicity, Mobility, and Volume of Hazardous Substances

As previously discussed, about 35,200 tons, a large portion of the contaminated soil mass, was removed from the Site during previous interim and emergency actions. An additional approximately 5,400 tons of contaminated soil mass will be removed during the cleanup action from the vicinity of the stormwater trunk line, a potential conduit for release to Puget Sound. Groundwater quality monitoring demonstrates that the residual groundwater contamination is not migrating beyond the shoreline, demonstrating the limited mobility of Site contamination via groundwater. As a result, the selected cleanup action substantially reduces the volume of hazardous substances at the Site when considered in conjunction with the interim actions and EAs.

Implementability

The selected cleanup action is easily implemented. The remedial excavation areas are in accessible locations and at shallow depths, although close coordination with the current tenant (Ameron International) will be required to avoid disrupting tenant operations during cleanup action implementation. Groundwater compliance monitoring will be conducted using existing monitoring wells; and institutional controls in the form of deed restrictions will be implemented by the Port.

Cleanup Costs

The estimated cost for implementing the remedial excavations and institutional controls and conducting long-term groundwater compliance monitoring, including reporting, is about \$1,500,000.

4.2.3 **RESTORATION TIMEFRAME**

The MTCA [WAC 173-340-360(6)(a)] specifies that the following factors be considered in establishing a "reasonable" timeframe:

- Potential risks to human health and the environment
- Practicability of achieving a shorter restoration timeframe
- Current use of the Site, surrounding areas, and associated resources that are, or may be, affected by releases from the Site
- Potential future use of the Site, surrounding areas, and associated resources that are, or may be, affected by releases from the Site

- Availability of alternate water supplies
- Likely effectiveness and reliability of institutional controls
- Ability to control and monitor migration of hazardous substances from the Site
- Toxicity of the hazardous substances at the Site
- Natural processes that reduce concentrations of hazardous substances and have been documented to occur at the Site or under similar Site conditions.

The selected cleanup action described in this CAP is consistent with or meets the above factors from WAC 173-340-360 and will address potential risks to human health and the environment.

The selected cleanup action will be compatible with current and potential future use of the Site. The primary considerations for future land use will be the proper management of extracted groundwater if construction dewatering is required and the management of contaminated soil excavated during Site redevelopment. The City of Everett provides municipal water to the Site, and Site groundwater is not considered a potable water supply, so availability of an alternate water supply is not an issue. Site institutional controls will be largely limited to requirements for management of extracted groundwater, which can be easily and reliably implemented.

The control and monitoring of hazardous substances will be easily achieved by the selected cleanup action because contamination is limited to localized areas of soil contamination capped and contained on Site or removed for offsite disposal, and potential groundwater contamination will be monitored by the compliance monitoring program. Additionally, with the contaminant mass largely removed from the Site during the interim actions and EAs, natural processes are anticipated to further reduce concentrations of hazardous substances in groundwater.

Thus, the cleanup action provides for a reasonable restoration time frame, as is outlined in WAC 173-340-360(4), and achieving a shorter restoration timeframe is not practicable.

4.2.4 PUBLIC PARTICIPATION AND COMMUNITY ACCEPTANCE

A public comment period was held to allow the public and parties affected by the cleanup action an opportunity to provide comments on the draft CAP. Ecology reviewed all public comments submitted during the public comment period, and determined that no revisions were required to prepare this final CAP. Individuals or organizations that commented received notice by regular mail or e-mail that Ecology had received their comments, along with an explanation about how the comments were addressed.

5.0 SUMMARY OF OTHER CLEANUP ACTION ALTERNATIVES

Because of the extensive interim actions and EAs conducted at the Site that have resulted in the removal of over 90 percent of the total contaminants on the Site, much of the residual soil contamination that could potentially be targeted for removal, treatment, or containment as part of a final cleanup action has already been addressed. Consequently, potential cleanup alternatives for the Site were limited to various combinations of containment and remedial excavation. In the FS, the preferred remedial alternative was identified as Alternative 3. The other remedial alternatives considered were:

- Alternative 1 Site-wide excavation of all remaining soil contamination
- Alternative 2 Remedial excavation of all contamination in areas where site redevelopment is planned and containment of soil in areas where redevelopment has already occurred
- Alternative 4 Site-wide containment of all remaining soil contamination.

Alternatives 1 and 2 were considered impracticable because the significantly higher costs associated with additional removal was considered disproportionate to the incremental increase in benefit because the mass of additional contamination removed would only be slightly higher than Alternative 3 (the preferred alternative). Additionally, Alternatives 1 and 2 would be highly disruptive to Port and Port tenant operations.

Alternative 4 was not considered permanent to the maximum extent practicable because the remaining areas of contamination with the highest contaminant concentrations and the highest risk to human health and the environment (that are removed under Alternative 3) are reasonably accessible for excavation and permanent removal from the Site.

6.0 CAP IMPLEMENTATION SCHEDULE

Implementation of the CAP will commence following entry of the consent decree containing the final CAP. The cleanup will need to be conducted in conjunction with cleanup of the portion of the TC Systems site along the common boundary between the two sites. This coordination requirement could affect the project schedule and needs to be addressed prior to establishing the cleanup implementation schedule. A schedule of work and deliverables, that specifies the schedule for submittal of design and construction documents and for construction of the final cleanup action, will be submitted to Ecology for review and approval within 60 days of finalization of the CAP and entry of the Consent Decree.

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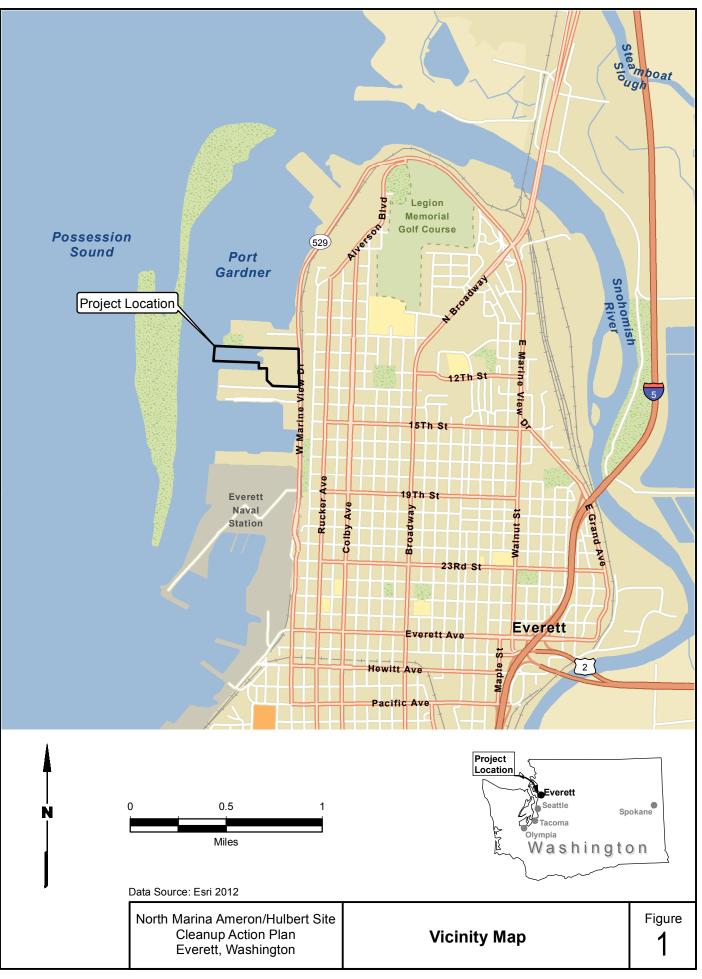
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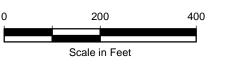
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North Marina Ameron/Hulbert Site Boundary (Determined in the RI/FS)

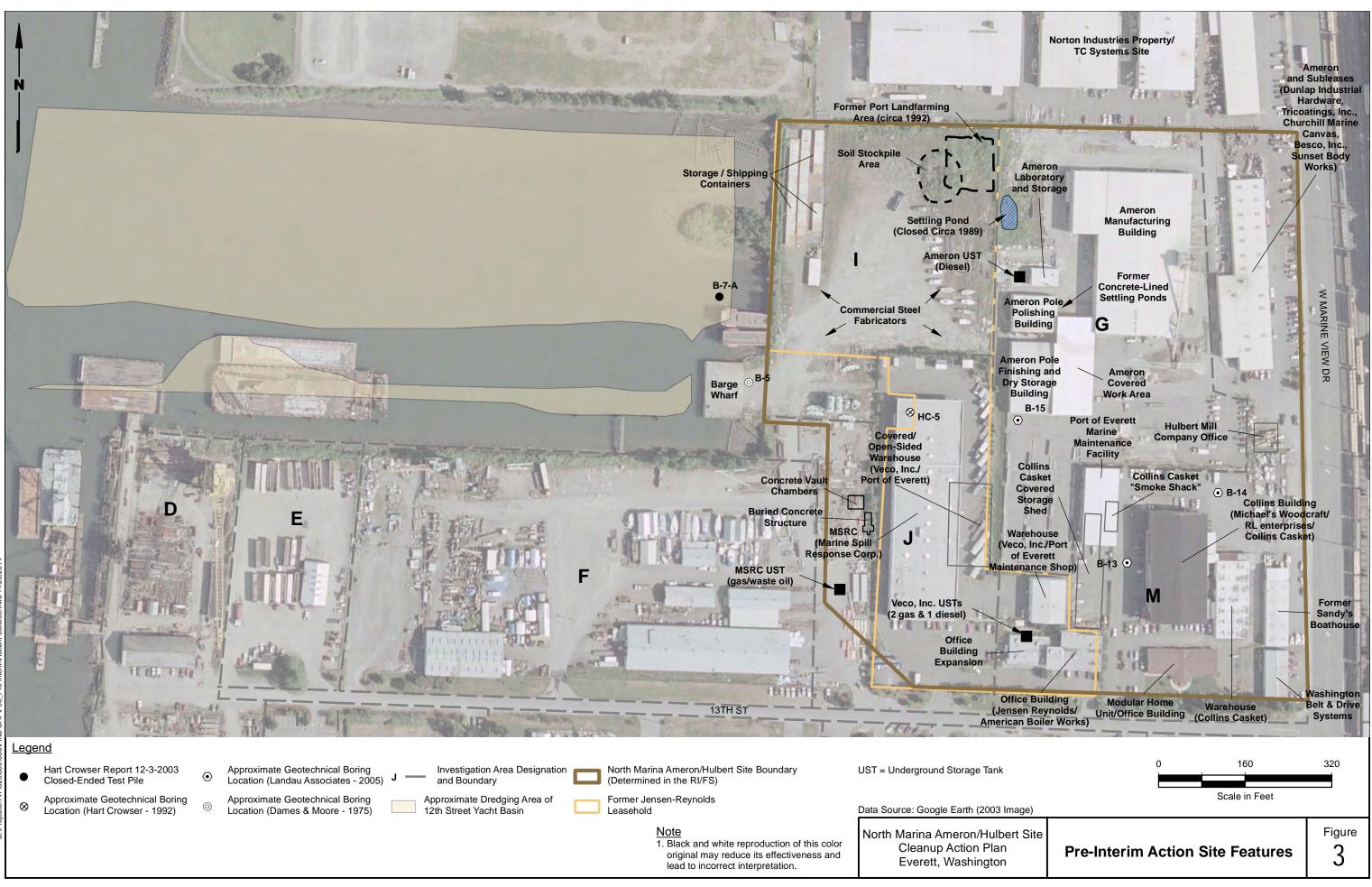


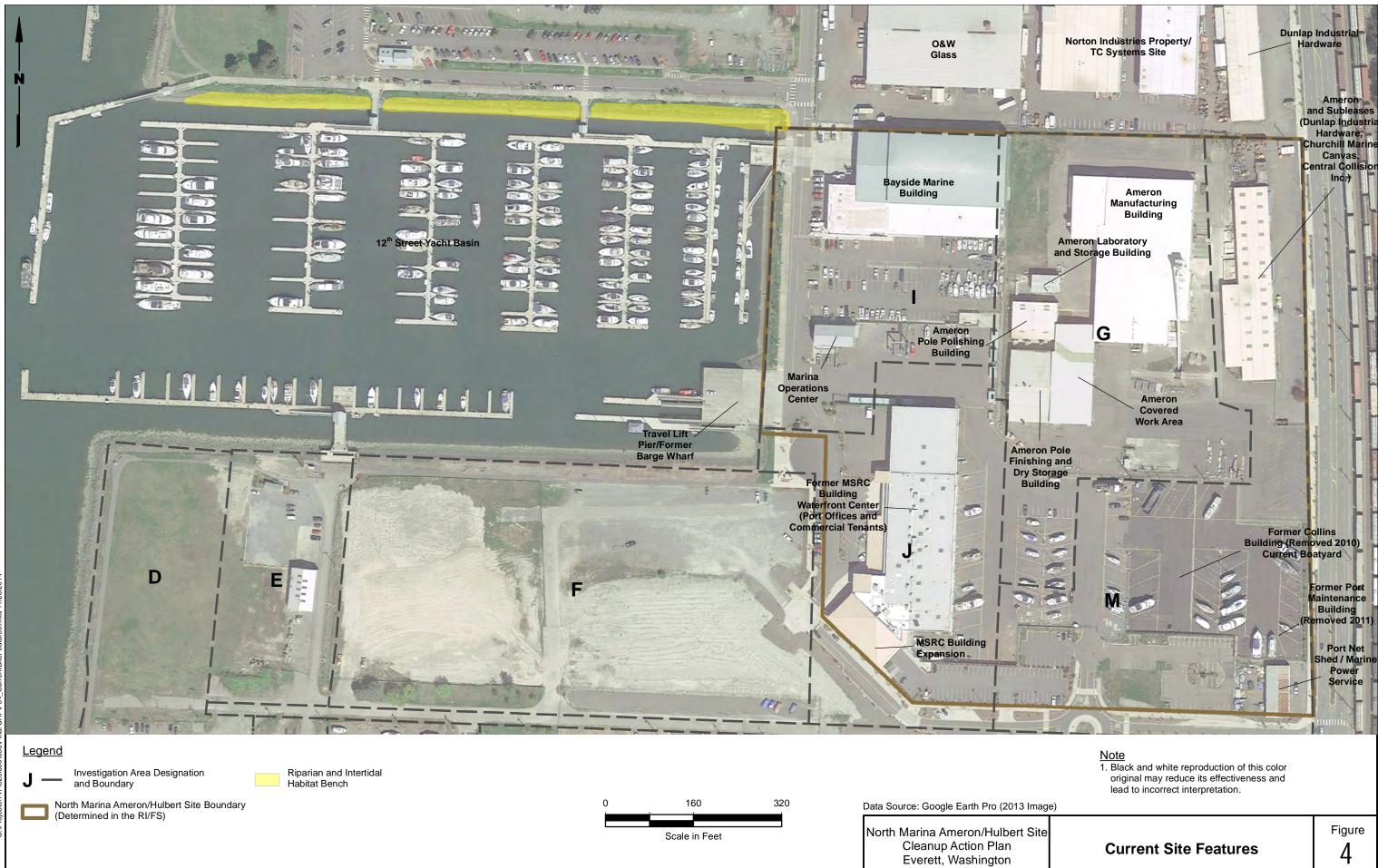
Data Source: 2013 Google Earth Pro Image; Snohomish County Assessor

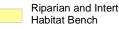
North Marina Ameron/Hulbert Site **Cleanup Action Plan** Everett, Washington

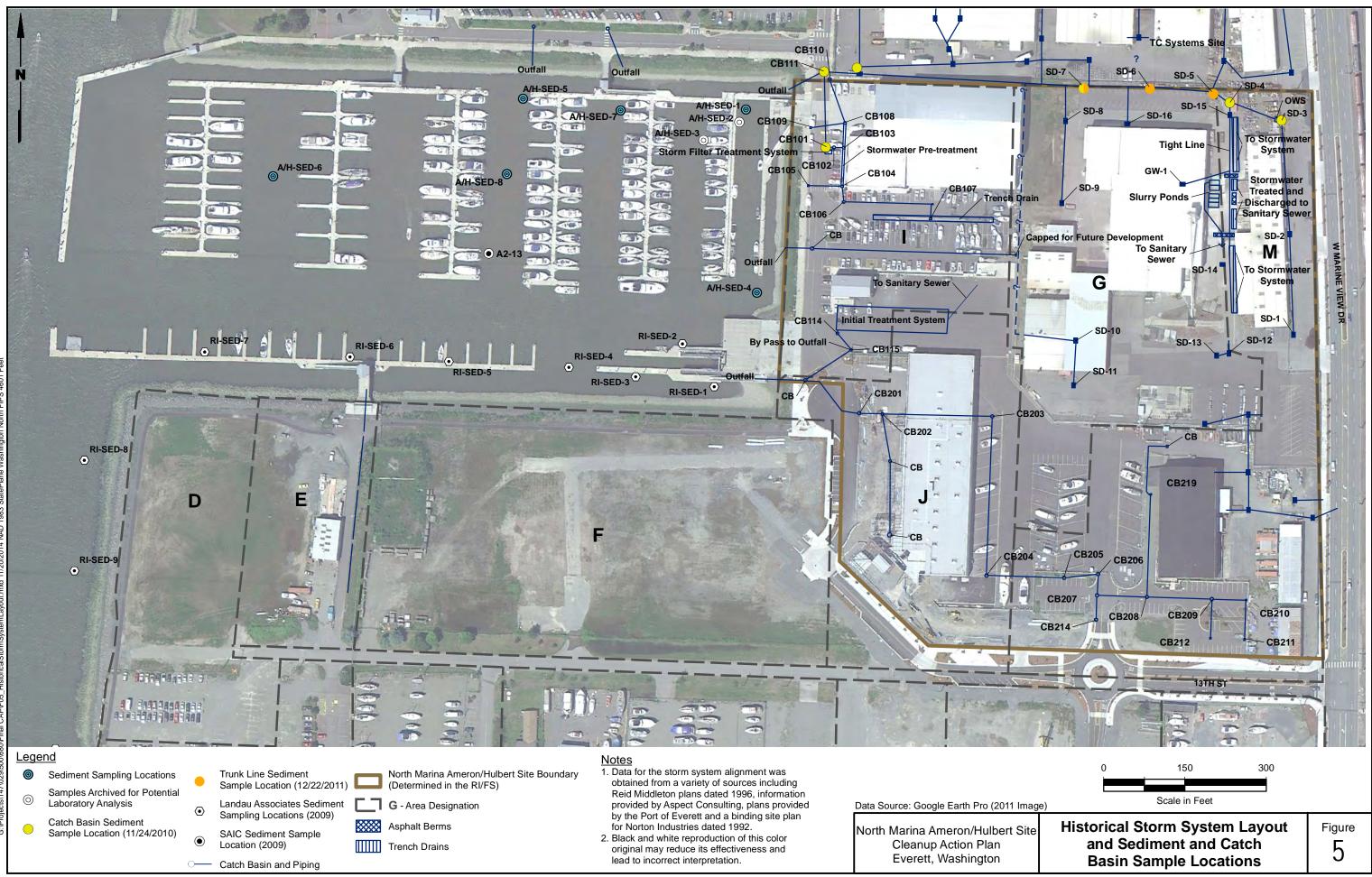
North Marina **Ameron/Hulbert Site Plan**

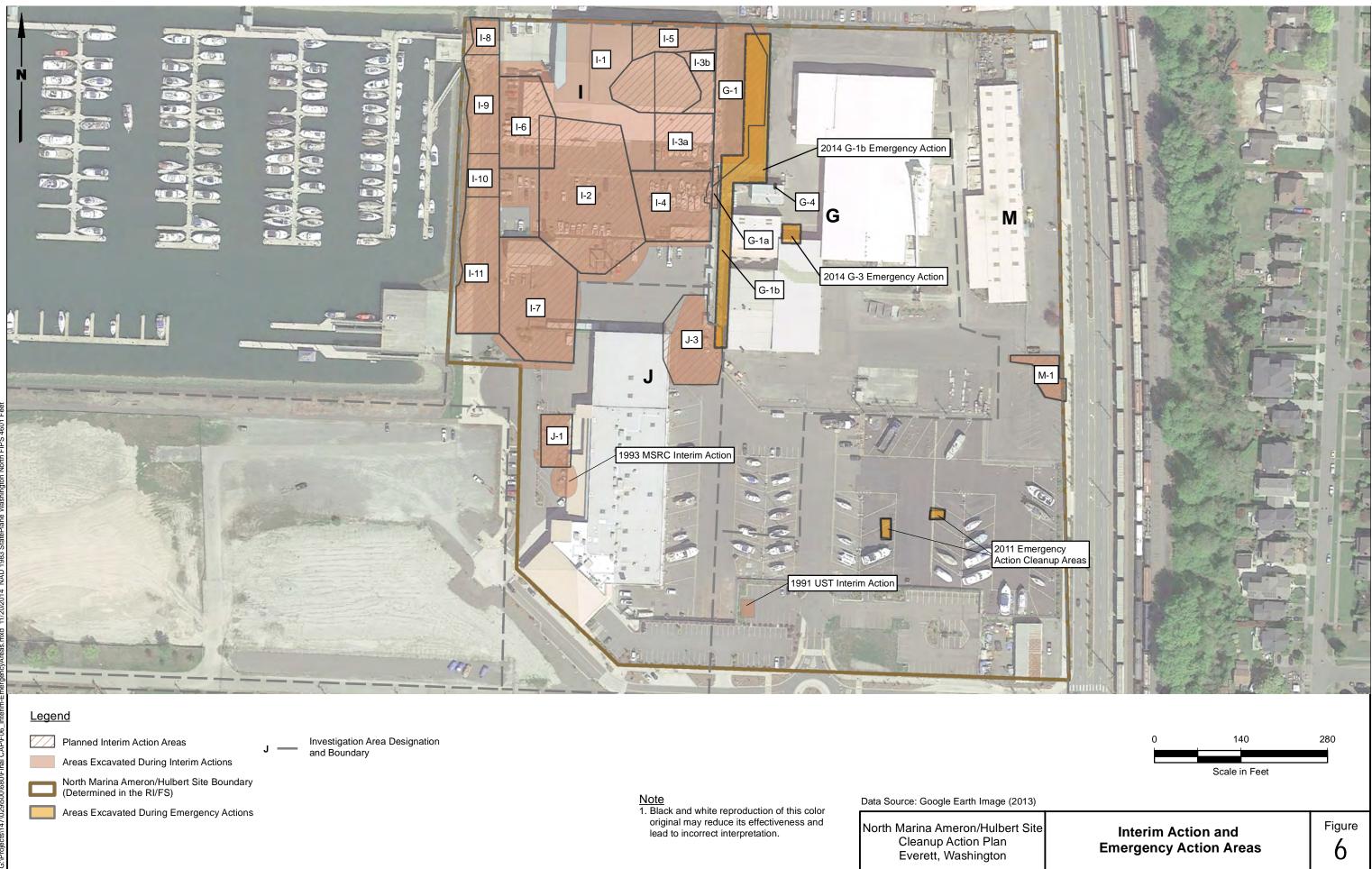
Figure 2













Legend

- \odot Legend Post-RI Soil Boring Location
- ulletPost R-I Soil Boring Location - No Samples Analyzed
- Soil Sample Exceeded Cleanup ۲ Levels - Represents Soil Remaining
 - Soil Sample Below Cleanup
- Levels - Represents Soil Remaining
 - 150' Sample Grid



North Marina Ameron/Hulbert Site Boundary (Determined in the RI/FS)



G - Area Designation

Area of Arsenic-Affected Crushed Rock (No Analytical Data Available for Crushed Rock Remaining in this Area)

<u>Notes</u>

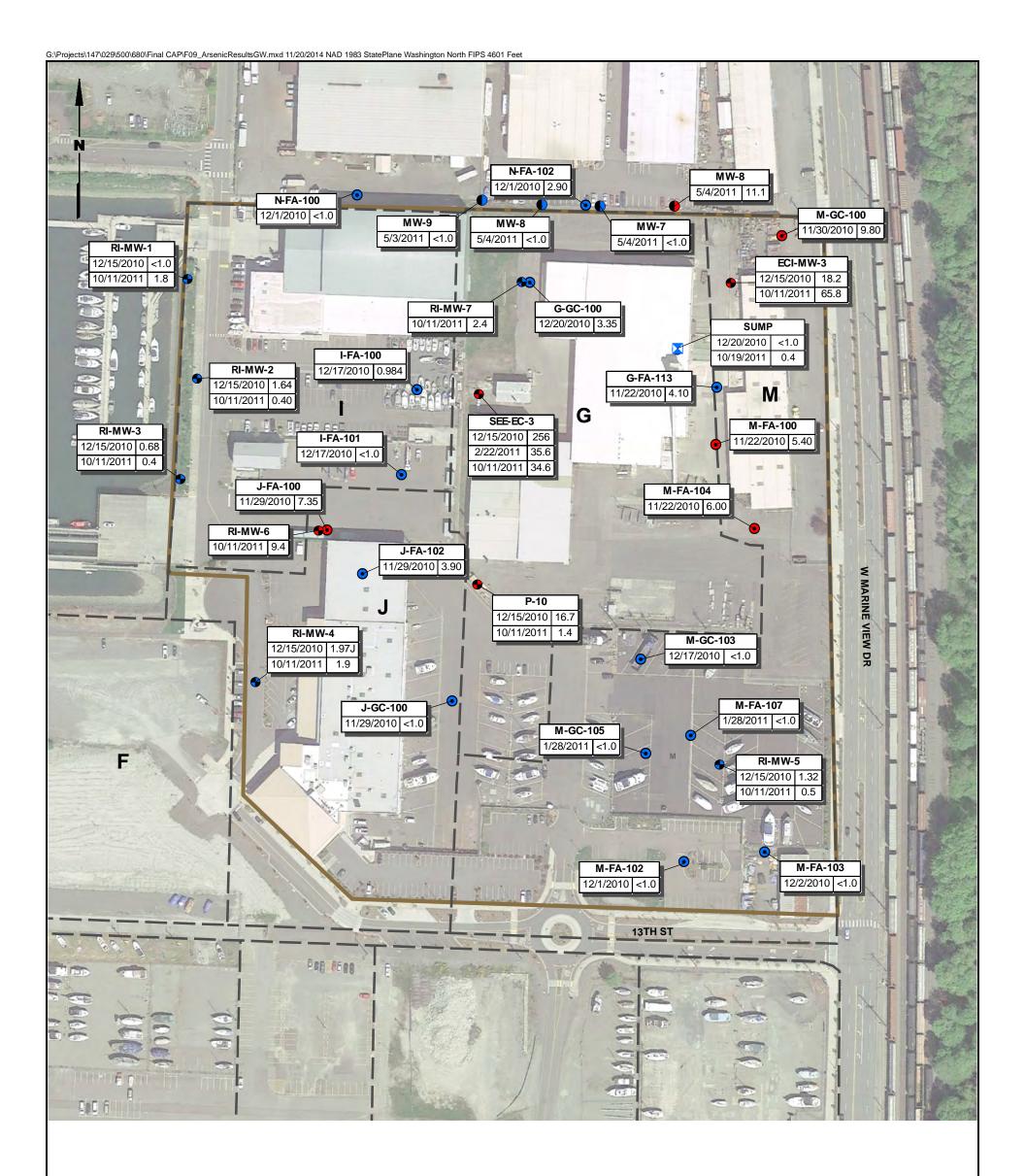
1. All results shown in mg/kg. 2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Google Earth P	ro (2013 Image)

0 50 Scale in Feet	100	North Marina Ameron/Hulbert Site Cleanup Action Plan Everett, Washington	Post-RI Supplemental Soil Characterization	Figure 7
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 Levels - Represents Soil Remaining 150' Sample Grid North Marina Ameron/Hulbert Site Boundary (Determined in the RI/FS) Kera of Arsenic-Affected Crushed Rock (No Analytical Data Available for Crushed Rock Remaining in this Area) Cleanup Area to be Addressed in Final Cleanup Action 	Image)
 150' Sample Grid North Marina Ameron/Hulbert Site Boundary (Determined in the RI/FS) Area of Arsenic-Affected Crushed Rock (No Analytical Data Available for Crushed Rock Remaining in this Area) Cleanup Area to be Addressed 	
150' Sample Grid Sandblast Grit within Area M-2) Area of Arsenic-Affected Crushed Rock (No Analytical Data Available for Crushed	
Sandhag Campio Containing	
Levels Represente contraining Levels Containing	
 Soil Sample Below Cleanup Levels - Represents Soil Remaining Statistical Compliance Area for Arsenic and Lead in Soil Excluding Samples Containing 	
 Soil Sample Exceeded Cleanup Levels - Represents Soil Remaining G - Area Designation 	 Black and white reproduction of this colo original may reduce its effectiveness and lead to incorrect interpretation.
Legend	Note



Legend

Monitoring Well \bullet

 \odot Soil Boring

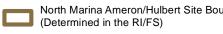
 \mathbf{O} TC Systems Monitoring Well

Groundwater Sample Exceeds Preliminary

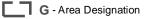
Screening Level (5 μ g/L) - (Only exceedances in dissolved concentrations are shown).

Groundwater Sample Does Not Exceed Preliminary

Screening Level for Arsenic



North Marina Ameron/Hulbert Site Boundary



Sample ID Sample Date Arsenic Result Notes

 All results shown in (µg/L)
 Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Google Earth Pro (2011 Image)

0 140 280 Scale in Feet	North Marina Ameron/Hulbert Site Cleanup Action Plan Everett, Washington	Groundwater Analytical Results for Dissolved Arsenic	Figure 9	
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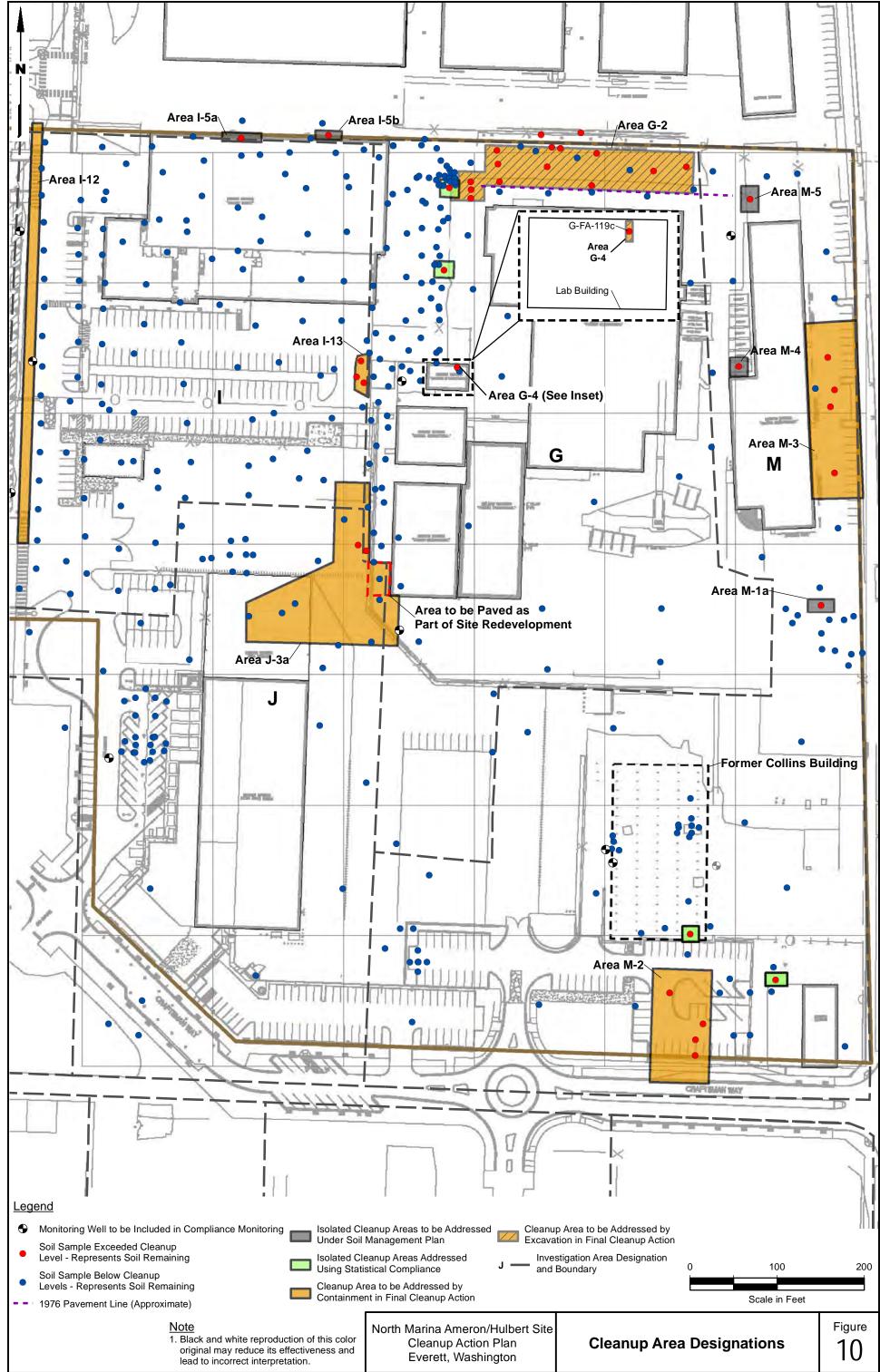


TABLE 1 SUMMARY OF PREVIOUS INTERIM ACTIONS NORTH MARINA AMERON/HULBERT SITE PORT OF EVERETT, WASHINGTON

-	Indicator Hazardous Su	Interim Cle	anup Actior	Compliance Monitoring Conducted Following Interim Cleanup Action?			
Interim Action Area	Soil	Groundwater	Soil (a)		Groundwater	Soil	Groundwater
Investigation Area C							
Investigation Area G G-1	Arsenic, Lead	Arsenic, Copper	Soil Removal	2,701	Source Removal	Yes	No
G-1	Arsenic, Lead	Arsenic, Copper	Soli Removal	2,701	Source Removal	165	INU
Investigation Area I							
I-1	Arsenic		Soil Removal	563		Yes	
I-2	Arsenic		Soil Removal	7,965		Yes	
I-3a	Arsenic, Lead, Copper		Soil Removal	3,654		Yes	
I-3b	Arsenic, Lead, Copper		Soil Removal	(b)		Yes	
I-4	Arsenic, Lead, Copper		Soil Removal	778		Yes	
I-5	Arsenic, Copper	Copper	Soil Removal	3,813		Yes	
I-6	Arsenic, cPAHs		Soil Removal	3,237		Yes	
I-7	Arsenic	Copper	Soil Removal	2,495		Yes	
I-8	Arsenic, Copper		Soil Removal	3,263		Yes	
I-9	Arsenic, Copper, cPAHs		Soil Removal	(c)		Yes	
I-10	Arsenic, Copper		Soil Removal	(c)		Yes	
I-11	Arsenic, Copper, cPAHs		Soil Removal	(c)		Yes	
Investigation Area J							
J-1	Arsenic		Soil Removal	553		Yes	
J-3	Arsenic, Copper, cPAHs		Soil Removal	2,563		Yes	
MSRC Interim Action (1993)	Petroleum Hydrocarbons		Soil Removal	966	Source Removal	Yes	Yes
Investigation Area M							
M-1	cPAHs	Arsenic	Soil Removal	396		Yes	
UST Interim Action (1991)	Petroleum Hydrocarbons		Soil Removal	75	Source Removal	Yes	Yes
	· · · · ·		Total	33,022			

UST = underground storage tank

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

(a) Value presented is tons of soil removed.

(b) Soil mass for Areas I-3a and I-3b not separately tallied. Soil mass presented for Area I-3a represents entire Area I-3.

(c) Soil mass for Areas I-8 through I-11 not separately tallied. Soil mass presented for Area I-8 represents entire mass for these areas.

TABLE 2 SOIL ANALYTICAL RESULTS POST-RI SUPPLEMENTAL SOIL CHARACTERIZATION NORTH MARINA AMERON/HULBERT SITE PORT OF EVERETT, WASHINGTON

	Proposed Cleanup Level	Dangerous Waste Criteria WAC 173-303	G-FA-101h(2.5-3.5) YN10G	Dup of G-FA-101h(2.5-3.5) G-FA-DUP1 YN10L 6/6/2014	G-FA-101i(3-4) YN10E 6/6/2014	G-FA-101i-(5-6) YN10F 6/6/2014	G-FA-101j(3-4) YN10C 6/6/2014	G-FA-101j(5-6) YN10D 6/6/2014	G-FA-101k(3-4) YN10A 6/6/2014	G-FA-101k(5-6) YN10B 6/6/2014
TOTAL METALS (mg/kg) Method 200.8/6010C Antimony Arsenic Lead	32 20 250		30.5	35.4	7.3	17.3	4.0	14.5	3.0	4.1
TCLP METALS (mg/L) Method SW6010C/7470A Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver		5 100 1 5 5 0.2 1 5								
TOTAL PETROLEUM HYDROCARBONS (mg/kg)										
NWTPH-Dx Diesel-Range Organics Lube Oil	2,000 2,000									
NWTPH-Gx Gasoline-Range Organics	100									

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TABLE 2 SOIL ANALYTICAL RESULTS POST-RI SUPPLEMENTAL SOIL CHARACTERIZATION NORTH MARINA AMERON/HULBERT SITE PORT OF EVERETT, WASHINGTON

	G-FA-101L(3-4) YP13A 6/6/2014	G-FA-101L(5-6) YP13B 6/6/2014	G-FA-116(10-11) YN10H 6/6/2014	Di G-FA-117(7-8) YN10I 6/6/2014	up of G-FA-117(7-8) G-FA-DUP2 YN10M 6/6/2014	G-FA-117(8-9) YN61A 6/6/2014	G-FA-118(6-7) YN10J 6/6/2014	Dup of G-FA-118(6-7) G-FA-DUP3 YN10N 6/6/2014	G-FA-119c(0.4-1.2) YN10K 6/6/2014
TOTAL METALS (mg/kg) Method 200.8/6010C Antimony Arsenic Lead	6	23	0.4 U 11.5 29.1	0.3 UJ 7.3 7.3 J	0.3 U 5.9 6.0	0.3 U 8.7 12.2			25 2580 1700
TCLP METALS (mg/L) Method SW6010C/7470A Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver									0.2 U 0.10 0.02 0.06 0.2 0.0001 U 0.2 U 0.02 U
TOTAL PETROLEUM HYDROCARBONS (mg/kg)									
NWTPH-Dx Diesel-Range Organics Lube Oil							7.2 13 U	6.0 U 12 U	
NWTPH-Gx Gasoline-Range Organics							7.5 U	7.2 U	
	NWTPH-Dx = Tota NWTPH-Gx = Tota WAC = Washingto U = Indicates the o J = Indicates the a UJ = The analyte Bold = Detected co	s per kilogram haracterization Leachin al Petroleum Hydrocarb al Petroleum Hydrocarb on Administrative Code compound was not dete nalyte was positively ide vas not detected in the	ons - Diesel Range ons - Gasoline Range cted at the reported cor entified; the associated sample; the reported sa	numerical value is the		ation of the analyte i	n the sample.		

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TABLE 3 SOIL AND GROUNDWATER CLEANUP LEVELS NORTH MARINA AMERON/HULBERT SITE PORT OF EVERETT, WASHINGTON

	Proposed Soil Cleanup Level (mg/kg)	Proposed Groundwater Cleanup Level (μg/L)
Antimony	32	
Arsenic	20	5
Copper		3.1
Lead	250	
cPAH TEQ	0.14	
bis(2-Ethylhexyl)phthalate		2.2
1,1-dichloroethylene		3.2
TPH-Dx	2,000	500
TPH-Oil		500
TPH-Gx	100	

-- = Constituent is not a contaminant of concern for this media.

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

cPAH = carcinogenic polycylic aromatic hydrocarbons

TEQ = Toxicity Equivalency Factor

TPH-Dx = total petroleum hydrocarbons - diesel range

TPH-Oil = total petroleum hydrocarbons - oil range

TPH-Gx = total petroleum hydrocarbons - gasoline range

APPENDIX A

Technical Memorandum – Craftsman District Boatyard Expansion Emergency Action

TECHNICAL MEMORANDUM



TO: Andy Kallus, Washington State Department of Ecology

FROM: Larry Beard, P.E., L.G. Kathryn Hartley

DATE: November 7, 2011

RE: EMERGENCY ACTION CLEANUP CRAFTSMAN DISTRICT BOATYARD EXPANSION AREA NORTH MARINA AMERON/HULBERT SITE EVERETT, WASHINGTON

This technical memorandum presents the results of the emergency cleanup action conducted at the Port of Everett (Port) North Marina Ameron/Hulbert site (Site) to address petroleum hydrocarbon soil contamination in a portion of the Site that is being redeveloped by the Port as an expansion of the Port's existing Craftsman District boatyard. A remedial investigation/feasibility study (RI/FS) is currently underway for the Site under Agreed Order No. 6677 between the Port, Ameron International, and the Hulberts [the potentially liable parties (PLPs)], and the Washington State Department of Ecology (Ecology).

The boatyard expansion is being constructed over the next few months on an expedited schedule within the area shown on Figure 1. Ecology determined that, based on factors including the schedule for construction of the boatyard expansion, an emergency action for partial cleanup of the boatyard expansion area was needed to adequately protect human health and the environment in advance of the cleanup action to be completed following the RI/FS. The emergency cleanup action was conducted in accordance with the Emergency Action Cleanup Plan dated May 3, 2011, and approved by Ecology in May 5, 2011 letter directing the PLPs to implement an emergency action consistent with the May 3, 2011 plan.

This technical memorandum provides a brief summary of the boatyard expansion area investigation results, emergency action activities, and the results of post-excavation compliance monitoring. These data will also be incorporated into the RI report, which will be prepared following completion of the supplement RI sampling.

BOATYARD EXPANSION AREA INVESTIGATION RESULTS

Based on the results of the initial RI, diesel- and oil-range petroleum hydrocarbons were present in shallow soil at concentrations greater than the Site preliminary screening levels (PSLs) in two areas within the boatyard expansion: 1) an approximately 20-ft by 30-ft area in the western portion of the boatyard expansion area (West Area), and 2) an approximately 15-ft by 20-ft area in the eastern portion of the boatyard expansion area (East Area). West Area soil contamination consisted of a surficial layer of black, petroleum hydrocarboncemented sand and woodchips extending to a depth of approximately 0.5 ft below ground surface (BGS) and soil immediately below the surficial material to a depth of about 1.5 ft BGS that exceeded the dieseland heavy oil-range petroleum hydrocarbons PSLs. East Area soil contamination consisted of petroleum hydrocarbons in shallow soil directly beneath a concrete pad and a layer of crushed rock that had been placed during the field investigation to provide access for sampling in an area of ponded water.

EMERGENCY ACTION ACTIVITIES

Excavation activities were completed on August 22, 2011. Based on visual observation compliance monitoring (discussed in the next section), the West Area excavation extended to 2 to 3 ft BGS within the visually affected area. The total volume of soil removed from this area was approximately 44 cubic yards.

Prior to East Area excavation, clean overburden material (crushed rock) was removed and stockpiled for reuse as excavation backfill. Additionally, a concrete slab located on top of the affected material was demolished and transported to an offsite recycling facility. Petroleum hydrocarbon soil contamination in the East Area was initially excavated to a depth of about 1.5 ft BGS. However, because petroleum hydrocarbons were observed during field screening and sheen was observed in water that collected at the base of the excavation, the excavation was continued to a depth of about 2.5 ft BGS, at which point field screening no longer indicated the presence of petroleum hydrocarbons and sheen was no longer observed to be present. Compliance monitoring (discussed in t he next section) confirmed that concentrations of petroleum hydrocarbons were below the Site PSLs. The total volume of soil removed from this area was about 35 cubic yards.

The impacted soil from these areas was excavated and directly loaded into trucks for transport to Cemex in Everett, Washington for treatment using thermal desorption. Prior to backfilling the West Area excavation, a second concrete pad was demolished and transported to an offsite recycling facility. The excavations were backfilled with a combination of quarry spalls, clean overburden soil removed from the East Area, and imported select borrow fill material that had been previously tested for metals (arsenic, cadmium, chromium, copper, lead, mercury, and zinc) to confirm that the import fill met Site PSLs.

COMPLIANCE MONITORING

Compliance monitoring in the West Area consisted of collecting one soil sample from the approximate center of each of the excavation sidewalls and one soil sample from the center of the base of the excavation (Figure 1). The samples were analyzed for diesel- and heavy oil-range petroleum hydrocarbons by Method NWTPH-Dx. Petroleum hydrocarbons were not detected in any of the compliance monitoring samples in the West Area at concentrations greater than the laboratory reporting limits. Results of compliance monitoring sampling in the West Area are presented in Table 1.

DRAFT

Compliance monitoring in the East Area was originally planned to consist of collection of one soil sample from the center of the base of the excavation (lateral extent of contamination was bound by characterization soil borings); however, field screening identified localized areas of petroleum hydrocarbon-impacted soil during the excavation, mainly in the western portion of the East Area. The excavation was extended to a depth of 2.5 ft and field screening no longer indicated the presence of petroleum hydrocarbons. Ecology then requested the collection of four compliance monitoring samples, one from each corner of the base of the excavation, rather than the originally planned single sample. East Area confirmation sample locations are shown on Figure 1. The confirmation samples were analyzed for diesel- and heavy oil-range petroleum hydrocarbons by Method NWTPH-Dx. Petroleum hydrocarbons were not detected at concentrations greater than the laboratory reporting limits in any of the compliance monitoring samples in the East Area. Results of compliance monitoring sampling in the East Area are presented in Table 1.

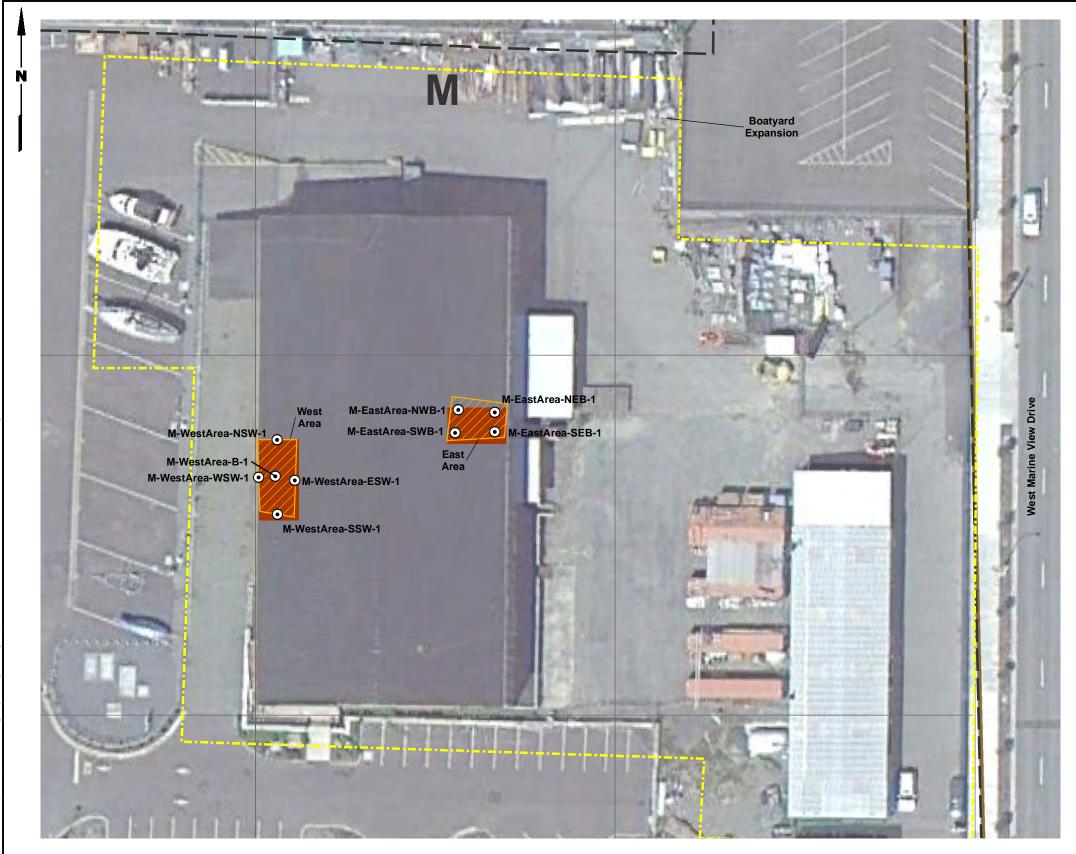
SUMMARY

An emergency action cleanup was conducted to address petroleum hydrocarbon contamination in shallow soil in two areas (East Area and West Area) within the Port's Craftsman District boatyard expansion area. Approximately 79 cubic yards of soil were removed from the two areas and transported off-site for treatment. Diesel-range and heavy oil-range petroleum hydrocarbons were not detected in any of the compliance monitoring samples at concentrations greater than the laboratory reporting limits, demonstrating that the emergency action achieved the Site PSLs. The compliance monitoring results from the emergency action will be used to represent current conditions in the boatyard expansion area in the RI/FS report.

LIMITATIONS

This document was prepared for the exclusive use of the Port of Everett for specific application to the Craftsman District Boatyard Expansion Emergency Action. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of the Port and Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by the Port and Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

Attachments: Figure 1: Emergency Action Cleanup Areas and Sample Locations Table 1: Soil Analytical Results





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• Excavation Soil Sample Location

Cleanup Areas

Planned Cleanup Areas

Boatyard Expansion

Approximate Ameron/Hulbert Site Boundary

M - Area Designation

<u>Note</u>

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

Emergency Action Cleanup Areas and Compliance Monitoring Sample Locations

Figure

TABLE 1 SOIL ANALYTICAL RESULTS COMPLIANCE MONITORING SAMPLES PORT OF EVERETT - AMERON HULBERT

			TOTAL PETROLEUM HYDROCARBON Method NWTPH-Dx (mg/kg)		
Location	Sample ID	Date Collected	Diesel	Oil	
M-East Area-NWB-1	1108095-01	08/22/2011	25 U	50 U	
M-East Area-SWB-1	1108095-02	08/22/2011	25 U	50 U	
M-East Area-NEB-1	1108095-03	08/22/2011	25 U	50 U	
M-East Area-SEB-1	1108095-04	08/22/2011	25 U	50 U	
M-West Area-ESW-1	1108095-05	08/22/2011	25 U	50 U	
M-West Area-B-1	1108095-06	08/22/2011	25 U	50 U	
M-West Area-SSW-1	1108095-07	08/22/2011	25 U	50 U	
M-West Area-NSW-1	1108095-08	08/22/2011	25 U	50 U	
M-West Area-WSW-1	1108095-09	08/22/2011	25 U	50 U	
Preliminary Screening Level			2,000	2,000	

 $\mathsf{U}=\mathsf{Indicates}$ the compound was not detected at the reported concentration.

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APPENDIX B

Technical Memorandum – Trunk Line Emergency Action

TECHNICAL MEMORANDUM



TO: Andy Kallus, Washington State Dep	partment of Ecology
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FROM: Larry Beard, P.E., Landau Associates

DATE: July 24, 2014

RE: CONSTRUCTION DOCUMENTATION STORMWATER TRUNK LINE CLEANOUT AND REPAIR EMERGENCY ACTION NORTH MARINA AMERON/HULBERT SITE EVERETT, WASHINGTON

This technical memorandum documents the Stormwater Trunk Line Cleanout and Repair Emergency Action (EA) at the North Marina Ameron/Hulbert site (Site). The EA included the cleanout of the existing trunk line located along the north Site boundary, and the replacement of a portion of the existing stormwater trunk line. A Site vicinity map is provided as Figure 1. A site plan showing the location of the trunk line EA in relation to the Site is provided as Figure 2. This work was conducted by the Port of Everett under an Emergency Action directed by the Washington State Department of Ecology (Ecology). Norton Industries, the property owner to the north of the Port's property, also participated in this work during the trunk line replacement phase of the project.

A remedial investigation/feasibility study (RI/FS) was completed for the Site under a Model Toxics Control Act (MTCA) Agreed Order No. 6677 between Port, Ameron International and the Hulberts [the potentially liable parties (PLPs)], and Ecology. This EA was conducted prior to the final RI/FS cleanup action implementation to ensure that the trunk line does not become a conduit for release of contaminated soil or groundwater to marine surface water prior to implementation of the final cleanup action.

EA BACKGROUND

The stormwater trunk line is located near the north property boundary that separates the Site from the Norton Industries property. Portions of the trunk line are located on Port property and portions are located on the Norton Industries property to the north (which includes the TC Systems site). Stormwater from both properties discharges to the trunk line. The trunk line was installed sometime between the mid-1970s and the early 1980s and was constructed of sections of 18- and 24-inch-diameter corrugated metal pipe (CMP). At the time of the EA, the trunk line was in poor condition, likely due to corrosion throughout the years following its installation, and contained a large accumulation of contaminated solids.

The trunk line discharges directly to marine surface water in the Port's 12th Street Marina (a.k.a., 12th Street Yacht Basin) and contained solids with elevated concentrations of a number of hazardous

substances (see paragraph below). Although sediment quality data indicate that the accumulated solids have not impacted marine sediment since the 12th Street Yacht Basin was dredged in 2006, the trunk line provided a potential conduit for discharge of these solids to surface water and sediment. Additionally, the poor condition of the trunk line at the time of the EA potentially provided a conduit for contaminated soil or groundwater from the Site and the adjacent TC Systems site to the north to impact marine surface water or marine sediment.

It is noted that pre-dredging sediment investigations in the 12th Street Yacht Basin (including the portion of the 12th Street Yacht Basin located south of the Site boundary) found sediment management standard (SMS) exceedances, although not widespread, of heavy metals and phthalates, elevated concentrations of total petroleum hydrocarbons (TPH), and slightly elevated concentrations of dioxins/furans.

Based on factors that included the schedule for final Site cleanup and the potential risk to marine surface water and sediment, the EA was conducted to first clean out the existing trunk line and then construct a new trunk line to replace a portion of the existing trunk line. Because of the poor condition of the trunk line, and because the cleanout work required the use of high pressure water jetting, the cleanout activities were expected to create the risk of further degradation of the pipe and potential pipe collapse. This risk, in addition to the environmental benefit of a watertight stormwater pipe at this cleanup site, was the basis of the need for replacing the trunk line as part of the EA.

Solids samples collected from the former trunk line during the RI contained elevated concentrations of heavy metals; semivolatile organic compounds (SVOCs); polychlorinated biphenyls (PCBs); heavy metals; TPH, and concentrations of dioxins/furans that would be considered a threat to human health or ecological receptors if discharged to marine sediment. In addition to the potential discharge of these accumulated solids to marine surface water, the suspected poor condition of the trunk line posed a potential for contaminated soil and/or groundwater to enter the trunk line. Hazardous substances that were identified as being present in soil and/or groundwater adjacent to the trunk line included heavy metals, petroleum hydrocarbons, PCBs, and SVOCs.

Based on the potential risk to marine surface water and sediment, an EA for cleanout and repair of the trunk line was presented in a September 19, 2012 technical memorandum (Landau Associates 2012) and was authorized by Ecology in a September 19, 2012 letter (Ecology 2012). The original plan called for slip-lining the trunk line with Cured-In-Place-Pipe (CIPP) after accumulated stormwater solids were removed from the existing CMP trunk line. Video inspection of the trunk line following its cleaning revealed that the CMP had deteriorated to the point that CIPP could not be used to slip-line the trunk line. It was also discovered that one of the sections of trunk line was 18 inches in diameter instead of 24 inches, which had previously been reported. These conditions significantly limited the implementability and capacity of a slip-line repaired trunk line. Based on these considerations, and a concern that installing the trunk line along the current alignment could threaten the stability of the Bayside Marine building, the EA was modified to construct a new trunk line to the north of the western portion of the existing trunk line as depicted on Figure 2. The new trunk line would be installed using conventional trenching construction methods, as was documented in the EA work plan addendum (Landau Associates 2013). The portion of the existing trunk line located east of the SD-8 lateral connection to catch basin SD-5 is located within Cleanup Area G-2. This portion of the trunk line will be replaced as part of the final cleanup action for the Site and was not addressed as part of this EA, with the exception that accumulated solids were cleaned out as discussed below.

EA IMPLEMENTATION

The EA was implemented in two phases. The first phase consisted of removing solids accumulated in the existing trunk line and the second phase consisted of replacing the portion of the existing trunk line that was not located within or adjacent to the Area G-2 cleanup area. The implementation of the EA is presented in the following sections.

Trunk Line Cleanout

The trunk line cleanout was conducted from April 15, 2013 to May 30, 2013. Accumulated solids were removed from the trunk line by jetting and removing the solids slurry in the closest downstream manhole using a vactor truck. Approximately 13 tons of accumulated sediment were removed from the trunk line and disposed of at Waste Management's Greater Wenatchee Landfill. Following cleanout, the trunk line was video surveyed, to the extent possible. However, because some sections of the pipe were in poor condition, and only a limited number of access locations were available, the video survey could not be completed for large segments of the trunk line. As previously indicted, the video survey that was completed showed that some sections of the CMP were in too poor a condition to be repaired by slip lining.

Following the trunk line cleanout and prior to commencing the trunk line replacement, several sinkholes emerged along the section of pipe located adjacent to the Bayside Marine Dry-Stack building. As a result, the Port of Everett Commission authorized an Emergency Declaration to expedite the pipe replacement.

Trunk Line Replacement

Construction of the new portion of trunk line occurred under the Port's Emergency Declaration between December 1 and December 30, 2013. The new trunk line was completed parallel to, and north

of, the existing trunk line between catch basin CB-111 and eastward to the point where the SD-8 lateral connects to the trunk line as depicted in Figure 2. As previously indicated, the portion of the existing trunk line located east of the SD-8 lateral connection to catch basin SD-5 will be replaced as part of the final cleanup action for the Site and was not addressed (with the exception that it was cleaned out) as part of this EA. Construction activities included excavation of a trench for the new trunk line, completion of new sections of trunk line (and associated catch basins), management of excavated soil, backfilling the newly constructed trunk line, and abandonment of the old section of trunk line.

On November 25, 2013, prior to the beginning of trench excavation, a monitoring well was discovered within the trench excavation limits to the west of catch basin CB-103 on Norton Industries property. Jim Schack of Norton Industries Inc. was notified and personnel from Stantec Consulting, on behalf of Norton Industries, notified Ecology and decommissioned the well without incident on November 27, 2013.

Placement of the new trunk line occurred as each section of trenching was completed. The new trunk line was constructed of 24-inch-diameter high-density polyethylene (HDPE) pipe and connected to all stormwater laterals served by the former trunk line. Construction of the new line was completed in substantive compliance with all local and state requirements, as described in the *Emergency Action Amendment Stormwater Trunk Line Cleanout and Repair* (Landau Associates 2013). The new trunk line alignment is shown on Figure 2 and in the as-built drawing for this project (Drawing C1.1), included as Attachment 1.

After installation of the new trunk line sections, crushed surfacing base coarse (CSBC) was used to bed around the new trunk line pipe. Base coarse material was analyzed for arsenic by ALS Laboratories, located in Everett, Washington. The arsenic concentration was well below the Site screening level in the base coarse material.

Soil excavated from the trench that passed field screening criteria was used to backfill above the new trunk line pipe. An additional 90 cubic yards of backfill material was required to backfill some areas of the trench, and was taken from surplus structural backfill used for the Everett Shipyard Site upland cleanup. In areas where groundwater was encountered at excavation depth, a layer of quarry spalls was placed 6 to 12 inches deep and then CSBC was placed above it. Groundwater, when encountered, was pumped to the sanitary sewer under permit with the City of Everett.

Decommissioning of the old section of trunk line between the point where the SD-8 lateral connects to the trunk line westward to catch basin CB-111 was completed on December 12, 2013, while the section of the trunk line between CB-111A and CB-111 was decommissioned on December 19, 2013. Decommissioning was accomplished by filling the disconnected section of the trunk line with cement slurry.

Following the completion of the trunkline replacement and trunkline abandonment, the Port's contractor surveyed the foundation of Bayside Marine's Dry-Stack building. The survey results indicated that the cleanout and replacement activities, and the sinkholes mentioned in the previous section, did not damage the building.

The property was fully restored following the trunkline replacement, including replacement of affected fence panels, replacement of demolished asphalt, and other minor site features that were affected by the work.

SOIL MANAGEMENT

Soil excavated during pipeline construction was managed consistent with the Contamination Contingency Plan developed for the North Marina Redevelopment Site (Landau Associates 2008). This included screening excavated soil for visual or olfactory evidence of contamination and segregating potentially contaminated soil for analytical testing.

At the new catch basin CB-102 location on Norton Industries property, dark grey soil and wood material (planks, posts, and other wood debris) were encountered during excavation. This material was segregated into one stockpile and Landau Associates' personnel collected samples to characterize the excavated soil quality. Potentially contaminated soil was also encountered on Norton Industries property between catch basin CB-102 and the location for new catch basin CB-103. This material was segregated into two additional stockpiles based on visual indications of potential contamination (dark grey soil, planks, posts, and other wood debris) and characterized. Analytical results from all three of the stockpiles indicated elevated levels of some SVOCs, as well as arsenic in two of the three stockpiles; 625 tons of contaminated soil was transported to Allied Waste for disposal as solid waste. Analytical results of the stockpile sampling are provided as Attachment 2.

USE OF THIS MEMORANDUM

This technical memorandum has been prepared for the use of the Port of Everett and the Washington State Department of Ecology for specific application to the North Marina Ameron/Hulbert Site. None of the information, conclusions, and recommendations included in this document can be used for any other project without the express written consent of the Port and Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and written authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily

exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

REFERENCES

Ecology. 2012. Letter re: Authorization - Implementation of the Trunk Line Cleanout and Repair Emergency Action. From Andy Kallus, Washington State Department of Ecology, Land Cleanup Unit, Land and Aquatic Lands Cleanup Section, Olympia, Washington, to Larry Beard, Landau Associates, Inc., Edmonds, Washington. September 19.

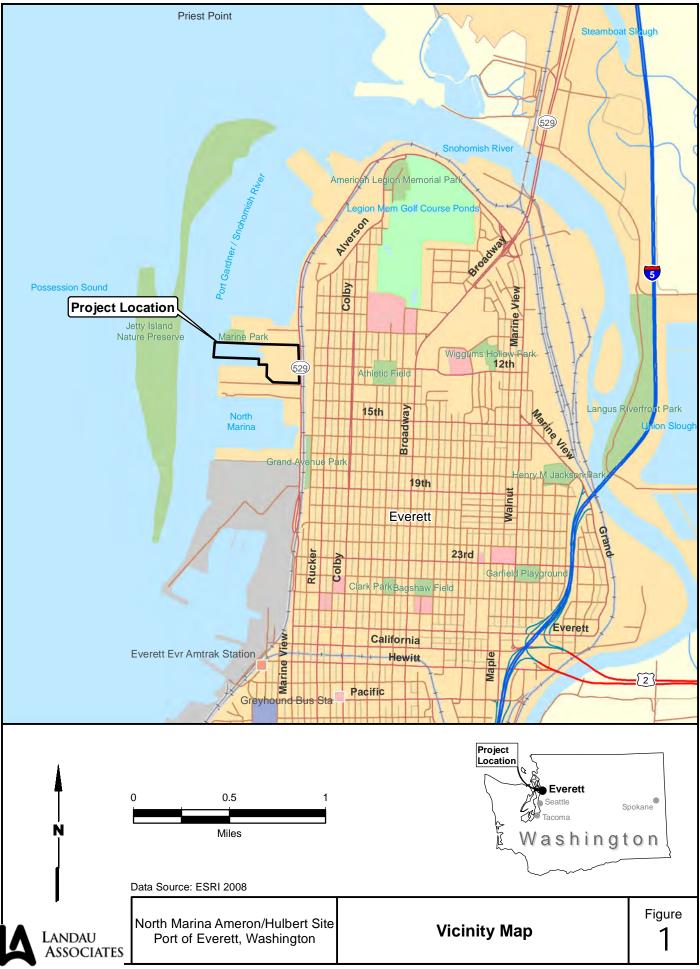
Landau Associates. 2013. Technical Memorandum to Andy Kallus, Washington State Department of Ecology, re: *Emergency Action Amendment Stormwater Trunk Line Cleanout and Repair, North Marina Ameron/Hulbert Site, Everett, Washington.* Larry Beard, Landau Associates. November 15.

Landau Associates. 2012. Technical Memorandum to Andy Kallus, Washington State Department of Ecology, re: *Emergency Action Cleanup Plan, Stormwater Trunk Line Cleanout and Repair, North Marina Ameron/Hulbert Site, Everett, Washington.* Larry Beard, Landau Associates. September 19.

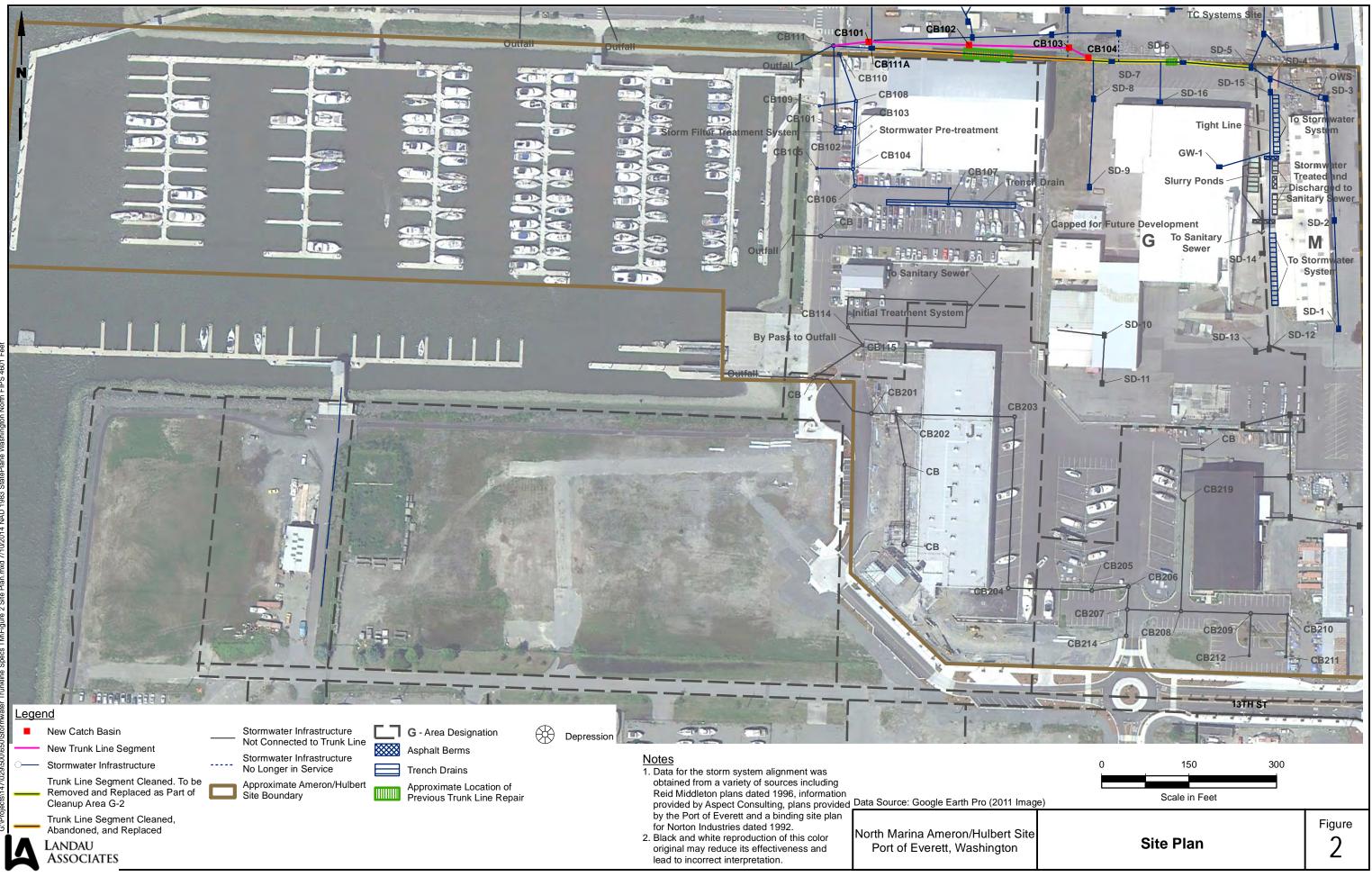
Landau Associates. 2008. *Contamination Contingency Plan, North Marina Redevelopment Site, Everett, Washington*. Prepared for the Port of Everett. January 30.

ATTACHMENTS

Figure 1: Vicinity Map Figure 2: Site Plan Attachment 1: Trunk Line Replacement As-Built Drawing Attachment 2: Stockpile Analytical Results

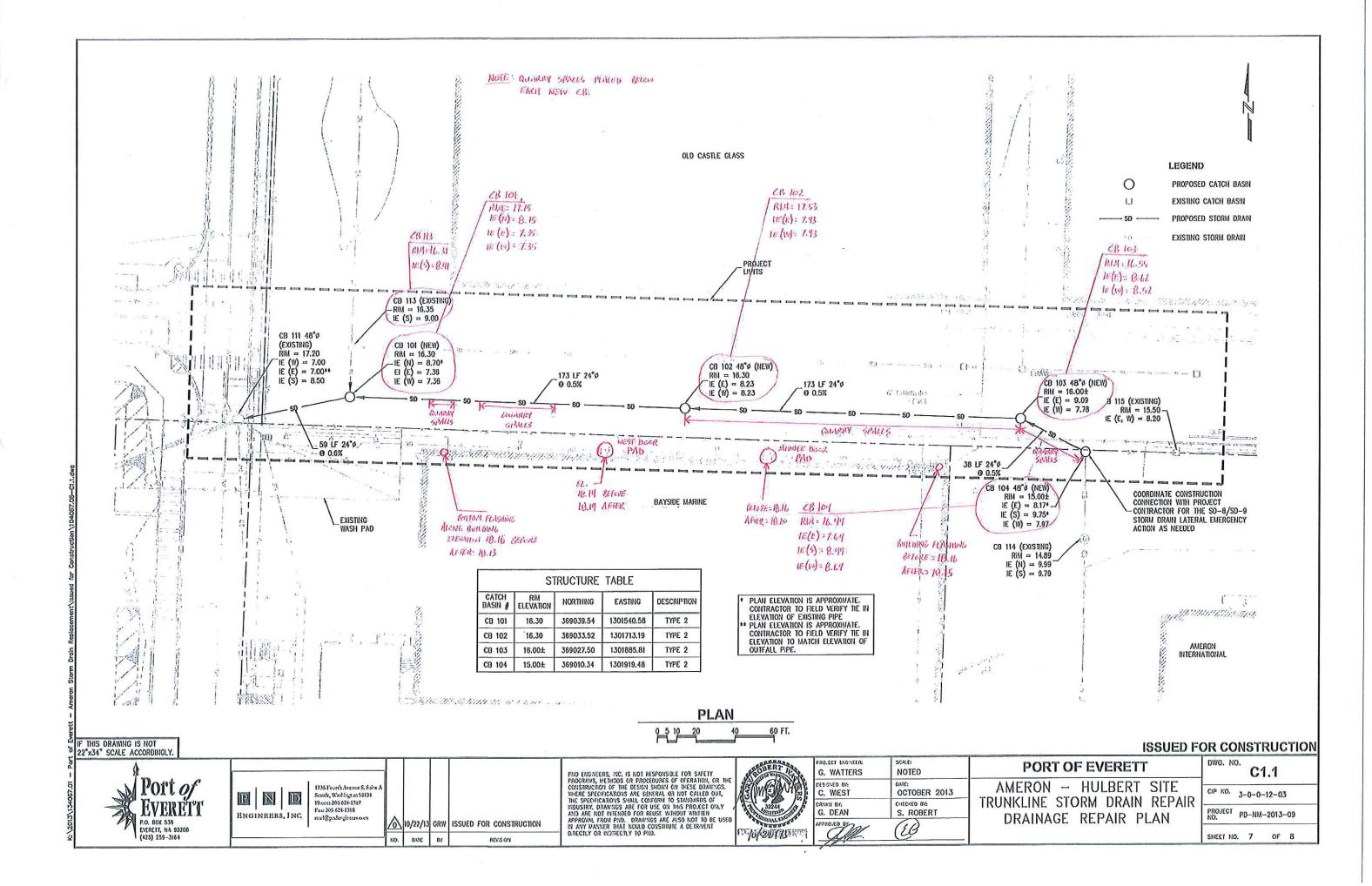


Y:\Projects\147029\Mapdocs\Ameron Hulbert Site\2012 RIFS Report\Fig1-Vicinity Map.mxd 9/19/2012



ATTACHMENT 1

Trunk Line Replacement As-Built Drawing



ATTACHMENT 2

Stockpile Analytical Results

ATTACHMENT 2 STOCKPILE ANALYTICAL RESULTS NORTH MARINE REDEVELOPMENT SITE

	Preliminary	SP-1	SP-3	SP-5
	Screening Levels (a)	EV13120036-01 12/05/2013	EV13120059-01 12/09/2013	EV13120059-03 12/09/2013
TOTAL PETROLEUM				
HYDROCARBONS (mg/kg)				
Method NWTPH-DX	0.000		05.11	F 4
Diesel Oil	2,000 2,000	330 220	25 U 51	51 89
Method NWTPH-GX	2,000		51	
Gasoline	30/100 (b)			7.6
VOLATILES (µg/kg)				
Method SW8260C				
Dichlorodifluoromethane				10 U
Chloromethane Vinyl Chloride				10 U 10 U
Bromomethane				10 U
Chloroethane				10 U
Carbon Tetrachloride				10 U
Trichlorofluoromethane				10 U
Carbon Disulfide				10 U
Acetone				50 U
I,1-Dichloroethene				10 U 20 U
Methylene Chloride Acrylonitrile				20 U 50 U
Methyl T-Butyl Ether				10 U
Frans-1,2-Dichloroethene				10 U
,1-Dichloroethane				10 U
2-Butanone				50 U
Cis-1,2-Dichloroethene				10 U
2,2-Dichloropropane				10 U
Bromochloromethane Chloroform				10 U 10 U
I,1,1-Trichloroethane				10 U
1,1-Dichloropropene				10 U
I,2-Dichloroethane				10 U
Benzene	0.29			5.0 U
Trichloroethene				10 U
1,2-Dichloropropane				10 U
Dibromomethane				10 U
Bromodichloromethane Trans-1,3-Dichloropropene				10 U 10 U
4-Methyl-2-Pentanone				50 U
Foluene	110			10 U
Cis-1,3-Dichloropropene	-			10 U
I,1,2-Trichloroethane				10 U
2-Hexanone				50 U
I,3-Dichloropropane				10 U
				10 U
Dibromochloromethane				10 U 5.0 U
Chlorobenzene				10 U
1,1,1,2-Tetrachloroethane				10 U
Ethylbenzene	18			10 U
n,p-Xylene	16,000			20 U
Styrene				10 U
-Xylene	16,000			10 U
Bromoform				10 U
sopropylbenzene I,1,2,2-Tetrachloroethane				10 U 10 U
1,1,2,2-1 etrachioroethane				10 U 10 U
3romobenzene				10 U
N-Propyl Benzene				10 U
2-Chlorotoluene				10 U
1,3,5-Trimethylbenzene				10 U
1-Chlorotoluene				10 U
T-Butyl Benzene				10 U
1,2,4-Trimethylbenzene		1		10 U

ATTACHMENT 2 STOCKPILE ANALYTICAL RESULTS NORTH MARINE REDEVELOPMENT SITE

	Preliminary Screening	SP-1 EV13120036-01	SP-3 EV13120059-01	SP-5 EV13120059-03
	Levels (a)	12/05/2013	12/09/2013	12/09/2013
S-Butyl Benzene				10 L
P-Isopropyltoluene				10 L
1,3 Dichlorobenzene				10 L
1,4-Dichlorobenzene				10 L
N-Butylbenzene				10 L
1,2-Dichlorobenzene				10 L
1,2-Dibromo 3-Chloropropane				50 L
1,2,4-Trichlorobenzene				10 L
Hexachlorobutadiene				10 L
Naphthalene				10 L
1,2,3-Trichlorobenzene				10 L
SEMIVOLATILES (µg/kg)				
Method SW8270D		000 11	000 11	000
Pyridine		200 U	200 U	200 L
N-Nitrosodimethylamine		100 U	100 U	100 L
Phenol		530	100 U	100 L
		100 U	100 U	100 L
Bis(2-Chloroethyl)Ether		250 U	250 U	250 L
2-Chlorophenol		250 U	250 U	250 L
1,3-Dichlorobenzene		100 U 100 U	100 U	100 L
1,4-Dichlorobenzene		100 U 100 U	100 U 100 U	100 L 100 L
Benzyl Alcohol		100 U 100 U	100 U 100 U	100 L
1,2-Dichlorobenzene p-Cresol		100 U	100 U	100 L
Bis(2-chloroisopropyl) ether		250 U	250 U	250 L
(1,13)		7200	250 U 100 U	250 C 170
n,p-Cresol (2:1 ratio) N-Nitrosodi-n-propylamine		250 U	250 U	250 L
Hexachloroethane		250 U 100 U	250 U 100 U	230 U 100 L
Nitrobenzene		100 U	100 U	100 U 100 U
		100 U	100 U	100 U 100 U
lsophorone 2-Nitrophenol		100 U	100 U	100 L
•		100 U	100 U	100 L 100 L
2,4-Dimethylphenol Benzoic Acid	320,000	100 U	100 U	100 L
Bis(2-Chloroethoxy)Methane	320,000	250 U	250 U	250 L
2,4-Dichlorophenol		500 U	500 U	500 L
1,2,4-Trichlorobenzene		100 U	100 U	100 L
Naphthalene	140	1600	220	220
4-Chloroaniline	140	1000 U	1000 U	1000 L
2,6-Dichlorophenol		250 U	250 U	250 L
Hexachlorobutadiene		500 U	500 U	500 L
4-Chloro-3-Methylphenol		500 U	500 U	500 L
2-Methylnaphthalene	320	250 U	250 U	250 L
1-Methylnaphthalene	020	250 U	250 U	250 L
Hexachlorocyclopentadiene		100 U	100 U	100 L
2,4,6-Trichlorophenol		100 U	100 U	100 L
2,4,5-Trichlorophenol		100 U	100 U	100 L
2-Chloronaphthalene		100 U	100 U	100 L
2-Nitroaniline		100 U	100 U	100 L
Acenaphthylene		140	100 U	100 L
Dimethyl phthalate		100 U	100 U	100 L
2,6-Dinitrotoluene		100 U	100 U	100 L
Acenaphthene	66	100 U	100 U	100 L
n-Nitroaniline	50	100 U	100 U	1000 L
2,4-Dinitrophenol		100 U	100 U	100 L
1-Nitrophenol		100 U	100 U	100 L
Dibenzofuran		100 U	100 U	100 L
2.4-Dinitrotoluene		100 U	100 U	100 L
2,3,4,6-Tetrachlorophenol		100 U	100 U	100 L
Diethyl phthalate		100 U	100 U	100 L
Fluorene	553	120	100 U	100 L
4-Chlorophenyl-Phenylether	000	100 U	100 U	100 L
4-Nitroaniline		250 U	250 U	250 L
4,6-Dinitro-2-Methylphenol		100 U	100 U	100 L
			100 U	
N-Nitrosodiphenylamine		100 U	11111	100 L

ATTACHMENT 2 STOCKPILE ANALYTICAL RESULTS NORTH MARINE REDEVELOPMENT SITE

	Preliminary	SP-1	SP-3	SP-5
	Screening	EV13120036-01	EV13120059-01	EV13120059-03
	Levels (a)	12/05/2013	12/09/2013	12/09/2013
4-Bromophenyl phenyl ether		100 U	100 U	100 U
Hexachlorobenzene		100 U	100 U	100 U
Pentachlorophenol		500 U	500 U	500 U
Phenanthrene	12,000	250	160	180
Anthracene	12,000	100 U	100 U	100 U
Carbazole		250 U	250 U	250 U
Dibutyl phthalate	100	100 U	100 U	100 U
Fluoranthene	89	150	100 U	140
Pyrene	2,400	490	100 U	140
Butyl benzyl phthalate	530	100 U	100 U	100 U
3,3'-Dichlorobenzidine		250 U	250 U	250 U
Benz[a]anthracene	TEQ	100 U	100 U	100 U
Chrysene	TEQ	100 U	100 U	100 U
Bis(2-Ethylhexyl) Phthalate	4.9	920	100 U	100 U
Di-N-Octyl Phthalate		100 U	100 U	100 U
Benzo(b)fluoranthene	TEQ	100 U	100 U	100 U
Benzo(k)fluoranthene	TEQ	100 U	100 U	100 U
Benzo(a)pyrene	0.14	100 U	100 U	100 U
Indeno(1,2,3-cd)pyrene	TEQ	100 U	100 U	100 U
Dibenzo(a,h)anthracene	TEQ	100 U	100 U	100 U
Benzo(ghi)perylene cPAH TEQ	0.14	100 U ND	100 U ND	100 U ND
CPARTEQ	0.14	ND	ND	ND
PCBs (mg/kg)				
Method SW8082				
Aroclor 1016		0.50 U	0.10 U	0.10 U
Aroclor 1221		0.50 U	0.10 U	0.10 U
Aroclor 1232		0.50 U	0.10 U	0.10 U
Aroclor 1242		0.50 U	0.10 U	0.10 U
Aroclor 1248		0.50 U	0.10 U	0.10 U
Aroclor 1254		0.50 U	0.10 U	0.10 U
Aroclor 1260		0.50 U	0.10 U	0.10 U
Aroclor 1268	1.0	0.50 U	0.10 U	0.10 U
Total PCBs	1.0	ND	ND	ND
TOTAL METALS (mg/kg)				
Methods SW6020/SW7471				
Arsenic	20	11	34	37
Barium	1,650	69	45	80
Cadmium	80	0.62 U	0.50 U	0.50 U
Chromium	120,000	20	35	38
Lead	250	28	37	54
Mercury Selenium	24	0.053	0.048	0.067
	400	8.8 U	5.0 U	5.0 U 0.50 U
Silver	400	0.63 U	0.50 U	0.50 0
TCLP METALS (mg/L)				
Methods SW6020/SW7470				
Arsenic	5	0.025 U	0.028	0.025 U
Barium	100	0.21	0.52	0.42
Cadmium	1	0.025 U	0.025 U	0.025 U
Chromium	5	0.025 U	0.025 U	0.025 U
Lead	5	0.025 U	0.025 U	0.031
Mercury	0.2	0.00020 U	0.00020 U	0.00020 U
Selenium	1	0.025 U	0.025 U	0.025 U
Silver	5	0.025 U	0.025 U	0.025 U

U = Indicates the compound was not detected at the reported concentration. Bold = Detected compound. Box = Exceedance of Preliminary Screeing Level.

(a) Preliminary Cleanup Screening Level based on lowest soil criteria corrected for PQL and background.(b) MTCA Method A Cleanup Screening Level is 30 mg/kg when benzene is present and 100 mg/kg when benzene is not present.

APPENDIX C

Technical Memorandum – G-1b/G-3 Emergency Action

Memorandum

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Project No:	Oldcastle-Area G-1B Emergency Action
Date:	August 28, 2014
From:	Tom Colligan and Kristin Anderson, Floyd Snider
Copies:	Larry Beard, Landau Associates; Janet Knox, Pacific Groundwater Group; Owen Reese, Aspect Consulting
To:	Andy Kallus, Washington State Department of Ecology

INTRODUCTION

This memorandum documents the recently conducted Emergency Action (EA) for Areas G-1B and G-3 of the North Marina Ameron/Hulbert Site (Site) in Everett, Washington. A vicinity map is provided as Figure 1. Areas G-1B and G-3 are located on land owned by the Port of Everett (Port) and currently occupied by Ameron International (Ameron), a manufacturer of decorative concrete poles. The EA included the excavation of soils and the replacement of a storm drain system that ran through Area G-1B. Both areas were contaminated with sandblast grit and/or cement slurry residue containing heavy metals at concentrations greater than the Site cleanup standards. The EA was conducted in accordance with a February 6, 2014, work plan (Aspect Consulting 2014) that was approved by the Washington State Department of Ecology (Ecology).

EA BACKGROUND

A remedial investigation/feasibility study (RI/FS) for the Site was prepared by Landau Associates (Landau Associates 2014a) under Agreed Order No. 6677 between the Port, Ameron and the Hulberts, and Ecology. The RI/FS report contains a detailed description of the history of the Site and its associated contamination. The Site was divided into several investigation areas, including Area G, which consists roughly of the area used as a concrete pole manufacturing facility since the early 1970s. The majority of Area G is paved with asphalt or covered by buildings, except for unpaved land along its western boundary with Area I, now Bayside Marine (Figure 2). This unpaved area is the location of Area G-1. Area G-1 was partially remediated in a 2006 Interim Action undertaken by the Port. Remaining contamination was investigated during the RI/FS, and a new cleanup area, Area G-1B, was identified for cleanup under the preferred RI/FS remedial alternative (Landau Associates 2014a). Area G-3 was also identified during the RI/FS, and was identified for cleanup under the preferred RI/FS remedial alternative (Landau Associates 2014a). Area G-3 was that were taken out of service and abandoned in place by filling the vaults with on-site backfill.

Based on the RI/FS, the constituents of concern (COCs) identified in Areas G-1B and G-3 were antimony, arsenic, and lead. These COCs were detected in several soil sampling locations at

concentrations exceeding one or more of the cleanup levels established in the draft Cleanup Action Plan (DCAP; Figure 2). Antimony concentrations exceeding the cleanup level (32 milligrams per kilogram [mg/kg]) in Area G-1B soil ranged from 127 to 303 milligrams per kilogram (mg/kg); arsenic concentrations exceeding the cleanup level (20 mg/kg) ranged from 21.8 to 3,270 mg/kg; and lead concentrations exceeding the cleanup level (250 mg/kg) ranged from 417 to 1,460 mg/kg. Based on field screening, several other contaminants were analyzed in compliance samples collected from Area G-1B including total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, xylenes, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs). Of the additional contaminants listed above, only TPH gasoline- and diesel-range organics and cPAHs were identified as Site COCs with soil cleanup levels identified in the DCAP. Contaminants not identified as Site COCs in the RI/FS were compared to soil screening levels identified in the RI/FS. Table 1 summarizes all of the cleanup or screening levels used for the EA.

The discharge of stormwater from the Ameron facility is authorized under an Industrial General Stormwater Permit. Stormwater infrastructure in the G-1B area (prior to the EA) consisted of a lateral line with two catch basins. SD-9 was the upgradient catch basin that connected to SD-8, which in turn connected to the main trunk line that runs along the northern boundary of the Ameron leasehold. In addition, drainage from a separate lateral line, SD-10, was thought to be routed through the southern part of Area G-1B; however, documentation of its exact configuration was not available. The lateral draining from catch basin SD-9 was found to be partially plugged and was identified in an inspection report from Ecology's Water Quality Program as requiring maintenance. The inspection report also indicated that the discharge point associated with storm drain line SD-10 needed to be identified. A section of the trunk line connecting the storm drain system to Port Gardner Bay was replaced by the Port as part of a previous EA (Landau Associates 2014b).

The work plan for the EA included the following activities:

- Removal of soil with contaminant concentrations in excess of the cleanup levels identified in the RI/FS such that the EA can be considered a final cleanup action for Area G-1B
- Removal of arsenic-containing fill soil in the former settling basins at Area G-3 such that the EA can be considered a final cleanup action for Area G-3
- Replacement of catch basins SD-8 and SD-9, the lateral pipe between them, and the lateral pipe connecting SD-8 to the main trunk line
- Mapping and inspection of the lateral pipe draining from catch basin SD-10 to determine where it drains and making improvements as necessary

EA IMPLEMENTATION

The EA was implemented in two concurrent phases, with the storm drain system replacement undertaken in coordination with the excavation of contaminated soil. Both phases were performed by Interwest Construction, Inc. (ICI) with oversight by Floyd|Snider. Key photographs documenting the completion of the EA are presented in Attachment 1.

Area G-1B Excavation Activities

Prior to excavation, subsurface utilities that required protection were located using electromagnetic methods and available utilities maps were reviewed. The preconstruction ground surface and locations of existing stormwater catch basins were surveyed before excavation was begun.

Stormwater erosion and sediment controls were set up to prevent discharge of contaminated waters or sediment to catch basins. During the excavation, stockpiles were covered with plastic sheeting to control dust and prevent excessive turbidity in Site stormwater. Straw wattle and pea gravel were also used to minimize the turbidity of water entering the storm drains. The paved area adjacent to the excavations was swept at the end of each workday to minimize track-out of soil. However, most of the soil work was performed without any tracking over pavement, by keeping the excavation equipment on the soil and the trucks on the pavement.

In Area G-1B, the upper 2 to 3 feet of soils were assumed to be uniformly contaminated based on the RI/FS data and were hauled directly off-site to Rabanco's transfer station in Seattle following excavation. The extent of excavation was expanded in the field to include remaining visible sources of contamination, including sandblast grit and cement slurry. Thus, the initial excavation depth varied between 2 and 4 feet below ground surface (bgs), as shown on Figure 3.

After the collection of uniformly spaced sidewall and bottom confirmation samples, overexcavation was performed in the vicinity of sampling locations with COC concentrations greater than the cleanup levels. These over-excavated areas are shown on Figure 3. An additional foot of soil was removed from the ground surface in the vicinity of excavation base samples G1B-C25, -C29, and -C36. The original northern limit of the excavation was also extended approximately 20 feet north until it reached the backfill for the new trunk line in the vicinity of sidewall sample G1B-C37a. The original eastern limit of the excavation was extended 3 feet east in the vicinity of sidewall sample G1B-C35a and 4 feet east in the vicinity of G1B-C32b. The original southern limit of the excavation was extended 48 feet south in a narrow strip along the building foundation in the vicinity of G1B-C1a. Finally, the area between G1B-C22 and G1B-C23 was excavated to remove visible sandblast grit. Additional confirmation samples were collected from overexcavation areas, in coordination with Ecology. The confirmation sample collection and results are discussed further in the section "Details of Confirmation Sampling" later in this report.

Area G-3 Excavation Activities

Area G-3 consists of three concrete vaults that formerly were concrete slurry settling ponds but were apparently backfilled with contaminated soil after being taken out of service. The western vault was capped with a concrete foundation; the middle and eastern vaults were left uncapped. All soil was removed from the middle and eastern vaults and hauled off-site. The vaults were then broom-swept and eventually backfilled with imported soil and paved with asphalt. The concrete sides and base of the vaults precluded the collection of confirmation samples.

The concrete covering the westernmost pond, however, was found to have heavy steel rebar reinforcement approximately 1 foot below grade and additional solid concrete below this rebar. Repeated attempts to saw cut and break the concrete did not succeed in exposing the former settling pond. Further attempts to advance direct-push borings with a Geoprobe encountered pea gravel below the concrete and resulted in refusal due to concrete rubble in the fill at depths

between 1 and 3 feet below grade. Two samples of the pea gravel (G3-01 and G3-SB1-0-3) were collected and analyzed for arsenic, antimony, and lead. No further work was undertaken at the westernmost vault because this vault is believed to be backfilled with pea gravel and concrete rubble to its full depth.

Storm Drain Replacement

The EA work plan identified the replacement of the existing storm drain lateral between SD-9 and the trunk line (refer to Figure 2) to the north as a key component of the work. The main goal of this replacement was to allow stormwater to bypass the existing plugged line connecting catch basins SD-8 and SD-9. A secondary goal was to determine the discharge location of the lateral draining from SD-10, which had previously been mapped draining west under the pole-finishing building, but the remainder of its path was unknown.

The scope of the planned storm drain replacement was modified somewhat during the preparation for and construction associated with the EA. In the work plan, the scope of the storm drain work included replacement of just catch basins SD-8 and SD-9 and approximately 200 linear feet of associated piping. The scope of the storm drain work was expanded to include the connection of SD-10 to SD-9, work that was prompted by Ameron's observation in December 2013 during the planning for the EA that the storm drain lateral from catch basin SD-10 had stopped draining. The Port had recently completed a separate EA to replace a segment of the trunk line (Landau Associates 2014b). That work included grouting closed the former trunk line pipe, which appeared to be the pipe to which SD-10 was draining. As a result, the planned improvements associated with the recently completed EA were redesigned to connect SD-10 to SD-9, adding approximately 300 linear feet of 8-inch-diameter polyvinyl chloride (PVC) piping and two new catch basins, as shown in Attachment 2. The revised design was submitted to the Port and Ecology prior to construction.

Storm drain replacement was performed by ICI. A rod and level were used to establish the pipe slope and invert elevations. As-built drawings of the constructed improvements are included in Attachment 2. The newly constructed storm drain system consists of the following elements:

- A new Type 1 catch basin to replace SD-8
- An inline check valve installed in the effluent line from SD-8 to prevent tidal intrusion
- A new Type 2 catch basin to replace SD-9 that is capable of being converted to a pump station, if necessary, for future stormwater management
- Replacement connections from the roof drains of laboratory building and manufacturing building to SD-9
- Two new Type 1 catch basins (SD-16 and -17) installed along the western boundary to route piping from SD-10 to SD-9
- Approximately 500 feet of 8-inch-diameter PVC piping

The new system drains approximately 3.25 acres of Ameron facility through the new catch basin (CB-104) installed by the Port along the new trunk line that drains to Port Gardner Bay.

The majority of the existing storm system in the project area was demolished, and the remainder was cleaned. Catch basins SD-8 and SD-9 and the associated concrete piping were demolished

and disposed of as contaminated material. During the demolition of SD-9, two roof drain systems were discovered: one was associated with a roof drain from the laboratory building and included a cistern found to contain sandblast grit (mentioned below under Additional Work), and the other drained from the main manufacturing building to the east. The roof drain system from the lab building was demolished and replaced. The roof drain system from the main manufacturing building was cleaned by hydrojet and vactor truck. The existing lateral pipe downstream of SD-10 was also cleaned from the new catch basin SD-16 back to SD-10. Management of wastewater generated during cleaning is described in the section "Waste Disposal" below.

Trenching for the storm drain installation occurred after the majority of the contaminated soil removal had been completed. During the initial trenching work starting from the north, excavated soils consisting of sandy hydraulic fill were stockpiled until the results of confirmation sampling identified whether the material could be reused or needed to be disposed of. Three stockpiles met the cleanup levels and were reused as backfill. One stockpile exceeded the cleanup levels and was disposed of off-site.

Groundwater encountered during trenching for the storm drain system was managed either by building the system in the wet or, in a few areas, by using a sump pump to discharge the groundwater to an undisturbed vegetated portion of the Site farther west. A plug was installed in CB-104 to prevent groundwater from draining through the newly installed piping and into the trunk line.

Additional Work

In addition to the soil excavation and stormwater activities described above, conditions were encountered during excavation that were not within the planned work scope and were addressed in coordination with Ecology. These additional tasks included the removal of a roof drain system connected to SD-9, the removal of former underground storage tank (UST) piping in Area G-1B near the laboratory building, and additional investigation of sandblast backfill under the laboratory building.

Along the north foundation of the laboratory building in the eastern sidewall of the Area G-1B excavation, a cistern connecting to the building's roof drain (refer to Figure 2) was found to contain sandblast grit. This cistern was removed and its piping was cut at the excavation sidewall. The cistern was hauled off-site as contaminated material, and the limited amount of sandblast grit that was present in the remaining piping was removed by hand. An additional confirmation sample, G1B-C42, was collected from the excavation sidewall underlying the former cistern.

Adjacent to the cistern, a block-out hole in the concrete footing of the laboratory building was also found to contain residual sandblast grit. Attempts to remove this grit by hand shovel created a small void under the foundation. A limited borescope investigation was performed to determine the extent of the sandblast grit in the void. The boroscope was able to penetrate approximately 10 inches into the void and visually confirm the presence of remaining sandblast grit at the void limits.

A subsequent investigation completed by Landau Associates (Landau Associates 2014c) advanced five Geoprobe soil borings inside the laboratory building. Sandblast grit was found to be contained within a concrete structure underlying an approximately 2.3-foot by 7-foot patch in the concrete floor slab. This patch is situated adjacent to the blockout hole observed in the

building's footing. The sandblast grit was encountered below the concrete floor slab at a depth of 0.4 feet bgs and extended to the concrete bottom of the structure at 1.2 feet bgs. This residual sandblast grit, designated as Area G-4, is proposed to be removed as part of the final cleanup action.

Approximately 30 feet west of the storm drain cistern, a small concrete pad and associated piping for a decommissioned diesel UST (refer to Figure 2) were also encountered during the Area G-1B excavation. Olfactory and photoionization detector (PID) screening of the piping indicated that the pipes potentially contained some petroleum residue; therefore, the pad was removed and disposed of as contaminated material. Galvanized piping running to the slab was cut and capped at the eastern sidewall of the excavation, and a second utility locate using electromagnetic methods was performed to determine whether the pipes were connected to the laboratory building. The pipes were found to enter the laboratory building from the north and terminate approximately 5 feet into the building, where a concrete patch in the building floor measuring approximately 18 by 42 inches suggested that a second underground object such as a pump may have been previously removed. No further electromagnetic anomalies were detected in the area, however, indicating that additional underground objects (such as a UST) are not present. Inside the building, additional galvanized piping was noted extending up through the floor and continuing upward through the roof as a vent. Although electrical connectivity could not be established between this vent piping and the pipes entering the building from the east, the two sets of pipes were likely related. Additionally, the location of one excavation confirmation sample, G1B-C16, was moved approximately 5 feet east of the location indicated in the work plan in order to sample the material close to the former UST. That sample was analyzed for gasoline- and oil-range petroleum hydrocarbons, and the results were less than the detection levels for both analytes (Table 2).

During removal of the former SD-8 and SD-9 catch basin structures, sandblast grit was observed in the catch basins and concrete storm drain pipe connecting these structures. Initial soil samples collected from below the base of former SD-8 and SD-9 contained arsenic at concentrations greater than the cleanup levels. To ensure that contaminated material within the pipe did not affect the underlying soil, the concrete storm drain pipe was completely removed rather than decommissioned in place as originally planned. This storm drain removal effort also required cutting back approximately 3 to 4 feet of asphalt from the northeast side of the excavation, to an area outside the excavation limits for mass removal of contaminated soil already delineated by confirmation samples with contaminant concentrations less than cleanup levels. It was discovered that the storm pipe was not a straight run, but instead was installed with a jog at mid-length (Figure 3) to avoid wooden pilings.

All concrete storm drain structures were handled as contaminated and hauled off-site for disposal. After removal of the pipe, additional samples G1B-D4 through -D5 and G1B-D9 through -D14 were collected at the base of the excavated ditch dug to remove the pipe. Samples were collected at approximately 30-foot spacing and analyzed for antimony, arsenic, and lead. Additional samples (G1B-D1 through -D3 and G1B-D6 through -D8) were also collected from the base of the trench for the new storm drain. The storm drain trenches were sampled at the intersection of the trench base and sidewall, at depths ranging from 5 to 6 feet bgs. Samples from the former storm drain locations were collected below the bottom depths of each drain, approximately 6.5 feet bgs at SD-8 and 3.5 feet bgs at SD-9. The additional ditch samples are shown on Figure 3.

In the vicinity of former catch basin SD-8, a supplemental soil investigation was conducted to delineate the horizontal and vertical extents of arsenic contamination, which was persistent in that area. Nine direct-push soil borings were advanced with a Geoprobe to a depth of 12 feet bgs, and the soils were sampled for EA COCs. This investigation was completed according to a supplemental work plan developed in coordination with Ecology (Attachment 3). Soil boring logs from the supplemental investigation are presented in Attachment 4 and a summary of soil analytical data in the SD-8 Area is presented in Table 4. After the receipt of analytical data from the samples collected during this supplemental investigation that delineated the majority of the remaining contamination, the minor amount of remaining contaminated soil near SD-8 was excavated to a depth of 10 feet bgs using a trench box. The analytical data obtained from the soil borings were considered to be the interim confirmation sampling results for this additional excavation because extensive sloughing of soil into the pit prevented the collection of confirmation samples.

A subsequent Geoprobe investigation completed by Landau Associates (Landau Associates 2014c) advanced two soil borings in the vicinity of the former SD-8 excavation after the area was backfilled. Soil samples collected from below the base of former SD-8 and from the south end of former SD-8 over-excavation had arsenic concentrations less than the Site cleanup level. These results, in conjunction with the interim confirmation samples collected during the EA, confirmed that arsenic contamination greater than cleanup levels did not remain in this area.

DETAILS OF CONFIRMATION SAMPLING

Excavation confirmation sampling was completed according to the work plan. The confirmation samples were field screened for visual, olfactory, and/or photoionization detector (PID) indications of contamination. Field indications of contamination (e.g., odor and PID readings) were generally not noted once the visually contaminated soils were removed. Samples were collected from the excavation base and sidewalls at approximately 50-foot intervals in accordance with the EA work plan (Aspect Consulting 2014). In areas that were over-excavated on the basis of the initial confirmation sampling results, the additional confirmation samples were analyzed only for those COCs that exceeded their cleanup levels in the original sample. The analytical results for the final confirmation sampling as well as the results for imported soil are presented in Table 2. The analytical results for soil that was excavated and hauled off-site for disposal are presented in Table 3. The originally planned locations of the confirmation samples are shown on Figure 3.

The following bullets summarize the deviations from the general sampling scheme described above:

 A sheen and hydrocarbon odor were noted in the sample collected from the base of former SD-9 (G1B-SD9-PitB). This sample was analyzed for gasoline- and diesel range organics, volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). Arsenic and gasoline-range organics were detected at concentrations greater than their cleanup levels in this sample, and other EA COCs including diesel- and oil-range organics, lead, and antimony were detected at concentrations less than their cleanup levels; scattered low level detections of VOCs and PAHs in this sample were also less than their respective Site or Model Toxics Control Act (MTCA) cleanup levels. This area was subsequently over-excavated and a second base sample (G1B-SD9-PitBb) had non-detect results for arsenic, gasolinerange organics, and VOCs.

- Although no field indications of contamination were noted in the sample from G1B-C16, this sample was also analyzed for diesel-range organics because it was collected adjacent to the former diesel UST. Diesel- and oil-range organics were not present at concentrations greater than the laboratory reporting limit in Sample G1B-C16.
- The planned sidewall samples at G1B-C8, -C11, and -C14 were located within a crushed-rock base course installed on the adjacent Bayside Marine property to the west as part of the Area I Interim Action. Samples were not collected because potentially-contaminated soil underlying the base course was not exposed. A portion of the western sidewall lies within cleanup area I-13 identified in the DCAP, as shown on Figure 3.
- One additional sidewall sample, G1B-C15.5, was also collected from the sidewall midway between G1B-C38 and G1B-C15a, where an unknown black material was observed in the excavation sidewall. Concentrations of EA COCs in this sample were less than Site cleanup levels.
- A thick, heavily-reinforced concrete foundation prevented excavation of soil from the western vault of the former settling ponds. Sampling efforts encountered pea gravel below the slab and hit refusal at 1 to 3 feet below grade. Two samples of the pea gravel (G3-01 by hand auger and G3-SB1-0-3 by Geoprobe) were collected and analyzed for arsenic, antimony, and lead. Both samples met Site cleanup levels for all parameters. Analytical results for these samples are presented in Table 3.

In addition to in-situ soil sampling, the stockpiles of imported backfill soil from a location in Bellevue, Washington, were sampled at a frequency of at least one sample per 500 cubic yards (CY). These samples were analyzed for the Resource Conservation and Recovery Act (RCRA) list of metals and the extended list of potential COCs listed in the work plan, including gasoline- and diesel-range TPH and PAHs. Although several PAH compounds were detected in one of sample, the sum of the Toxicity Equivalency Factors (TEFs) for all detected PAHs was less than the Site cleanup level. Concentrations of all other detected analytes did not exceed their individual MTCA Method B cleanup levels. Stockpile samples were scooped from three to four locations at each stockpile and composited prior to analysis. Imported crushed rock used for final grading was also sampled for arsenic using the methods described above. Analytical results for these samples are presented in Table 5.

Statistical Analysis

Of the 61 confirmation samples collected from the bottom and sidewalls of the main excavation area (i.e., Area G-1B) and 4 surface scrape samples, 3 samples had arsenic concentrations slightly greater than the cleanup level (refer to Figure 3). All other EA COCs were remediated to concentrations less than cleanup levels. At one location, G1B-C2, the area could not be over-excavated to address arsenic contamination at 49 mg/kg because further excavation would have destabilized the row of Ecology blocks that support the adjacent Port-owned property to the west, and contaminated soil was left in place in this area during prior Interim Actions at Area J-3 due to the depth of contamination in this area. Test pits subsequently excavated in this area, however, did not contain the construction debris that was encountered in Area J-3. The two other samples

with arsenic concentrations slightly greater than the cleanup level (G-1B-D11 at 26 mg/kg and G-1B-D9 at 23 mg/kg) were not over-excavated because it would have required removal of additional asphalt and resulted in impacts on the facility.

Preliminary analysis of the entirety of the confirmation sample data indicated overall compliance with the cleanup levels in accordance with WAC 173-303-739(7)(e), because the arsenic concentrations exceeded the cleanup level in less than 10 percent of the samples, and no one exceedance was twice the cleanup level, with the exception of G1B-C2 as described above. The statistical analysis was performed using the MTCA Stat program, which calculates the 95 percent upper confidence limit (UCL) for a data set. A preliminary analysis indicated that the Site data followed a log-normal distribution and were appropriate for calculation of the UCL. The 95 percent UCL for the Site was 11 mg/kg, indicating overall compliance with the arsenic cleanup level. The results of the statistical analysis are presented in Attachment 5.

WASTE DISPOSAL

Waste generated during the EA was primarily soil and demolition debris, with a small quantity of wastewater from the cleaning of existing components of the storm drain system.

All soils excavated during mass removal and all debris from the demolition of the existing storm drain system were managed as contaminated material. A total of approximately 3,178 tons of contaminated or potentially contaminated soil and storm drain pipe were hauled off-site and disposed of at the Roosevelt Regional Landfill. The trucking records are presented in Attachment 6.

Soils excavated during the installation of the new storm drain system were stockpiled and analyzed for the EA COCs. Three of the four stockpiles had COC concentrations less than the cleanup levels; these soils were reused to backfill the trenches after the storm drain excavation. The other stockpile was hauled off-site. The analytical results from the reused and disposed of stockpiles are included in Table 3. Solids and water resulting from cleaning the existing storm drain pipes were temporarily held in the former settling ponds in Area G-3. After the solids were allowed to settle, the water was pumped out of the vault, and the remaining solids were blended with excess imported backfill material as a drying agent and hauled off-site for disposal.

Water used in cleaning the existing storm drains was temporarily detained in the former settling ponds in Area G3 to allow turbidity to settle. A sample of this water was collected and analyzed for metals, cyanide, and nonpolar fats, oils, and grease. Constituent concentrations were less than the allowable limits for discharge to the City of Everett municipal sanitary sewer, and the approximately 2,992 gallons of wastewater were discharged on May 14, 2014, under City of Everett Public Works Discharge Authorization 262-13 for the Ameron/Hulbert Emergency Action. Laboratory analytical data, field pH, and total discharge volume were reported to the City by ICI.

SITE RESTORATION

After the excavation was completed in Areas G-1B and G-3, the excavated areas were backfilled with imported clean material and roller compacted to match the surrounding grade; the sampling results for the imported fill are provided in Table 5. Both areas were compacted and stabilized with a layer of crushed rock after the backfilling was completed. Area G-3 was paved with asphalt, and asphalt was also placed in the area surrounding SD-9. Limited portions of the western edge

of Area G1-B adjacent to the Bayside Marine property were seeded with grass and mulched with straw.

In some instances, soils or demolition debris were temporarily stockpiled on backfilled areas because of limited landfill capacity for their disposal. The stockpiled soils were analyzed for the EA COCs prior to disposal. In those areas where stockpiled soils had concentrations exceeding the Site cleanup levels or where other concerns were noted, the ground surface was scraped, and confirmation samples were collected after the stockpiles were removed in order to confirm that the concentrations at the final ground surface were less than the cleanup levels. The sampling results for the ground surface scrape samples in Area G-1B are provided in Table 3.

Compaction testing was performed by Krazan & Associates in four locations on the crushed rock surfacing and was found to be "at least 95%" in each case, as required by the specifications. These results were transmitted to the Port.

After construction was completed, the ground surface, new storm drain locations, and invert and rim elevations were surveyed by a licensed surveyor. This survey information is presented in Attachment 2.

CONCLUSIONS

The EA was completed in substantial accordance with the work plan, and all of the objectives were met. The soil remaining in Area G-1B is in compliance with the Site cleanup levels except under the Ecology block wall in the vicinity of sample G1B-C2 where it remains at a concentration greater than two times the cleanup for arsenic (i.e., 49 mg/kg). The storm drain was constructed according to the plans, with field modifications to incorporate the SD-10 to SD-11 discharge.

Additional investigation activities by Landau Associates confirmed that arsenic contamination in the vicinity of former SD-8 was removed by over-excavation of this area during the EA. This investigation also found that the remaining sandblast grit under the laboratory building is limited in extent and is contained within a small concrete structure under the building floor slab.

REFERENCES

- Aspect Consulting. 2014. Emergency Action Work Plan for Areas G-1B and G-3, North Marina Ameron/Hulbert Site, Everett, Washington. 6 February.
- Landau Associates. 2014a. Public Review Draft Remedial Investigation/Feasibility Study, North Marina Ameron/Hulbert Site, Everett, Washington. 17 January.
 - ——. 2014b. Construction Documentation, Stormwater Trunk Line Cleanout and Repair Emergency Action, North Marina Ameron/Hulbert Site, Everett, Washington. 7 April.
 - ——. 2014c. Cleanup Action Plan, North Marina Ameron/Hulbert Site, Everett, Washington. 15 July.

ENCLOSURES

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Attachments

- Attachment 1 Key Photographs
- Attachment 2 Storm Drain As-Built Drawing
- Attachment 3 Addendum No. 1 Emergency Action Work Plan for Areas G-1B and G-3 Supplemental Soil Investigation—Area G-1B Emergency Action SD-8 Area
- Attachment 4 Soil Boring Logs
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- Attachment 6 Trucking Documentation

Tables

		Site Soil Cleanup	
		Level	Site Soil Screening
Constituent of Concern	Site COC? ¹	(mg/kg) ²	Level (mg/kg) ³
	3112 COC!	(1118/ Kg)	Level (IIIg/Kg)
Metals Arsenic	Voc	20	
	Yes Yes	32	
Antimony	res	=	
Barium			1,650
Cadmium			80
Chromium	No.		120,000
Lead	Yes	250	
Mercury			24
Selenium			400
Silver			400
Total Petroleum Hydrocarbons			-
Gasoline-Range Organics		30/100 ⁴	
Diesel-Range Organics		2,000	
Oil-Range Organics			2,000
Benzene			0.29
Ethylbenzene			18
Toluene			110
Total Xylenes			16,000
Carcinogenic Polycyclic Aromatic Hydroc	arbons (cPAHs)		•
Benzo(a)anthracene		TEQ	
Benzo(a)pyrene		0.14	
Benzo(b)fluoranthene		TEQ	
Benzo(k)fluoranthene		TEQ	
Chrysene		TEQ	
Dibenzo(a,h)anthracene		TEQ	
Indeno(1,2,3-cd)pyrene		TEQ	
cPAH TEQ (ND=1/2RL) ^{5,6}		0.14	
		0.14	
Polycyclic Aromatic Hydrocarbons (PAH 1-Methylnaphthalene	s) 		
2-Methylnaphthalene			320
Acenaphthene			66
Acenaphthylene			
Anthracene			12,000
Benzo(g,h,i)perylene			
Fluoranthene			89
Fluorene			553
Naphthalene			140
Phenanthrene			12,000
			2,400
Pyrene			2,400

Table 1Relevant Site and MTCA Cleanup Levels

Notes:

-- Not available/not applicable.

1 Constituent identified as a Site COC in the Final RI/FS.

2 Cleanup level identified in the DCAP. This applies to Site COCs.

3 Screening level identified in the RI/FS. This applies to non-Site COCs.

4 The cleanup level for gasoline-range TPH is 30 mg/kg if benzene is detected, and 100 mg/kg if benzene is not detected.

5 Calculation of cPAH TEQ concentrations is per WAC 173-340-708(8)(e).

6 Calculated using detected cPAH concentrations plus one-half the reporting limit for cPAHs that are not detected.

Abbreviations:

COC Constituent of concern

cPAH Carcinogenic polycyclic aromatic hydrocarbon

DCAP Draft Cleanup Action Plan

mg/kg Milligrams per kilogram

MTCA Model Toxics Control Act

ND Non-detect

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RI/FS Remedial Investigation/Feasibility Study RL Reporting limit

Site North Marina Ameron/Hulbert Site

TEQ Toxic Equivalency Quotient

WAC Washington Administrative Code

Construction Completion Report Emergency Action for Areas G-1B and G- 3 Table 1

		Depth	Antimony	Arsenic	Lead	Diesel- Range Organics	Oil- Range Organics
		feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Site	Cleanup Level		32	20	250	2,000	2,000
Sample ID	Sample Date						
G1B-C1a	09-Apr-14	2		17			
G1B-C2	20-Mar-14	2	3	49	100		
G1B-C3	20-Mar-14	2	1.6	19	24		
G1B-C4	20-Mar-14	2	0.85	7.5	30		
G1B-C5	20-Mar-14	2	4	20	19		
G1B-C5 G1B-C6	20-Mar-14	2	1.4	10	170		
G1B-C0 G1B-C7	20-Mar-14	2	0.5 U	5 U	56		
G1B-C7 G1B-C9	19-Mar-14	2	0.51	6.9	27		
G1B-C9 G1B-C10	20-Mar-14	2	0.5 U	<u> </u>	49		
G1B-C10 G1B-C12		2		<u> </u>	23		
	19-Mar-14	2	0.5 U	5.1	7.3		
<u>G1B-C13</u>	25-Mar-14	2	0.52				
<u>G1B-C15a</u>	08-Apr-14			5.4			
<u>G1B-C15.5</u>	25-Mar-14	2	0.73	12	20		
G1B-C16	02-Apr-14	2	0.5 U	<u>5 U</u>	4.6	25 U	50 U
G1B-C17	25-Mar-14	3	0.5 U	6.2	12		
G1B-C18	03-Apr-14	3	0.56	6.5	6.7		
G1B-C19	03-Apr-14	2	0.5 U	5.3	5.4		
G1B-C20	03-Apr-14	3	2.5	5 U	8		
G1B-C21	03-Apr-14	3	0.5 U	10	9.1		
G1B-C22	03-Apr-14	2	0.5 U	12	17		
G1Bx-C22	03-Apr-14	2	0.5 U	11	14		
G1B-C23	21-Mar-14	2	0.5 U	9.8	6		
G1B-C24b	15-Apr-14	2	0.5 U	11	11		
G1B-C25a	08-Apr-14	4	0.55	6.2	5.8		
G1B-C26	21-Mar-14	2	0.5 U	5.3	7.9 U		
G1Bx-C26	21-Mar-14	2	0.5 U	6.3	7.8		
G1B-C27	19-Mar-14	2	0.5 U	10	5.7 U		
G1B-C28	19-Mar-14	2	0.5 U	6.5	5.1 U		
G1B-C29a	02-Apr-14	4		9.4			
G1B-C30	18-Mar-14	2	1.5	16	11		
G1B-C31	18-Mar-14	2	0.73	8.6	9.8		
G1B-C32b	09-Apr-14	2		6.2			-
G1B-C33	18-Mar-14	2	1	7.1	9.3		
G1B-C34	18-Mar-14	2	1.1	12	9		
G1B-C35a	02-Apr-14	2	0.5 U	11	12		
G1B-C36a	02-Apr-14	3		7			
G1Bx-C36a	02-Apr-14	3		11			
G1B-C37a	02-Apr-14	2		11		25 U	50 U
G1B-C38	25-Mar-14	2	1	5.1	28		
G1B-C39	02-Apr-14	2		8.6			
G1B-C40	09-Apr-14	2	0.5 U	2.1 JB	3.5		
G1B-C41	09-Apr-14	2	0.5 U	4.2	13		
G1B-C42	08-Apr-14	3		13			
G1B-D1	11-Apr-14	5		18			
G1B-D2	11-Apr-14	6		8.9			
G1B-D2 G1B-D3	11-Apr-14	6		4.2			
G1B-D5 G1B-D4	11-Apr-14	6		9.1			
G1B-D4 G1B-D5	14-Apr-14	6	0.74	7.5	8.1		
G1B-D5 G1B-D6	14-Apr-14	6	0.74 0.5 U	10	11		
G1B-D0 G1B-D7	14-Apr-14	6	0.5 U	8.5	8.5		
		6			8.5 		
<u>G1B-D8</u>	14-Apr-14			<u>6.5</u>		1	
<u>G1B-D9</u>	25-Apr-14	6	1.2 U	<u>23</u>	14		
<u>G1Bx-D9</u>	25-Apr-14	6	1.2 U	19	13		
G1B-D10	25-Apr-14	6	1.2 U	5 U	7.1		
<u>G1B-D11</u>	25-Apr-14	6	4.9	26	20		
G1B-D12	25-Apr-14	6	1.2 U	12	12		
G1B-D13	25-Apr-14	6	1.2 U	10	6.8		
G1B-D14	25-Apr-14	6	1.3	10	17		

Table 2 **Final Excavation Soil Confirmation Sampling Results**

G1B-D14	25-Apr-14	6	1.3	10	17	
G1B-HA1	19-Mar-14	5.5	0.5 U	8	10	
G1B-HA2	19-Mar-14	5.5	0.5 U	12	11	

Notes:

Bold Indicates a contaminant that exceeds the Site or MTCA CUL.

-- Not available/not applicable.

x Indicates a field duplicate sample.

1 Sample G1B-C2 was collected from within the J-3 Interim Action Area.

Abbreviatons:

bgs Below ground surface

CUL Cleanup level

mg/kg Milligrams per kilogram

MTCA Model Toxics Control Act

Qualifiers:

JB The concentration is estimated due to blank contamination.

U Analyte was not detected at the associated reporting limit.

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Table 3Additional Soil Sampling Results

						Gasoline-	Diesel-	Oil-											Indeno	cPAH TEQ
						Range	Range	Range		Ethyl-			Benzo(a)	Benzo(a)	Benzo(b)	Benzo(k)		Dibenzo(a,h)	(1,2,3-cd)	(ND=
		Depth	Antimony	Arsenic	Lead	Organics	Organic	Organic	Benzene	benzene	Toluene	Xylenes	anthracene	pyrene	fluoranthene	fluoranthene	Chrysene	anthracene	pyrene	1/2RL) ^{3,4}
	Unit	feet bgs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	μg/kg	µg/kg	μg/kg	μg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Site Cleanup Level or Scree	ening Level		32	20	250	30/100¹	2,000	2,000	290	18,000	110,000	16,000,000	TEQ	140	TEQ	TEQ	TEQ	TEQ	TEQ	140
Sample ID Sar	mple Date																			
Overexcavated Initial Confirm	mation Samp	oles ²																		
	0-Mar-14	2	2.6	28	28															
	5-Mar-14	2	16	59	56															
)3-Apr-14	2	16	63	6.5															
G1B-C24a 03)8-Apr-14	2		98																
G1B-C25 03)3-Apr-14	2	46	230	260															
G1B-C29 19	9-Mar-14	2		32																
G1B-C32 18	8-Mar-14	2	3.8	70	24															
G1B-C32a 02)2-Apr-14	2		31																
G1B-C35 18	.8-Mar-14	2	100	570	260															
G1B-C36 18	8-Mar-14	2	20	100	62															
G1B-C37 18	8-Mar-14	2	11	54	53															
SD9 Excavation Samples																				
	15-Apr-14	3	15	52	19	180	48	65	5 U	10 U	10 U	20 U	22	20 U	20 U	20 U	28	20 U	20 U	16.5
G1B-SD9-PitBb 2	25-Apr-14	4		5 U		3 U			0 U	0.1 U	0.05 U	0.2 U								
Storm Drain Trench Excavation	ion Soil Stock	kpile Sam									-									
CIB Hendi Stockpile I	L4-Apr-14		5.3	32	25															
G1B-Trench-Stockpile 2 14	L4-Apr-14		2.8	16	14															
	L4-Apr-14		1.5	13	11															
G1B-Trench-Stockpile 4 1	L6-Apr-14		0.98	12	7.4															
Surface Soil Scrape Samples											-									
•10 •0: apo 1		0-0.25	4	30	21															
G1B-Scrape 1a 29	29-Apr-14	0-0.25		5 U																
G1B-Scrape 2 29	29-Apr-14	0-0.25		12																
G1B-Scrape 3 30	80-Apr-14	0-0.25		5 U																
G1B-C33 Scrape 30	80-Apr-14	0.5-0.75		5																
Area G3																				
G3-01 1	1-Apr-14	0.5-1	0.6	11	6.2															
G3x-01 1	1-Apr-14	0.5-1	0.7	5.3	3.4															
G3-SB1-0-3 24	24-Apr-14	0-3	0.54	8.7	5.7															

Notes:

bold Indicates a concentration that exceeds the Site or MTCA CUL.

-- Not available/not applicable.

X Indicates a field duplicate sample.

1 The MTCA CUL for gasoline-range TPH is 30 mg/kg if benzene is detected and 100 mg/kg if benzene is not detected.

2 Indicates material that was removed and hauled off-site for disposal.

3 Calculation of cPAH TEQ concentrations was performed per WAC 173-340-708(8)(e).

4 Calculated using detected cPAH concentrations plus one-half the reporting limit for cPAHs that were not detected.

Abbreviations:

bgs Below graound surface	μg/kg	Micrograms per kilogram
CUL Cleanup level	mg/kg	Milligrams per kilogram

MTCA Model Toxics Control Act TEQ Toxic Equivalency Quotient

Qualifier:

U Analyte was not detected at the associated reporting limit.

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North Marina Ameron/Hulbert Site

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		Depth	Antimony	Arsenic	Lead				
	Unit	feet bgs	mg/kg	mg/kg	mg/kg				
S	ite Cleanup Level		32	20	250				
Sample ID	Sample Date								
Initial SD8 Excavation									
G1B-HA3 ¹	19-Mar-14	5.5	0.58	24	30				
G1B-HA3a ¹	09-Apr-14	6		77					
G1B-SD8-PitB ¹	14-Apr-14	6.5		140					
G1B-SD8-PitN ¹	14-Apr-14	6.5		150					
G1B-SD8-PitS ¹	14-Apr-14	6.5		18					
G1B-SD8-PitW	14-Apr-14	6.5		5 U					
SD8 Area Supplemental Soil Samples									
G1B-SB1-7-8 ¹	24-Apr-14	7-8		4.8					
G1B-SB1-8-10 ¹	24-Apr-14	8-10		7.2					
G1B-SB2-7-8 ¹	24-Apr-14	7-8		7.4					
G1B-SB2-8-9 ¹	24-Apr-14	7-8		12					
G1B-SB3-7-8 ¹	24-Apr-14	8-9		68					
G1B-SB3-8-9 ¹	24-Apr-14	8-9		28					
G1B-SB3-9-10 ¹	24-Apr-14	9-10		8					
G1B-SB3-10-11	24-Apr-14	10-11		16					
G1B-SB4-2.7-3 ¹	24-Apr-14	2.7-3		12					
G1B-SB4-7-8 ¹	24-Apr-14	7-8		5.8					
G1B-SB4-8-9 ¹	24-Apr-14	8-9		8.5					
G1B-SB5-8-9	24-Apr-14	8-9		19					
G1B-SB5-9-10	24-Apr-14	9-10		5.7					
G1B-SB6-4-5	24-Apr-14	4-5		11					
G1B-SB6-5-7	24-Apr-14	5-7		9.7					
G1B-SB7-5.5-6.5	24-Apr-14	5.5-6.5		6.4					
G1B-SB7-6.5-7.5	24-Apr-14	6.5-7.5		15					
G1B-SB8-5.5-6.5	24-Apr-14	5.5-6.5		9.5					
G1Bx-SB8-5.5-6.5	24-Apr-14	5.5-6.5		10					
G1B-SB8-6.5-7.5	24-Apr-14	6.5-7.5		4.8					
G1B-SB9-5.5-6.5	24-Apr-14	6.5-7.5		5.7					
G1B-SB9-6.5-7.5	24-Apr-14	6.5-7.5		14					

Table 4 SD-8 Area Soil Sampling Results

Notes:

bold Indicates a concentration that exceeds the Site or MTCA CUL.

-- Not available/not applicable.

x Indicates a field duplicate sample.

1 Indicates material that was removed and hauled off-site for disposal.

Abbreviations:

bgs Below ground surface

CUL Cleanup level

mg/kg Milligrams per kilogram

MTCA Model Toxics Control Act

Qualifier:

U Analyte was not detected

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Table 5Sampling Results for Imported Fill Material

	Sample ID	G1B-Import 1	G1B-Import 2	G1B-Import 3	G1B-Import 4	G1B-Import 5	G1B-Import 6	Site Cle
	Material	Soil ¹	Soil ¹	Soil ¹	Soil ¹	Crushed Rock ²	Crushed Rock ²	Leve
	Sample Date	25-Mar-14	03-Apr-14	03-Apr-14	08-Apr-14	17-Apr-14	24-Apr-14	Screenin
Analyte	Units							
Metals	•							
Arsenic	mg/kg	2.8	5 U	5 U	5 U	4.8	8.3	20
Barium	mg/kg	46	51	48	57			1,6
Cadmium	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U			80
Chromium	mg/kg	28	28	27	30			120,
Lead	mg/kg	2.3	2.5	2.2	2.8			25
Mercury	mg/kg	0.02 U	0.02 U	0.02 U	0.058			24
Selenium	mg/kg	5 U	5 U	5 U	5 U			40
Silver	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U			40
Total Petroleum Hydrocarbo	ons							
Gasoline Range Organics	mg/kg	3 U	3 U	3 U	3 U			30/1
Diesel Range Organics	mg/kg	25 U	25 U	25 U	25 U			200
Oil Range Organics	mg/kg	50 U	50 U	50 U	50 U			200
Carcinogenic Polycyclic Aron	natic Hydrocarbo	ns (cPAHs)						
Benzo(a)anthracene	μg/kg	20 U	20 U	20 U	28			
Benzo(a)pyrene	μg/kg	20 U	20 U	20 U	30			
Benzo(b)fluoranthene	μg/kg	20 U	20 U	20 U	25			
Benzo(k)fluoranthene	μg/kg	20 U	20 U	20 U	25			
Chrysene	μg/kg	20 U	20 U	20 U	37			
Dibenzo(a,h)anthracene	μg/kg	20 U	20 U	20 U	20 U			
Indeno(1,2,3-cd)pyrene	μg/kg	20 U	20 U	20 U	21			
cPAH TEQ (ND=1/2RL) ^{4,5}	μg/kg	15.1 U	15.1 U	15.1 U	41.27			14
Polycyclic Aromatic Hydroca	rbons (PAHs)							
1-Methylnaphthalene	μg/kg		20 U	20 U	20 U			
2-Methylnaphthalene	μg/kg		20 U	20 U	20 U			320,
Acenaphthene	μg/kg		20 U	20 U	20 U			66,0
Acenaphthylene	μg/kg		20 U	20 U	20 U			
Anthracene	μg/kg		20 U	20 U	20 U			12,000
Benzo(g,h,i)perylene	µg/kg		20 U	20 U	22			
Fluoranthene	µg/kg		20 U	20 U	77			89,0
Fluorene	µg/kg		20 U	20 U	20 U			553,
Naphthalene	µg/kg		20 U	20 U	20 U			140,
Phenanthrene	μg/kg		20 U	20 U	62			12,000
Pyrene	µg/kg		20 U	20 U	73			2,400

Notes:

-- Not available/not applicable.

1 Imported fill soil from Chinook Middle School in Bellevue, WA.

2 Imported crushed rock from Cemex quarry in Granite Falls, WA.

3 The MTCA CUL for gasoline-range TPH is 30 mg/kg if benzene is detected and 100 mg/kg if benzene is not detected.

4 Calculation of cPAH TEQ concentrations was performed per WAC 173-340-708(8)(e).

5 Calculated using detected cPAH concentrations plus one-half the reporting limit for cPAHs that were not detected.

TEQ Toxic Equivalency Quotient

TPH Total petroelum hydrocarbons

WAC Washington Administrative Code

Abbreviations:

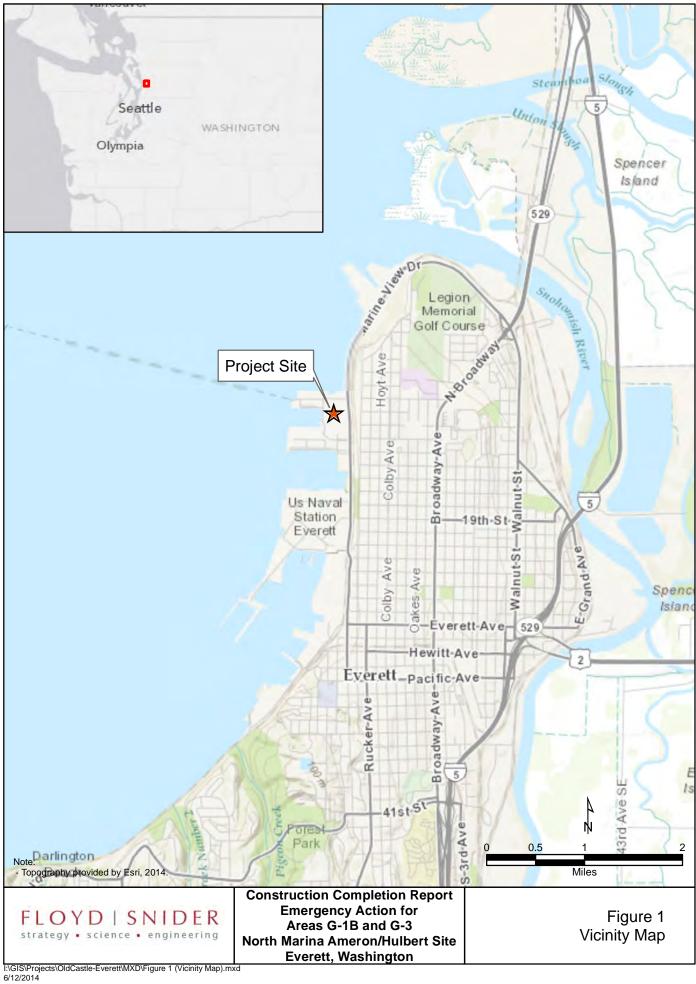
- CUL Cleanup level
- µg/kg Micrograms per kilogram
- mg/kg Milligrams per kilogram
- ND Non-detect
- MTCA Model toxics Control Act
- **RL** Reporting limit

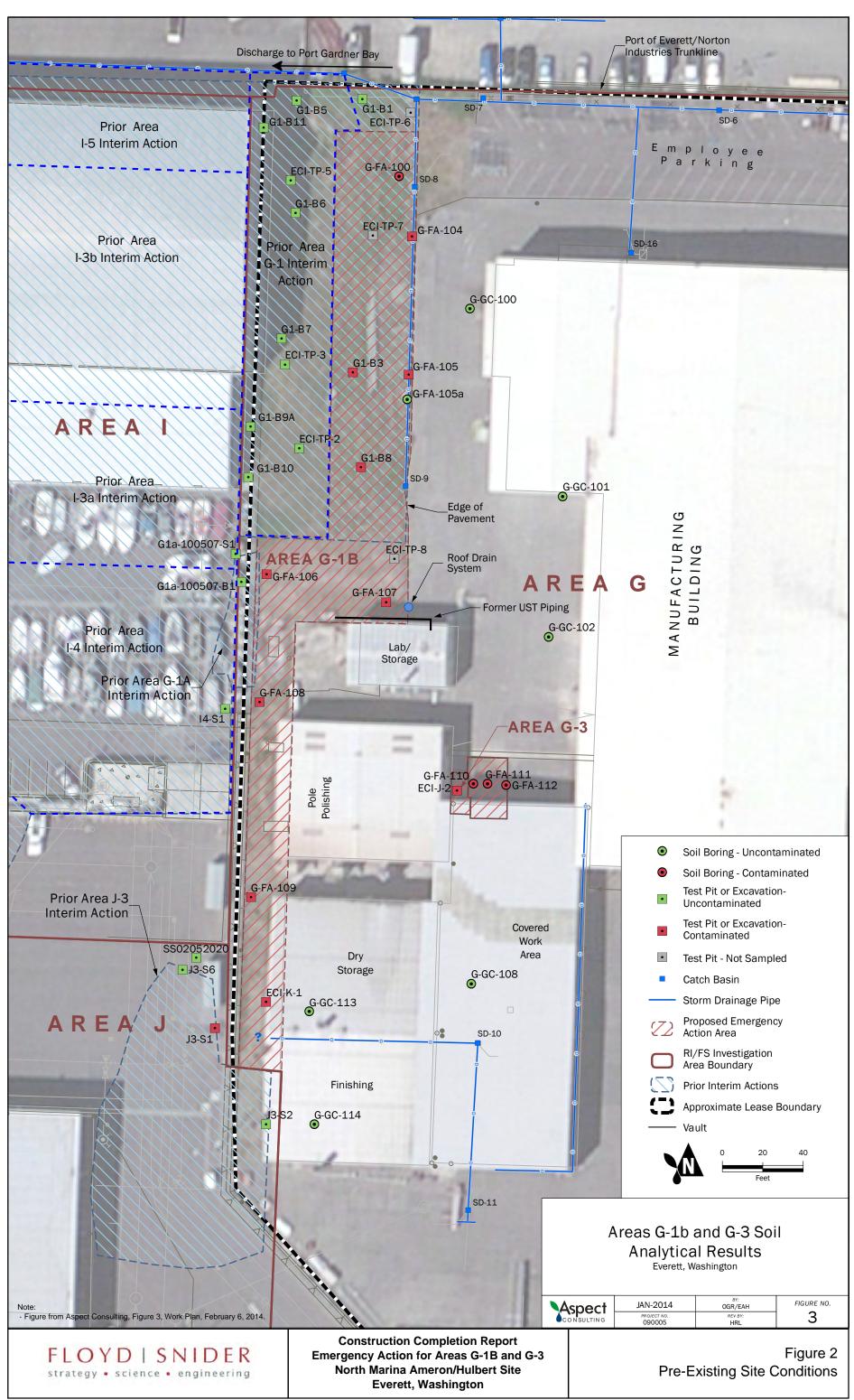
Qualifier:

U Analyte was not detected at the associated reporting limit.

Cleanup
vel or
ing Level
20 ,650 80
,650
80
0,000
250
24
400
400
2
/100 ³
2000
2000
140
0,000
5,000
000,000
9,000 3,000
3,000
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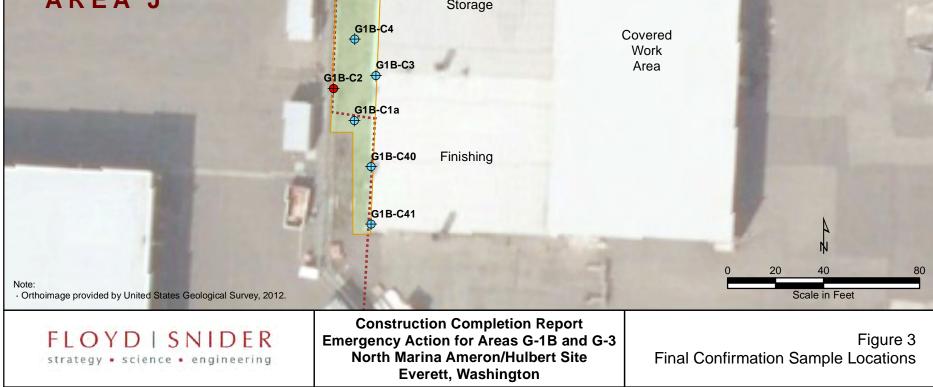
Figures





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Legend **Final Confirmation Sample Location** \oplus Less Than Cleanup Level Final Confirmation Sample Location G1B-C37a ٠ Exceeding Cleanup Level G1B-Scrape 1a Surface Scrape Sample Location 0 Less Than Cleanup Level G1B-HA1 \oplus Planned Location-Not Sampled (see text) G1B-HA2 ⊕ Former SD8 Over Excavation G-1B Limit of Excavation (Depth) (3 feet) (See Attachment 3) G1B-C36a Over Excavation Area (Depth) G1B-Scrape 3 G1B-D1,D2 4 G1B-D2 G1B-D9 G1B-D9 Former Storm Drain Excavation Area G1B-C34 G1B-D2 Planned Cleanup Area **Planned Cleanup** G1B-Scrape 2 G1B-C33 Area G-2 ⊕ G1B D3 G1B-C33 Scrape 🕀 61B-D10 (2 feet) G1B-C31 ⊕Å G1/B-C32b GIB-D4 G1B-C30 GHB-D5 G1B-C29a (3-5 **G**1B-C39 +feet) G18-C28 G1B-D6⊕⊕ G1B-D11 G1<mark>B-C</mark>27 ⊕ (2 feet) G1B D7 AREA I G1B-C26⊕ \oplus G1B-D12 Former SD9 Over Excavation G1B-08 ⊕ IUFACTURING BUILDING (3-5 feet) G1B-C25a⊕ G1B-C24b G1B-C23 G1B-D13 G1B-C22 (2-4 ⊕ G1B-C21 G1B-C20 Z AREA feet) G ∢ G1B-D14 ⊕G1B-C18 Σ G1B-C17 ⊕ G1B-C19 G1B-C42 G1B-C16 G1B-C15a **Former Roof Drain Cistern** G1B-C14 ⊕G1B-C14 **Over Excavation** (3 feet) Lab/ G1B-C15.5 Storage **Planned Cleanup Planned Cleanup** Area G-4 G1B-C13 ⊕ Area I-13 G1B-C38 Area G-3 \oplus G1B-C11 G1B-C11 -⊕G1B-C12 Pole Polishing G1B-C10 ⊕ Sec. 2. G1B-C9 G1B-C8 G1B-C8 (2 feet) ⊕G1B-C7 G1B-C6 G1B-C5 4 Dry AREA



I:\GIS\Projects\OldCastle-Everett\MXD\Figure 3 Excavation Sample Locations.mxd 7/31/2014

Attachment 1 Key Photographs



Photograph 1. Direct Loading Excavated Soil for Disposal.



Photograph 2. Sandblast Grit Material in Area G-1B Excavation Sidewall.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA Attachment 1: Key Photographs Photographs 1 and 2



Photograph 3. Typical HA Sample Location Test Pit.



Photograph 4. Finished Extent of Area G-1B Initial Excavation.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA Attachment 1: Key Photographs Photographs 3 and 4



Photograph 5. Typical Sidewall Confirmation Sample Collection Procedure.



Photograph 6. Potential Sandblast Grit at G1B-C2 Sample Location.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA Attachment 1: Key Photographs Photographs 5 and 6



Photograph 7. New Base Course from Area J-3 Interim Action Encountered at G1B-C8.



Photograph 8. Former Diesel UST Pad and Piping Near Lab Building.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA

Attachment 1: Key Photographs Photographs 7 and 8



Photograph 9. 'Pothole' Test Pit in Southern Portion of Area G-1B.



Photograph 10. Excavation of Area G-3 Former Settling Pond.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA Attachment 1: Key Photographs Photographs 9 and 10



Photograph 11. Area G-1B After Removal of Roof Drain Cistern.



Photograph 12. Excavation For Removal of Former SD8.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA Attachment 1: Key Photographs Photographs 11 and 12



Photograph 13. SD8 Area Pit After Excavation.



Photograph 14. Sandblast Grit Encountered in Former Storm Drain Pipe.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA Attachment 1: Key Photographs Photographs 13 and 14



Photograph 15. SD8 Pit Soil Sample Locations.



Photograph 16. Beginning Excavation of Former SD9.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA Attachment 1: Key Photographs Photographs 15 and 16



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Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA

Attachment 1: Key Photographs Photographs 17 and 18



Photograph 19. Connection of Existing Drain to New Storm Drain System.



Photograph 20. Trench Box Set for Over-Excavation of SD8 Area.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA Attachment 1: Key Photographs Photographs 19 and 20



Photograph 21. Graded and Compacted Finished Surface of Area G-1B.



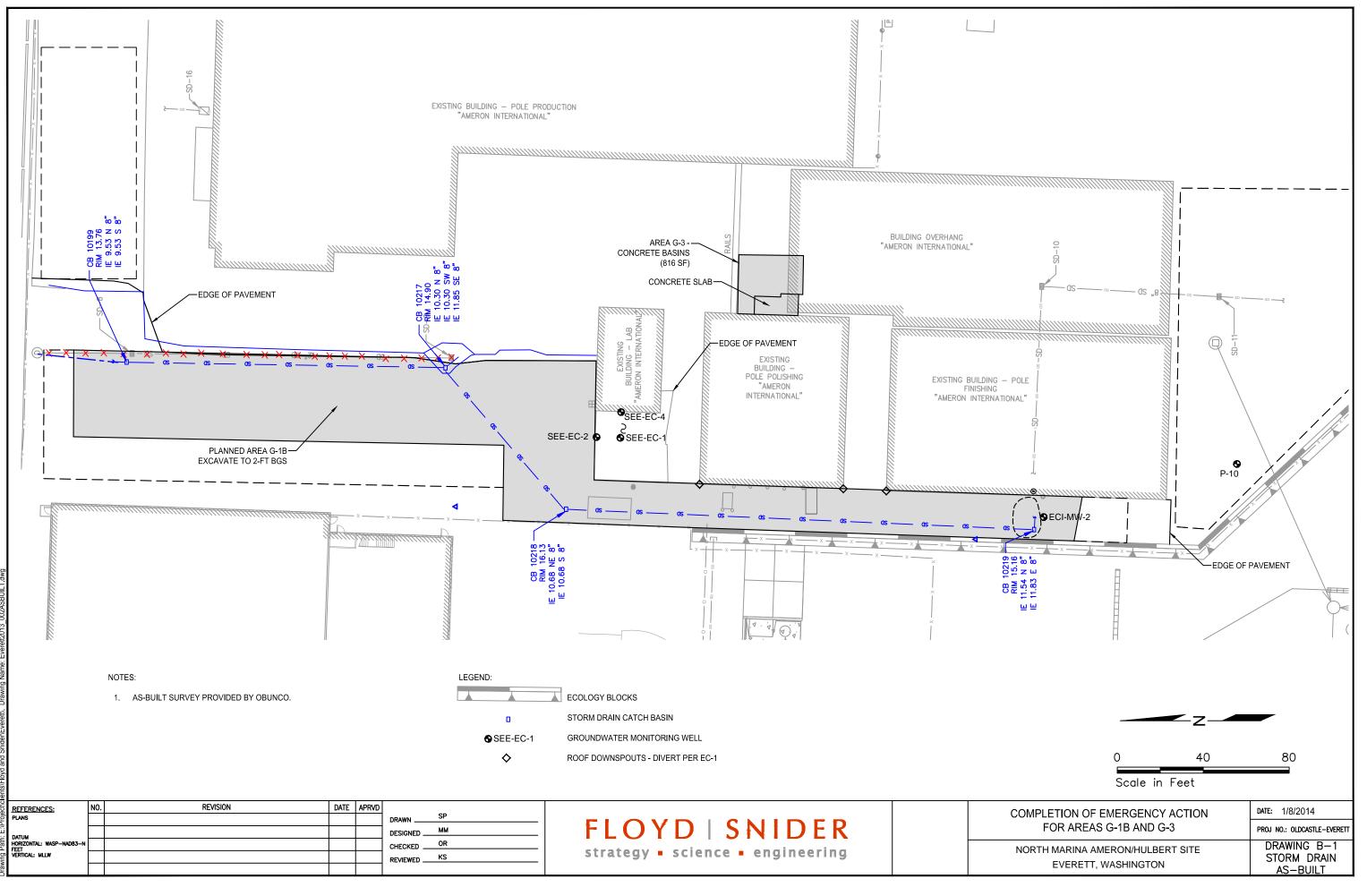
Photograph 22. Paved Finished Surface at Area G-3.

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Construction Completion Report Emergency Action for Areas G-1B and G-3 North Marina Ameron/Hulbert Site Everett, WA

Attachment 1: Key Photographs Photographs 21 and 22

Attachment 2 Storm Drain As-Built Drawing



Plot Date: 06/10/14 - 4:59pm, Plotted by: swp

Attachment 3 Addendum No. 1 – Emergency Action Work Plan for Areas G-1B and G-3 Supplemental Soil Investigation–Area G-1B Emergency Action SD8 Area

Technical Memorandum

io. They raise, washington State Department of Ecology	To:	Andy Kallus,	Washington	State Department of Ecology
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Copies:	Elise Gronewald, Port of Everett Larry Beard, Landau Associates Owen Reese, Aspect Consulting Janet Knox, Pacific Groundwater Group
From:	Tom Colligan, Kristin Anderson, Floyd Snider
Date:	April 23, 2014

Project No: Oldcastle-Everett/Oldcastle-G1B Emergency Action

Re: Addendum No. 1 - Emergency Action Work Plan for Areas G-1B and G-3 Supplemental Soil Investigation – Area G-1B Emergency Action SD8 Area North Marina Ameron/Hulbert Site, Everett, Washington

This technical memorandum presents Addendum No.1 to the Emergency Action (EA) Work Plan for Areas G-1B and G-3, and describes the scope of work for additional soil characterization to be completed as part of the Area G-1B EA for the North Marina Ameron/Hulbert Site (Site). A remedial investigation/feasibility study (RI/FS) has been completed for the Site under Agreed Order No. 6677 between the Port of Everett (Port), Ameron International and the Hulberts [the potentially liable parties (PLPs)], and the Washington State Department of Ecology (Ecology). The planned EA was presented in a February 6, 2014 work plan (Aspect Consulting 2014) and was authorized by Ecology.

This EA includes in part the excavation of soils contaminated with sandblast grit containing heavy metals including soil with contaminant concentrations greater than the Site cleanup standards, as well as replacement of the storm drain system that runs through this area of the Site. This supplemental scope of work addresses the characterization of residual arsenic detected at concentrations exceeding its cleanup level in soils surrounding the former storm drain SD8, which was replaced as part of the EA (refer to Figure 1). The results of this investigation will be used to determine the extent of arsenic soil contamination within the SD8 storm drain area, as well as to determine whether this arsenic contamination is comingled with the Area G-2 cleanup area. This work will inform the potential need for additional excavation in this area as part of the EA, and will identify areas that may be deferred to the Area G-2 cleanup area. Area G-2 will be remediated as part of the final cleanup action for the Site. Ecology and the PLPs are preparing a draft Cleanup Action Plan (DCAP) that will detail how the final cleanup action for the Site will be conducted.

PROPOSED SCOPE OF WORK

The proposed scope of work will delineate the extent of arsenic contamination underlying and around the former SD8 catch basin. The field procedures, analytical methods, and quality assurance/quality control (QA/QC) procedures will be consistent with those presented in the

Emergency Action Work Plan for Areas G-1B and G-3 (Aspect Consulting 2014) and the RI/FS Work Plan in general (Landau Associates 2010).

Additional soil investigation in the vicinity of the former SD8 will include the following:

- Advancement of four soil borings (G1B-SB1 through G1B-SB4) to 12 feet below ground surface (bgs) in locations previously hand sampled to depths ranging from 6 to 6.5 feet bgs, including the north and south sidewalls and base of the existing SD8 excavation area/sample location HA-3a area.
- Advancement of two additional soil borings (G1B-SB5 and G1B-SB6) to 12 feet bgs at new locations within Area G-1B; one location will be north of the SD8 excavation area and one boring will be between the new and old SD8 structures.
- Advancement of additional lateral step-out borings to 12 feet bgs in the event that evidence of anthropogenic contamination such as sandblast grit or woodwaste is encountered in the initial boring locations. These additional borings will be stepped out laterally 5 feet farther from the former SD8 than the original location. These borings will be designated by appending "-a, -b" and so forth to the primary boring location name.
- Advancement of three soil borings (G1B-SB7 through G1B-SB9) to 12 feet bgs at locations within and to the south of the adjacent Area G-2, to the east of the former SD8 excavation.

Proposed soil boring locations are presented in Figure 2. Soil borings will be advanced using direct-push (Geoprobe) technology, logged, and field screened (by visual, olfactory, and photoionization detector [PID] screening) for evidence of sandblast grit or other anthropogenic contaminants. Samples will be collected for analysis as follows:

- At the four borings (G1B-SB1 to G1B-SB4) in locations that were previously hand sampled (to approximately 6.5 feet bgs), soil samples for laboratory analysis will be collected beginning at 7 feet bgs and ending at 12 feet bgs.
- At the two borings in locations inside the Area G-1B excavation that were not previously sampled (G1B-SB5 and G1B-SB6), soil samples will be collected beginning at the observed contact between the imported backfill placed during the EA and the preexisting dredge fill material and ending at 12 feet bgs.
- If lateral step-out borings are advanced, soil samples will also be collected beginning at the observed contact between the imported backfill and preexisting dredge fill and ending at 12 feet bgs.
- At the three boring locations within and adjacent to Area G-2 (G1B-SB7 through G1B-SB9), soil samples will be collected beginning at 5.5 feet bgs and ending at 12 feet bgs, immediately below the contamination at 5.5 feet bgs noted at location G-FA-101d.

Samples will be collected directly from the polyethylene drill rod liners and processed according to the procedures detailed in the aforementioned Work Plan(s). Soil samples for laboratory analysis will be collected continuously from 1-foot depth intervals, or from 2-foot depth intervals if sample recovery is poor (If sufficient volume for laboratory analysis cannot be achieved over a 2-foot depth interval, the boring will be relocated within 5 feet of the original location and re-

driven). The presence of sandblast grit, or other potential contamination based on field screening, will be noted if observed. Samples will also be collected separately from any interval containing anthropogenic debris or other potential contamination based on field screening. Soil samples will be identified by their location, top depth and bottom depth. The target sample locations, depths, and rationale for sampling are presented in Table 1.

The two uppermost samples collected from each boring will be submitted for analysis, the remaining samples will be archived, unless field screening indicates potential contamination. All samples will be analyzed for arsenic with 24-hour turnaround time requested for receipt of analytical data. If field screening indicates the potential presence of additional contaminants in soil, then the soil sample will be analyzed for the appropriate additional analytes, based on field screening observations according to the aforementioned Work Plan(s). Archived samples will be analyzed sequentially, as needed, until the vertical extent of arsenic greater than 20 milligrams per kilogram (mg/kg), or potentially other contaminants exceeding Site cleanup standards, has been delineated at all soil boring locations.

DATA EVALUATION AND REPORTING

Laboratory data will be validated using the procedures described in the Work Plan (Aspect Consulting 2014). Preliminary data will be disseminated to Ecology and the additional recipients of this memorandum as soon as is practical after it has been received. Final validated data will be presented along with excavation confirmation sampling results in the EA completion report.

REFERENCES

- Aspect Consulting. 2014. Emergency Action Work Plan for Areas G-1B and G-3, North Marina Ameron/Hulbert Site, Everett, Washington. Prepared for Washington Department of Ecology. 6 February.
- Landau Associates. 2010. Final Work Plan, Remedial Investigation/Feasibility Study, North Marina Ameron/Hulbert Site, Everett, Washington. Prepared for Port of Everett. 17 November.

ATTACHMENTS

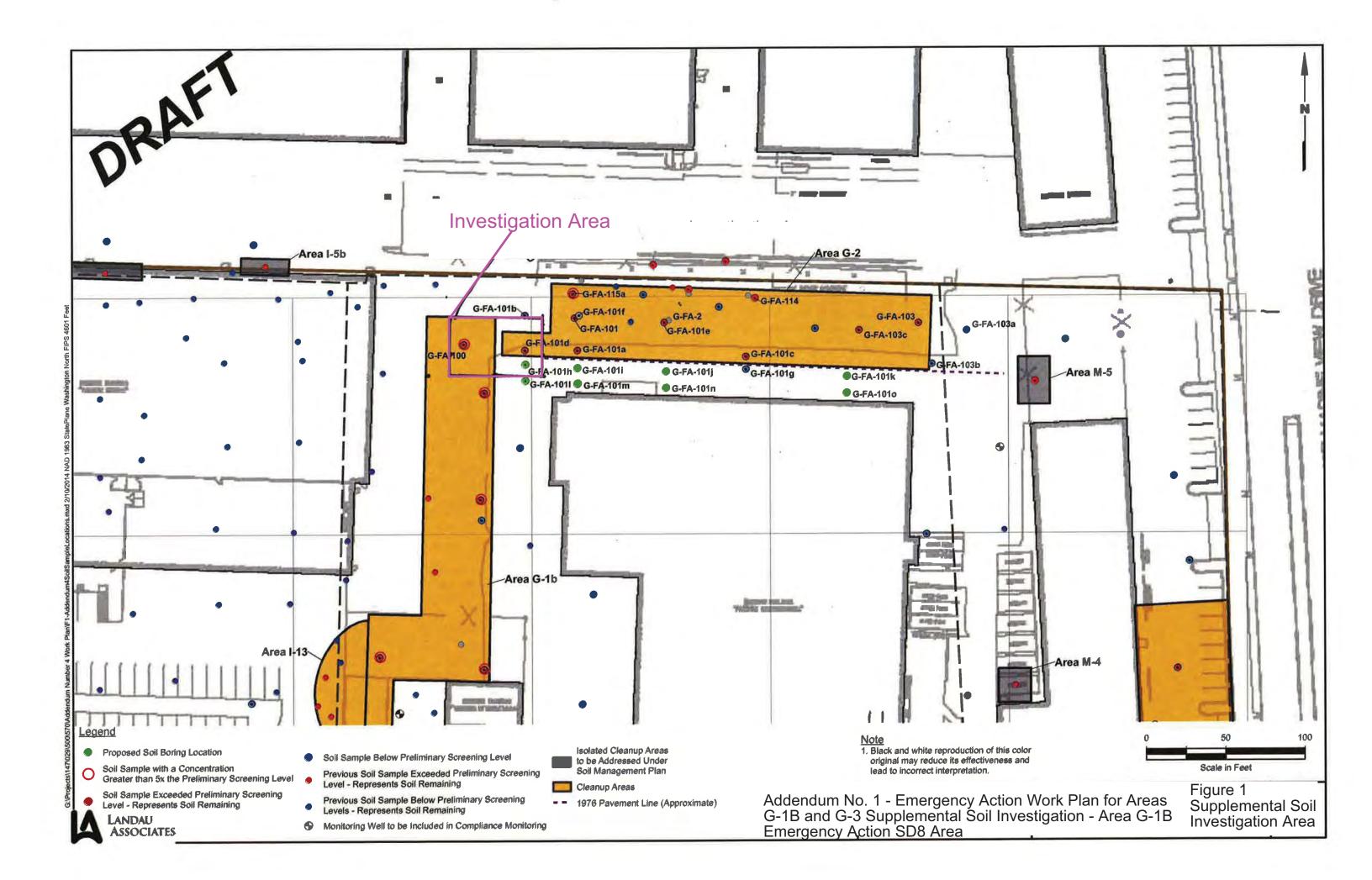
- Table 1Soil Sample Collection Plan
- Figure 1 Supplemental Soil Investigation Area
- Figure 2 Proposed Soil Boring Map (Revised 5/23/2013)

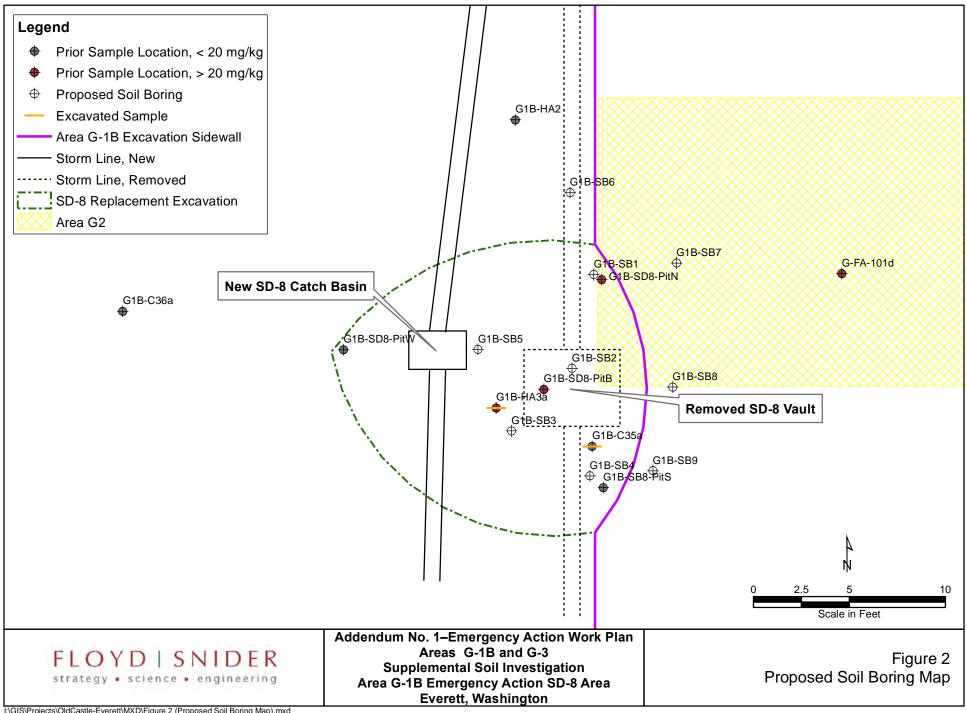
Soil Boring ID	Rationale	Top Sample Depth (bgs)	Bottom Sample Depth (bgs)	Sampling Frequency
G1B- SB1	Determine vertical extent of arsenic at previous G1B-SD8- PitN sample (As 150 mg/kg at 6.5 ft bgs)	7 ft	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening
G1B- SB2	Determine vertical extent of arsenic at previous G1B-SD8- PitB sample (As 140 mg/kg at 6.5 ft bgs)	7 ft	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening
G1B- SB3	Determine vertical extent of arsenic at previous G1B-HA-3a sample (excavated with old SD8 As 77 mg/kg at 6 ft bgs)	7 ft	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening
G1B- SB4	Confirm arsenic concentrations less than 20 mg/kg G1B-SD8- PitS sample (As 18 mg/kg at 6.5 ft bgs)	7 ft	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening
G1B- SB5	Determine lateral and vertical extent of arsenic to west of former SD8	(backfill/ dredge fill contact)	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening
G1B- SB6	Determine lateral and vertical extent of arsenic north of former SD8	(backfill/ dredge fill contact)	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening
Step- out Borings	If necessarydetermine lateral and vertical extent of field indications of contamination	(backfill/ dredge fill contact)	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening

Table 1 Soil Sample Collection Plan

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G1B- SB7	Determine lateral and vertical extent of arsenic to northeast of former SD8 in area G2	5.5 ft	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening
G1B- SB8	Determine lateral and vertical extent of arsenic to east of former SD8 in area G2	5.5 ft	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening
G1B- SB9	Determine lateral and vertical extent of arsenic to southeast of former SD8	5.5 ft	12 ft	1-foot intervals, or 2-foot intervals if poor recovery; or interval with potential contamination based on field screening





I:\GIS\Projects\OldCastle-Everett\MXD\Figure 2 (Proposed Soil Boring Map).mxd 5/23/2014

Attachment 4 Soil Boring Logs

Soil Boring ID: G1B-SB1 FLOYDISNIDER Drill Date: April 24, 2014 strategy . science . engineering Logged By: Kristin Anderson Drilled By: Don Harnden / ESN Northwest Drill Type: Direct Push Geoprobe Coordinate System: NAVD88/WA SP N Ground Surface Elevation: **Sample Method:** direct push 2"x5' core Boring Diameter: 2 inches Latitude/Northing: Longitude/Easting:

Boring Location: SD8 Area

Boring Depth (ft bgs): 12 feet Groundwater ATD (ft bgs): 4 feet

Client: Oldcastle Precast Project: Oldcastle-Everett Task: Area G-1B Emergency Action Address: 1130 W Marine View Dr Everett, WA

Remarks: Boring located adjacent to G1B-SD8-PitN hand auger sample location

PID (ppm)	SAMPLE INTERVAL (ft bgs)	SAMPLE ID	DRIVE / RECOVERY	DEPTH (ft bgs)	USCS SYMBOL	LITHOLOGIC DESCRIPTION AND OBSERVATIONS (color, grading, Group Name [with MAJOR and minor constituents], moisture content, etc.)
				0		
0.0					SP-SM	Moist, brown poorly graded fine SAND with silt and gravel (imported fill)
						At 4 ft, becomes wet.
0.0					SP	Wet, gray poorly graded fine SAND with wood fragments and trace silt (dredge fill). No sheen or odor.
				6	SM	1-foot lense of slightly plastic silty SAND with abundant wood fragments
0.0	7-8 ft	G1B-SB1- 7-8 @1113			SP	Wet, gray poorly graded fine SAND with wood fragments and trace silt (dredge fill). No sheen or odor.
	8-10 ft	G1B-SB1- 8-10 @1114				At 8.5 ft, becomes loose. Possible loss of sample material at bottom of core.
	10-11 ft	G1B-SB1- 10-11 @1115				At 10 ft, becomes more dense.
0.0	11-12 ft	G1B-SB1- 11-12 @1116			SM	Wet, gray slightly plastic silty SAND.

Notes:	Gradational unit contact	
ft bgs = feet below ground surface	USCS = Unified Soil Classification System	Page 1 of 1
ppm = parts per million	education = denotes groundwater table	č

FLOYD SNIDER strategy • science • engineering	S Drill Date: April 24, 2014 Logged By: Kristin Anderson Drilled By: Don Harnden / ESN Northwest	oil Boring ID: G1B-SB2
Coordinate System: NAVD88/WA SP N	Drill Type: Direct Push Geoprobe	Client: Oldcastle Precast
Ground Surface Elevation:	Sample Method: direct push 2"x5' core	Project: Oldcastle-Everett
Latitude/Northing:	Boring Diameter: 2 inches	Task: Area G-1B Emergency Action
Longitude/Easting:	Boring Depth (ft bgs): 12 feet	Address: 1130 W Marine View Dr
Boring Location: SD8 Area	Groundwater ATD (ft bgs): 4 feet	Everett, WA

Remarks: Boring located adjacent to G1B-SD8-PitB hand auger sample location

ppm)	SAMPLE INTERVAL (ft bgs)	SAMPLE ID	DRIVE / RECOVERY	DEPTH (ft bgs)	USCS SYMBOL	LITHOLOGIC DESCRIPTION AND OBSERVATIONS (color, grading, Group Name [with MAJOR and minor constituents], moisture content, etc.)
	(0)			0		
					SP-SM	SP-SM: Moist, brown poorly graded fine SAND with silt and gravel (imported fill).
0.0						At 4 ft, becomes wet.
0.0						
	7-8 ft	G1B-SB2- 7-8 @1010			SP	SP: Wet, gray poorly graded fine SAND with trace silt (dredge fill). Wood fragments present beginning at 7 ft. No sheen or odor.
	8-9 ft	G1B-SB2- 8-9 @1011				
	9-10 ft	G1B-SB2- 9-10 @1012		9 9 9 9 	SM	SM: Wet, gray poorly graded silty SAND.
	10-11 ft	G1B-SB2- 10-11 @1013				
	11-12 ft	G1B-SB2- 11-12 @1014				

FLOYD SNIDER strategy • science • engineering	Soil Boring ID: G1B-SB3 Drill Date: April 24, 2014 Logged By: Kristin Anderson Drilled By: Don Harnden / ESN Northwest		
Coordinate System: NAVD88/WA SP N	Drill Type: Direct Push Geoprobe	Client: Oldcastle Precast	
Ground Surface Elevation:	Sample Method: direct push 2"x5' core	Project: Oldcastle-Everett	
Latitude/Northing:	Boring Diameter: 2 inches	Task: Area G-1B Emergency Action	
Longitude/Easting:	Boring Depth (ft bgs):12 feet	Address: 1130 W Marine View Dr	
Boring Location: SD8 Area	Groundwater ATD (ft bgs): 6.5 feet	Everett, WA	

Remarks: Boring located adjacent to G1B-HA3a hand auger sample location

(nnm)	SAMPLE INTERVAL (ft bgs)	SAMPLE ID	DRIVE / RECOVERY	DEPTH (ft bgs)	USCS SYMBOL	LITHOLOGIC DESCRIPTION AND OBSERVATIONS (color, grading, Group Name [with MAJOR and minor constituents], moisture content, etc.)
	(0		
					SP-SM	Moist, brown poorly graded fine SAND with silt and gravel (imported fill).
0.0						
0.0				4		
	7-8 ft	G1B-SB3- 7-8		— ——7		Wet at top of core.
0.0	8-9 ft	@1032 G1B-SB3- 8-9 @1033			SP	Wet, loose dark gray poorly graded fine SAND with wood fragments and trace silt (dredge fill). No sheen or odor.
	9-10 ft	G1B-SB3- 9-10 @1034		9 9 9	SM	Wet, gray poorly graded fine silty SAND.
	10-11 ft	G1B-SB3- 10-11 @1035				
	11-12 ft	G1B-SB3- 11-12 @1036				At 11.5 ft, some black oxidized wood fragments present.

Coordinate System: NAVD88/WA SP N

Ground Surface Elevation:

Boring Location: SD8 Area

Latitude/Northing:

Longitude/Easting:

Drill Date: April 24, 2014 Logged By: Kristin Anderson Drilled By: Don Harnden / ESN Northwest Drill Type: Direct Push Geoprobe Sample Method: direct push 2"x5' core Boring Diameter: 2 inches Boring Depth (ft bgs):12 feet Groundwater ATD (ft bgs): 4 feet

Soil Boring ID: G1B-SB4

Client: Oldcastle Precast Project: Oldcastle-Everett Task: Area G-1B Emergency Action Address: 1130 W Marine View Dr Everett, WA

Remarks: Boring located adjacent to G1B-SD8-PitS hand auger sample location

PID ppm)	SAMPLE INTERVAL (ft bgs)	SAMPLE ID	DRIVE / RECOVERY	DEPTH (ft bgs)	USCS SYMBOL	LITHOLOGIC DESCRIPTION AND OBSERVATIONS (color, grading, Group Name [with MAJOR and minor constituents], moisture content, etc.)
				0	SP-SM	Moist, brown poorly graded fine SAND with silt and gravel (imported fill).
0.0						
0.0				2		
	2.7-3 ft	G1B-SB4- 2.7-3 @0936				At 2.7 ft, black-brown lense with wood fragments and some possible reflective material (grit?).
0.0					SP	Moist, gray poorly graded fine SAND with trace silt (dredge fill). No shee or odor.
0.0					SM	Wet, gray poorly graded fine silty SAND with abundant wood fragments.
				5	SP	Wet, gray loose poorly graded fine SAND.
	7-8 ft	G1B-SB4- 7-8				
		@0939				
	8-9 ft	G1B-SB4- 8-9 @0940		8	SM	Wet, gray silty fine SAND with wood fragments.
	9-10 ft	G1B-SB4- 9-10 @0941		9		
	10-11 ft	G1B-SB4- 10-11 @0942				
	11-12 ft	G1B-SB4- 11-12 @0943				

FLOYD SNIDER strategy • science • engineering	Soil Boring ID: G1B-SB5 Drill Date: April 24, 2014 Logged By: Kristin Anderson Drilled By: Don Harnden / ESN Northwest		
Coordinate System: NAVD88/WA SP N	Drill Type: Direct Push Geoprobe	Client: Oldcastle Precast	
Ground Surface Elevation:	Sample Method: direct push 2"x5' core	Project: Oldcastle-Everett	
Latitude/Northing:	Boring Diameter: 2 inches	Task: Area G-1B Emergency Action	
Longitude/Easting:	Boring Depth (ft bgs):12 feet	Address: 1130 W Marine View Dr	
Boring Location: SD8 Area	Groundwater ATD (ft bgs): 4 feet	Everett, WA	

Remarks: Boring located in approximate west sidewall of former SD8 excavation

PID (ppm)	SAMPLE INTERVAL (ft bgs)	SAMPLE ID	DRIVE / RECOVERY	DEPTH (ft bgs)	USCS SYMBOL	LITHOLOGIC DESCRIPTION AND OBSERVATIONS (color, grading, Group Name [with MAJOR and minor constituents], moisture content, etc.)
					GP/SP-SM	Mixture of pea GRAVEL and wet, brown poorly graded fine SAND with si (imported fill).
0.0						Very loose and wet material, poor recovery.
	8-9 ft	G1B-SB5- 8-9 @1055			SP	Wet, loose dark gray poorly graded fine SAND with wood fragments and trace silt (dredge fill). No sheen or odor.
0.0	9-10 ft	G1B-SB5- 9-10 @1056		9		
	10-11 ft	G1B-SB5- 10-11 @1057				
	11-12 ft	G1B-SB5- 11-12 @1058			SM	Grades to wet, gray silty fine SAND. Interval appears compressed.
	feet below g		ce		- Gradation SCS = Unif	al unit contact ied Soil Classification System Page 1 of 1 otes groundwater table

Coordinate System: NAVD88/WA SP N

Ground Surface Elevation:

Boring Location: SD8 Area

Latitude/Northing:

Longitude/Easting:

ppm = parts per million

Drill Date: April 24, 2014 Logged By: Kristin Anderson Drilled By: Don Harnden / ESN Northwest Drill Type: Direct Push Geoprobe Sample Method: direct push 2"x5' core Boring Diameter: 2 inches Boring Depth (ft bgs): 12 feet Groundwater ATD (ft bgs): 4 feet

Soil Boring ID: G1B-SB6

Client: Oldcastle Precast Project: Oldcastle-Everett Task: Area G-1B Emergency Action Address: 1130 W Marine View Dr Everett, WA

Remarks: Boring located ~8 feet north of former SD8

0.2 4-5 ft G1B-SB6- 	PID (ppm)	SAMPLE INTERVAL (ft bgs)	SAMPLE ID	DRIVE / RECOVERY	DEPTH (ft bgs)	USCS SYMBOL	LITHOLOGIC DESCRIPTION AND OBSERVATIONS (color, grading, Group Name [with MAJOR and minor constituents], moisture content, etc.)
0.2 4-5 ft G1B-SB6- 6-7 ft G1B-SB6- 5-7 ft G1B-SB6- 0.0 7-8 ft G1B-SB6- 0.0 9-10 ft G1B-SB6- 0.0 9-10 ft G1B-SB6- 0.0 9-10 ft G1B-SB6- 0.0 9-10 ft G1B-SB6- 0.0 11-12 ft G1B-SB6- 10-11 0 10-11 ft G1B-SB6- 10-11 0 11-12 ft G1B-SB6- 11-12 ft G1B-SB6-					0		
 4-5 @1135 5-7 ft G1B-SB6- 5-7 @1136 0.0 7-8 ft G1B-SB6- 7-8 @1137 0.0 7-8 ft G1B-SB6- 8-9 @1138 0.0 9-10 ft G1B-SB6- 8-9 @1138 0.0 9-10 ft G1B-SB6- 8-9 @1138 0.0 10-11 ft G1B-SB6- 10-11 @1139 0.0 11-12 ft G1B-SB6- 11-12 						SP-SM	Moist, brown poorly graded fine SAND with silt and gravel (imported fill).
0.0 7-8 ft G1B-SB6- 7-8 @1137 SM At 6.5 ft, one-foot lense of silty SAND. 8-9 ft G1B-SB6- 8-9 @1138 SP Wet, gray poorly graded SAND with wood fragments and trace silt 0.0 9-10 ft G1B-SB6- 8-9 @1138 SP Wet, gray poorly graded SAND with wood fragments and trace silt 0.0 9-10 ft G1B-SB6- 9-10 @1139 10 10 10-11 ft G1B-SB6- 10-11 @1140 10 10 0.0 11-12 ft G1B-SB6- 10-11 @1141 10	0.2	4-5 ft	4-5			SP	Wet, gray poorly graded SAND with wood fragments and trace silt (dredge fill). No sheen or odor.
0.07-8 ftG1B-SB6- $7-8$ @1137SMAt 6.5 ft, one-foot lense of silty SAND.8-9 ftG1B-SB6- $8-9$ @1138G1B-SB6- $9-10$ @1139SPWet, gray poorly graded SAND with wood fragments and trace silt0.09-10 ftG1B-SB6- $9-10$ @11409910-11 ftG1B-SB6- $10-11$ @1140100.011-12 ftG1B-SB6- $11-12$ @114110		5-7 ft	5-7		5		
7-8 ft G1B-SB6- 7-8 @1137 SM At 6.5 ft, one-toot lense of slity SAND. 8-9 ft G1B-SB6- 8-9 @1138 SP Wet, gray poorly graded SAND with wood fragments and trace slit 0.0 9-10 ft G1B-SB6- 9-10 @1139 9 9 10-11 ft G1B-SB6- 11-12 @1141 10 10 0.0 11-12 ft G1B-SB6- 11-12 @1141 10					6		Very loose material- possible lost sample at top of core.
@1137	0.0	7-8 ft			7 7	SM	At 6.5 ft, one-foot lense of silty SAND.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			@1137		+	SP	Wet, gray poorly graded SAND with wood fragments and trace silt
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		8-9 ft	8-9		8 		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.0	9-10 ft	9-10		9 9 		
		10-11 ft	10-11				
	0.0	11-12 ft	11-12		11		
SM Wet, gray slightly plastic silty SAND with abundand wood fragments.			@1141		+	SM	Wet, gray slightly plastic silty SAND with abundand wood fragments.
	lotes: bgs =		ground surfac	ce			al unit contact fied Soil Classification System Page 1 of 1

 \mathbf{x} = denotes groundwater table

Coordinate System: NAVD88/WA SP N

Ground Surface Elevation:

Boring Location: SD8 Area

Latitude/Northing:

Longitude/Easting:

Drill Date: April 24, 2014 Logged By: Kristin Anderson Drilled By: Don Harnden / ESN Northwest Drill Type: Direct Push Geoprobe Sample Method: direct push 2"x5' core Boring Diameter: 2 inches Boring Depth (ft bgs): 12 feet Groundwater ATD (ft bgs): 5.8 feet

Soil Boring ID: G1B-SB7

Client: Oldcastle Precast Project: Oldcastle-Everett Task: Area G-1B Emergency Action Address: 1130 W Marine View Dr Everett, WA

Remarks: Boring located in Area G-2, northeast of former SD8

PID ppm)	SAMPLE INTERVAL (ft bgs)	SAMPLE ID	DRIVE / RECOVERY	DEPTH (ft bgs)	USCS SYMBOL	LITHOLOGIC DESCRIPTION AND OBSERVATIONS (color, grading, Group Name [with MAJOR and minor constituents], moisture content, etc.)
0.1					SP-SM	Moist, brown poorly graded fine SAND with silt and gravel (imported fill).
					SP	Gray, poorly graded fine SAND with trace silt (dredge fill). No sheen or odor. Abundant wood fragments present beginning at 4.5 ft.
0.0						
	5.5-6.5 ft	G1B-SB7- 5.5-6.5 @1200		5		
0.0	6.5-7.5 ft	G1B-SB7- 6.5-7.5 @1201		6		At 5.8 ft, becomes wet. Interval appears compressed.
	7.5-8.5 ft	G1B-SB7- 7.5-8.5 @1202			SM	Loose, gray, poorly graded fine SAND with trace silt.
0.0	8.5-9.5 ft	G1B-SB7- 8.5-9.5 @1203			SP	Loose, ray, poorly graded fine SAND with trace silt.
	9.5-10.5 ft	G1B-SB7- 9.5-10.5 @1204 G1Bx-SB7- 9.5-10.5 (field duplicate) @1206		9 9 		
0.0	10.5-12 ft	G1B-SB7- 10.5-12 @1205			SM	Wet, gray slightly plastic silty SAND.

ft bgs = feet below ground surfaceUSCS = Unified Soil Classification Systemppm = parts per million= denotes groundwater table

Coordinate System: NAVD88/WA SP N

Ground Surface Elevation:

Boring Location: SD8 Area

Latitude/Northing:

Longitude/Easting:

Drill Date: April 24, 2014 Logged By: Kristin Anderson Drilled By: Don Harnden / ESN Northwest Drill Type: Direct Push Geoprobe Sample Method: direct push 2"x5' core Boring Diameter: 2 inches Boring Depth (ft bgs):12 feet Groundwater ATD (ft bgs): 7 feet

Soil Boring ID: G1B-SB8

Client: Oldcastle Precast Project: Oldcastle-Everett Task: Area G-1B Emergency Action Address: 1130 W Marine View Dr Everett, WA

Remarks: Boring located in Area G-2, east of former SD8

PID (ppm)	SAMPLE INTERVAL (ft bgs)	SAMPLE ID	DRIVE / RECOVERY	DEPTH (ft bgs)	USCS SYMBOL	LITHOLOGIC DESCRIPTION AND OBSERVATIONS (color, grading, Group Name [with MAJOR and minor constituents], moisture content, etc.)
0.1					SP-SM	Moist, brown poorly graded fine SAND with silt and gravel (imported fill).
					SP	Moist, gray poorly graded fine SAND with wood fragments and trace silt (dredge fill). No sheen or odor.
0.0	5.5-6.5 ft	G1B-SB8-		4 5		
0.0		5.5-6.5 @1235 G1Bx-SB8- 5.5-6.5 (field		6		Interval appears compressed 6-7 ft. At 6.5 ft, abundand wood fragments
	6.5-7.5 ft	duplicate) @ 1240 G1B-SB8- 6.5-7.5 @ 1236		₩7		At 7 ft, becomes loose and wet with poor sample recovery.
0.0	7.5-9.5 ft	G1B-SB8- 7.5-9.5 @1237				
	9.5-10.5 ft	G1B-SB8- 9.5-10.5 @1238				
0.0	10.5-12 ft	@1238 G1B-SB8- 10.5-12 @1239			SM	Wet, gray slightly plastic silty SAND with abundant wood fragments.

Coordinate System: NAVD88/WA SP N

Ground Surface Elevation:

Latitude/Northing:

Longitude/Easting:

Drill Date: April 24, 2014 Logged By: Kristin Anderson Drilled By: Don Harnden / ESN Northwest Drill Type: Direct Push Geoprobe Sample Method: direct push 2"x5' core Boring Diameter: 2 inches Boring Depth (ft bgs): 12 feet Groundwater ATD (ft bgs): 4 feet

Soil Boring ID: G1B-SB9

Client: Oldcastle Precast Project: Oldcastle-Everett Task: Area G-1B Emergency Action Address: 1130 W Marine View Dr Everett, WA

 Boring Location:
 SD8 Area
 Groundwater

 Remarks:
 Boring located in Area G-2, southeast of former SD8

(nnm) INTI	MPLE ERVAL bgs)	SAMPLE ID	DRIVE / RECOVERY	DEPTH (ft bgs)	USCS SYMBOL	LITHOLOGIC DESCRIPTION AND OBSERVATIONS (color, grading, Group Name [with MAJOR and minor constituents], moisture content, etc.)
					SP-SM	SP-SM: Moist, brown poorly graded fine SAND with silt and gravel (imported fill).
0.0				2 	SP	
0.0					58	SP: Moist, gray poorly graded fine SAND with small wood fragments (dredge fill). No sheen or odor.
0.0						Silty lense 3.6-4 ft. At 4 ft, becomes wet. Very loose at 5 ft.
						At 4 it, becomes wet. Very loose at 5 it.
5.5	-6.5 ft	G1B-SB9- 5.5-6.5 @0911		6		
6.5	-7.5 ft	G1B-SB9- 6.5-7.5 @0912				
7.5	-8.5 ft	G1B-SB9- 7.5-8.5 @0913				
8.5	5-9.5	G1B-SB9- 8.5-9.5 @0914		9 9 9 9		
9.5	-11 ft	G1B-SB9- 9.5-10.5 @0915			SM	SM: Wet, gray silty SAND with shell fragments.
		0010				At 11 ft, encountered refusal due to piling.

Attachment 5 MTCA Compliance Statistical Evaluation

2.1 G1B-C40 Area G-1B Final Confirmation Samples

4.2 (G1B-	C41
-------	------	-----

1.2							
	G1B-C41						
5	B-C33 Scra	pe					
5.1	G1B-C13	Number of samples		L	Jncensored values		
5.1	G1B-C38	Uncensored	53		Mean	10.77	
5.3	G1B-C19	Censored	9		Lognormal mean	10.67	
	G1B-C26	Detection limit or PQL	s 5		Std. devn.	7.26451203	
	G1B-C15a	Method detection limit	5		Median	9.4	
	G1B-C17	TOTAL	61		Min.	2.1	
6.2	G1B-C25a				Max.	49	
6.2	G1B-C32b						
6.3	G1Bx-C26						
	G1B-C18						
		Lognormal distribution?		Normal distrib	oution?		
		Lognormal distribution?					
6.5	G1B-D8	r-squared is:	0.956	r-squared is:		0.678	
6.9	G1B-C9	Recommendations:					
		Use lognormal distribution.					
7.1	G1B-C33						
7.5	G1B-C4						
7.5	G1B-D5						
8	G1B-HA1						
8.5	G1B-D7						
8.6	G1B-C31						
8.6	G1B-C39	UCL (Land's method) is 11.23	394629648153	5			
8.9	G1B-D2		Simple substit	ution used wit	th censored values.		
			*censored				
			(non-detect)				
			samples				
			include: G1B-				
			C7, G1B-				
			C10,				
			G1B-C12,				
			G1B-C16,				
			G1B-C20,				
			G1B-D10, G1B-SD9-				
			PitBb,				
			,				
9.1	G1B-D4		G1B-Scrape				
	-		1a				
	G1B-C29a		and G1B-Scra	ape 3			
	G1B-C23						
10	G1B-C6						
10	G1B-C21						
10	G1B-C27	L]
10	G1B-D6						
	G1B-D0						
	G1B-D14						
	G1B-C24b						
11	G1B-C35a						

11 G1B-C35a

11 G1Bx-C36a

11 G1B-C37a

11 G1Bx-C22

12 G1B-C15.5

12 G1B-C22

12 G1B-C34
12 G1B-HA2
12 G1B-D12
12 J1B-Scrape 2
13 G1B-C42
16 G1B-C30
17 G1B-C1a
18 G1B-D1
19 G1B-C3
19 G1Bx-D9
20 G1B-C5
23 G1B-D9

Attachment 6 Trucking Documentation

Seat J STOMER 163888 Old Castle Precas 1002 15th St SW,	t Inc Ste 110	MODAL	VEIGHMAST JAMIE DATE/TIME II 03-18- VEHICLE SOIL	B. 2014 8:5	5 am 0	ATE/TIME OUT 3-18-2014 CONTAINER	9:10 am
Auburn, WA 98001 LW-14062			BEFERENCE BEL OF 3 AD			INV	OICE
MANUAL IN SCALE OUT	GROSS WEIGHT TARE WEIGHT	104,760 40,740	NET TONS NET WEIGHT	32.01 64,020		INBOUND	
QTY. UNIT 0.00 YD TRACKI		SCRIPTION		RATE	EXTENSION	TAX	TOTAL
			FETY Vight Thing!				
							NET AMOUNT
	signing this document on behalf of he or she has the authority to sig			d understands the te	erms and condit	tions	CHANGE

1002	Castl 15th rn, W	Seat e Precas	Ste 110	MODAL	SITE 1 TIC WEIGHMASTI IN - K DATE/TIME IN 03-18- VEHICLE SOIL RESERBNCE BILL OF LAD	im L. OUT 2014 8:5 ICI	F - JAN 50 am	DATE/TIME OUT 03-18-2014 CONTAINER	9:14 am NVOICE
		AL IN E OUT	GROSS WEIGHT TARE WEIGHT	108,560 41,000	NET TONS NET WEIGHT	33.78 67,560		INBOUNI)
0.00 33.78	YD TN	TRACKIN SW-CONT	NG QTY	CRIPTION	T/SNOH	RATE	EXTENS	ION TAX	TOTAL
					SS CAR			*	
									TENDERED
			igning this document on behalf o			I understands the te	erms and co	nditions	CHANGE
on 1 RS-F042UP		2/2	ne or she has the authority to sign 1		BIGNATURE				CHECK#

TE			L DISPOSAL INTER 3rd and lander ttle, WA	MODAL	UN - K	WEIGHMASTER IN - Kim L. OUT - JAMIE B.				
	Castle	e Precas			DATE/TIME IN 03-18- VEHICLE SOIL	2014 9:2	20 am	DATE/TIME OUT 03-18-201 CONTAINER	4 9:40 an	
	n, WA	St SW, A 98001	Ste 110		RESERENCE BILL OF LAD				INVOICE	
	SCALE		GROSS WEIGHT TARE WEIGHT	105,940 41,220	NET TONS NET WEIGHT	32.36 64,720		INBOUN	D	
QTY. 0.00	UNIT YD	TRACKII		SCRIPTION		RATE	EXTENS	ION TAX	TOTAL	
				IS De	FETY Rene Things					
									NET AMOUNT	
									TENDERED	
			igning this document on behalf he or she has the authority to sid			d understands the t	terms and cor	nditions	CHANGE	
on t RS-F042UP		2/2			SIGNATURE	5			CHECK#	

ITE			L DISPOSAL INTER 3rd and lander tle, WA -	MODAL	WEIGHMASTE	WEIGHMASTER			
1002	Castl 15th rn, W	e Precas	t Inc Ste 110		IN - K DATE/TIME IN 03-18- VEHICLE RESERGINCE BILL OF LAD	2014 9:4 ICI	r - JAM 13 am	DATE/TIME OUT 03-18-201 CONTAINER	.4 9:53 am INVOICE
	SCAL	E IN E OUT	GROSS WEIGHT TARE WEIGHT	102,400 40,920	NET TONS NET WEIGHT	30.74 61,480		INBOU	ND
QTY .	UNIT YD	TRACKIN		CRIPTION		RATE	EXTENS	ION TAX	TOTAL
					ST SA				
									NET AMOUNT
			igning this document on behalf o ne or she has the authority to sigr			I understands the to	erms and co	nditions	CHANGE CHECK#

TE		REGIONAL DISPOSAL INT 3rd and lander			скет # 905748	C	ELL	
		Seattle, WA		IN - F	(im L. OU)	r - Jamii	ЕB.	
USTOMER 16388				DATE/TIME 03-18-	2014 9:5	51 am 🖁	ATE/TIME OUT 3-18-2014	10:01 am
		e Precast Inc		VEHICLE		c	ONTAINER	
		St SW, Ste 110 A 98001		REFERENCE 03-23/	TCT	-	TNU	/OICE
LW-1	4062			BILL OF LAI				
	SCALE	IN GROSS WEIGHT	109,520	NET TONS	34.15			
	SCALE	COUT TARE WEIGHT	41,220	NET WEIGHT	68,300		INBOUND	
QTY.	UNIT	and the second second	DESCRIPTION	1	RATE	EXTENSION	TAX	TOTAL
0.00 34.15		TRACKING QTY SW-CONT SOIL	EVERET	T/SNOH				
				Rom Harge				NET AMOUNT
							_	TENDERED
		ned individual signing this document on be se side and that he or she has the authority to			nd understands the t	erms and condit	tions	CHANGE

TE	REGIONAL DISPOSAL INTE 3rd and lander Seattle, WA	RMODAL	SITE TICK	^{ET #} 905749 m L. OUI	Cell 7 - JAMIE E	3.	
USTOMER 163888	- Deserat Tra		DATE/TIME IN 03-18-2	014 9:5		TIME OUT 18-2014	10:14 am
1002 15th	e Precast Inc St SW, Ste 110		YEUGLE		CONT	AINER	
Auburn, W LW-14062	A 98001		BILL OF LADI			INV	OICE
SCAL	E IN GROSS WEIGHT	102,760	NET TONS	31.00			
	E OUT TARE WEIGHT	40,760	NET WEIGHT	62,000	I	NBOUND	2
0.00 YD	D TRACKING QTY	ESCRIPTION		RATE	EXTENSION	TAX	TOTAL
31.00 TN	SW-CONT SOIL		T/SNOH				
	gned individual signing this document on behalf se side and that he or she has the authority to s			understands the to	erms and conditions		NET AMOUNT TENDERED CHANGE

ITE			L DISPOSAL INTER 3rd and lander :tle, WA -	MODAL	SITE 01 WEIGHMASTE IN - K	KET 905753 R	C - JAMIE	ELL	
1002	Castl 15th rn, W	e Precas St SW, A 98001	Ste 110		DATEFTIME IN 03-18-2 VEHICLE BESEREMCEI BILL OF LADI	2014 10:3	36 am 0	ATECTIME OUT 3-18-2014 ONTAINER	11:07 am OICE
	SCALI SCALI	E IN E OUT	GROSS WEIGHT TARE WEIGHT	106,820 40,460	NET TONS NET WEIGHT	33.18 66,360		INBOUND	
QTY. 0.00	UNIT YD	TRACKII		CRIPTION	1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	RATE	EXTENSION	TAX	TOTAL
					ST CA				
								-	NET AMOUNT
			igning this document on behalf on he authority to sig			l understands the t	erms and condit	ions	CHANGE
	icicica	o orac ana that	no or one has the authority to sig	and document on be	man or and endedmen.	-			

USTOMER 163888		L DISPOSAL INTER 3rd and lander tle, WA -	MODAL	SITE 1 TIC 01 WEIGHMASTE IN - K. 03-18-	im L. OUT	1 - JAM 53 am	CELL IE B. DATE/TIME OUT 03-18-2014	11:23 am
Old Cast 1002 15t	le Precas h St SW, WA 98001	Ste 110		VEHICLE SOIL RESERGINCE BILL OF LAD	ICI		CONTAINER	VOICE
	LE IN LE OUT	GROSS WEIGHT TARE WEIGHT	104,580 40,620	NET TONS NET WEIGHT	31.98 63,960		INBOUND	
31.98 Th	I SW-CONT	SOIL	/si	TT/SNOH				
	erse side and that h 2/2	igning this document on behalf o le or she has the authority to sign 1	this document on beh		understands the t	erms and con	ditions	NET AMOUNT TENDERED CHANGE CHECK#

SCALE IN SCALE OUT GROSS WEIGHT 108,040 NET TONS 33.70 SCALE OUT TARE WEIGHT 40,640 NET WEIGHT 67,400 INBOUND OTY UNT DESCRIPTION RATE EXTENSION TAX TOTAL 0.00 YD TRACKING QTY DESCRIPTION RATE EXTENSION TAX TOTAL 33.70 TN SW-CONT SOIL EVERETT/SNOH Indicate the second sec	1002	Castle 15th cn, W2		nc	WEIGHMASTER IN - Kin	Kim L. OUT - JAMIE B. EIN 3-2014 11:02 am 03-18-2014 11:2 CONTAINER GEICI INVOICE					
0.00 YD TRACKING QTY 33.70 TN SW-CONT SOIL EVERETT/SNOH Image: Control of the second se										INBOUND	
33.70 TN SW-CONT SOIL EVERETT/SNOH			TRACKING C		SCRIPTION	and the		RATE	EXTENSION	TAX	TOTAL
Tendered and understands the terms and conditions	33.70	TN	SW-CONT SC	DIL	A SI	ST TETY					
The undersigned individual signing this document of behalf of customer acknowledges that he or she has read and understands the terms and conditions										E	TENDERED
2/21 RS-F042UPR (07/12) SIGNATURE	on	the revers	e side and that he or s 2/21		n this document on beha	alf of the custo		understands the te	rms and conditions		

1002	Castl 15th n, W			RMODAL		SITE 01 WEIGHMASTEI IN - Ki DATE/TIME IN 03-18-2 VEHICLE SOIL REFERENCE 03-22/IC BILL OF LADIN	m L. OUT 014 11:2 CI	- JAM 9 am	CELL IE B. DATE/TIME 03-18- CONTAINE	R	12:14 pm DICE
	SCALE SCALE		GROSS WEIGHT TARE WEIGHT	95,940 40,820		I TONS WEIGHT	27.56 55,120		INB	OUND	
QTY.	UNIT		DE	SCRIPTION		The second second	RATE	EXTENSI	ON	TAX	TOTAL
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			igning this document on behalf ne or she has the authority to sig				understands the te	erms and con	ditions		CHANGE

TE		REGIONAL DISPOSAL INTE 3rd and lander Seattle, WA	RMODAL	IN - K	im L. OUT			
16388 Old (1002	Castl 15th	e Precast Inc St SW, Ste 110 A 98001		03-18- VEHICLE SOIL REFERENCE 03-09/			-18-2014	12:16 pr
LW-1	4062			BILL OF LAD			1110	/0101
	SCALE SCALE		105,360 40,800	NET TONS NET WEIGHT	32.28 64,560		INBOUND	
QTY . 0.00	UNIT YD	TRACKING QTY	ESCRIPTION		RATE	EXTENSION	TAX	TOTAL
32.28	TN	SW-CONT SOIL	EVERET	F/SNOH				
								NET AMOUNT
		gned individual signing this document on behalt se side and that he or she has the authority to s			d understands the te	erms and conditio	ins	CHANGE

1002	Castl 15th cn, W	Sea e Precas	Ste 110	RMODAL	DATE/TI 03-1 VEHICLE REFERE	MEIN 8-2014 11: 5 NCE 3/ICI		B. TE/TIME OUT -18-2014 NTAINER	12:35 pr OICE
	SCALE SCALE	E IN E OUT	GROSS WEIGHT TARE WEIGHT	106,680 41,000	NET TONS NET WEIGHI	32.84 65,680		INBOUND	
QTY. 0.00	UNIT YD	TRACKII		SCRIPTION	a state of the state	RATE	EXTENSION	TAX	TOTAL
				A Star	FETY Ferr	e un			
			signing this document on behalf the or she has the authority to sig			d and understands the	terms and condition	ns	NET AMOUNT TENDERED CHANGE CHECK#

USTOMER			AL DISPOSAL INTE: 3rd and lander attle, WA	RMODAL	IN - Ki		' – JAN			
1638; Old (Castl	e Preca St SW,	st Inc Ste 110		DATE/TIME IN 03-18-2 VEHICLE		8 pm		IME OUT 8-2014 INER	1:02 pm
Aubu: LW-1		A 9800:	1		REFERENCE 03-34/I BILL OF LADII				INV	OICE
	SCALI SCALI	E IN E OUT	GROSS WEIGHT TARE WEIGHT	100,700 40,200	NET TONS NET WEIGHT	30.25 60,500		I	NBOUND	
QTY.	UNIT		DE	SCRIPTION		RATE	EXTENS	ION	TAX	TOTAL
30.25	TN	SW-CON	T SOIL	EVERET	T/SNOH					
										NET AMOUNT
Th	e undersio	gned individual	signing this document on behalf	of Customer acknowledd	ges that he or she has read and	understands the te	erms and co	nditions		TENDERED

1002	Castl 15th rn, W	REGIONAL DISPOSAL INTEF 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	RMODAL	WEIGHMAST	rinda L. 2014 1:(ICI	03 pm 03-1	TIME OUT 18-2014 AINER	1:19 pm OICE
	SCALI SCALI	E IN GROSS WEIGHT E OUT TARE WEIGHT	104,100 40,520	NET TONS NET WEIGHT	31.79 63,580		INBOUND	
оту. 0.00	UNIT YD	DE TRACKING QTY	SCRIPTION		RATE	EXTENSION	TAX	TOTAL
31.79	TN	SW-CONT SOIL	EVERET	T/SNOH				
The on	e undersig the revers	ned individual signing this document on behalf e side and that he or she has the authority to sig 2/21	of Customer acknowled	ges that he or she has read and laif of the customer.	d understands the t	erms and conditions		NET AMOUNT TENDERED CHANGE CHECK#

Old (1002 Aubur	63888 ld Castle Precast Inc 002 15th St SW, Ste 110 uburn, WA 98001 W-14062 SCALE IN GROSS WEIGHT 106,560 M SCALE OUT TARE WEIGHT 40,520 NE					SITE 11CKET # 905779 WEIGHMASTER IN - Drinda L. OUT - Kim L. DATE/TIME IN 03-18-2014 1:14 pm 03-18-2014 1:36 VEHICLE CONTAINER SOIL CONTAINER 05FEPENCEICI INVOICE BILL OF LADING				
	SCALE OUT TARE WEIGHT 40,520 NE					33.02 66,040		INBOUND		
QTY.	UNIT			SCRIPTION		RATE	EXTENSION	TAX	TOTAL	
55.02	1 IN	SW-CON	I JUIL	1 SI						
	the revers	e side and that 2/	signing this document on behalf he or she has the authority to sig 21			d understands the t	erms and conditions		NET AMOUNT TENDERED CHANGE CHECK#	

TE REGIONAL DISPOSAL INTER 3rd and lander	MODAL	SITE 1	тіскет # 05783		CELL	
Seattle, WA		WEIGHM	ASTER Drinda L.	OUT - J	JAMIE B.	
163888		DAJE/I	8-2014 2:	83-18-2014	2:08 pm	
Old Castle Precast Inc 1002 15th St SW, Ste 110		VEWSH	J		CONTAINER	
Auburn, WA 98001 LW-14062		BILL OF	ADING		II	IVOICE
SCALE IN GROSS WEIGHT SCALE OUT TARE WEIGHT	NET TONS	31.62				
SCALE OUT TARE WEIGHT	NET WEIGHT	63,240		INBOUND		
OTY. UNIT DES 0.00 YD TRACKING QTY	CRIPTION	and a second	RATE	EXTENSIO	DN TAX	TOTAL
	L'S Die S	AS AN FETY View Thingt	- an			
						NET AMOUNT
The undersigned individual signing this document on behalf o on the reverse side and that he or she has the authority to sign RS-F042UPR (07/12)	n this document on beha		d and understands the	terms and cond	litions	CHANGE CHECK#

re REG	IONAL DISPOSAL INTER 3rd and lander Seattle, WA	MODAL	WEIGHMASTE IN - Di	WEIGHMASTER IN - Drinda L. OUT - JAMIE B.						
USTOMER 163888 Old Castle Pr			DATE/TIME IN 03-18-2 VEHICLE SOIL	DATE/TIME IN 03-18-2014 DATE/TIME OUT 03-18-2014 DATE/TIME OUT 03-18-2014 OUT 2:17 m VEHICLE SOLL CONTAINER						
1002 15th St Auburn, WA 9 LW-14062				DESERGNCEICI INVOICE BILL OF LADING						
SCALE IN SCALE OU		NET TONS NET WEIGHT	33.50 67,000		INBOUND					
ОТУ. UNIT 0.00 YD TRA	DE: ACKING QTY	SCRIPTION		RATE	EXTENSION	XAT	TOTAL			
	-CONT SOIL		FETTY Refet Thing!							
							NET AMOUNT			
The undersigned ind on the reverse side a	dividual signing this document on behalf or and that he or she has the authority to sig 2/21	of Customer acknowledg In this document on beh	ges that he or she has read and alf of the customer.	d understands the t	erms and condition	ns	CHANGE CHECK#			

	EGIONAL DISPOSAL INTER 3rd and lander Seattle, WA	RMODAL	WEIGHMAS	JAMIE B.	OUT - Kim I		
	t SW, Ste 110		DATE/TIME 03-19- VEHICLE SOIL BESERENCI		21 am 03-		8:31 am
Auburn, WA LW-14062	98001		BILL OF LA			1 IN V	TOICE
SCALE SCALE		111,440 41,300	NET TONS NET WEIGHT	35.07 70,140		INBÓUND	
QTY. UNIT 0.00 YD 7	TRACKING QTY	SCRIPTION		RATE	EXTENSION	TAX	TOTAL
35.07 TN S	SW-CONT SOIL	SI	T/SNOH				NET AMOUNT
The undersigned	individual signing this document on behalf de and that he or she has the authority to si	of Customer acknowled	iges that he as she has read a	nd understands the	terms and conditions		TENDERED
RS-F042UPR (07/12)	2/21	-		1			CHECK#

TE REGIONAL DISPOSAL INTERN 3rd and lander Seattle, WA -	MODAL	WEIGHMASTE	^{(et} [#] 905806 R Amie B. (JUT - TUC	CELL Kim L		
USTOMER 163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001		VEHICLE SOIL RESERSACE	2014 8:2	26 am	AINER I9-2014 8:38 a INVOICE		
LW-14062		BILL OF LADI			_		
SCALE IN GROSS WEIGHT SCALE OUT TARE WEIGHT	107,800 40,280	NET TONS NET WEIGHT	33.76 67,520		I	NBOUND	
OTY. UNIT DES 0.00 YD TRACKING QTY	CRIPTION	And the second second	RATE	EXTENS	SION	TAX	TOTAL
		FETY Tight Doing!					
							NET AMOUNT
The undersigned individual signing this document on behalf of on the reverse side and that he or she has the authority to sigr			understands the t	erms and co	onditions		CHANGE
on the reverse side and that he or she has the authority to sign 2/21 RS-F042UPR (07/12)		SIGNATURE					CHECK#

	NAL DISPOSAL INTER 3rd and lander eattle, WA -	MODAL	WEIGHMASTE IN - JA	AMIE B. C	CELL DUT - Kim I		*
USTOMER 163888 Old Castle Pred 1002 15th St SV			DATE/TIME IN 03-19-2 VEHICLE SOIL		39 am 03-	time out 19-2014 ainer	8:49 am
Auburn, WA 980 LW-14062						INV	OICE
SCALE IN SCALE OUT	GROSS WEIGHT TARE WEIGHT	102,800 40,820	NET TONS NET WEIGHT	30.99 61,980		INBOUND	
	KING QTY ONT SOIL	EVERET	T/SNOH				
						_	NET AMOUNT
	ual signing this document on behalf o that he or she has the authority to sig 2/21			I understands the t	erms and conditions		CHANGE CHECK#

Old (1002 Aubur	3rd and lander Seattle, WA TOMER 163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062 SCALE IN GROSS WEIGHT 106,340 NI SCALE OUT TARE WEIGHT 41,080 NET					1	DUT - K 16 am	CELL im L. DATE/TIME 03-19- CONTAINE	3	8:58 am OICE
					NET TONS NET WEIGHT	32.63 65,260		IN	BOUND	
QTY.				SCRIPTION		RATE	EXTENSI	ON	TAX	TOTAL
				51	'T/SNOH					
	the revers	se side and that 2/	signing this document on behalf o he or she has the authority to sig 21	n this document on beh		d understands the to	erms and con	ditions		NET AMOUNT TENDERED CHANGE CHECK#

Old (1002 Aubus	163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062 SCALE IN GROSS WEIGHT 99,620 N SCALE OUT TARE WEIGHT 41,040 NET				WEIGHMASTE	AMIE B. (2014 8:5 CI ICI	DUT - K 59 am	DATE/TIME OUT 03-19-2014 CONTAINER	9:09 am VOICE
	SCALE OUT TARE WEIGHT 41,040 NET					29.29 58,580	-	INBOUND	
QTY.				CRIPTION		RATE	EXTENSI	ON TAX	TOTAL
					Right Things				
			igning this document on behalf of he or she has the authority to sign			i understands the to	erms and con	ditions	NET AMOUNT TENDERED CHANGE

Old (1002 Aubus	3rd and lander Seattle, WA 163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062 SCALE IN GROSS WEIGHT 99,640 N SCALE OUT TARE WEIGHT 41,120 NET				N		L. TIME OUT 19-2014 TAINER	9:23 am 70ICE
				NET TONS NET WEIGHT	29.26 58,520		INBOUND	
0.00	UNIT YD	TRACKING QTY	DESCRIPTION	All and a second se	RATE	EXTENSION	TAX	TOTAL
29.26	TN	SW-CONT SOIL		T/SNOH				
The on RS-F042UP	the revers	ned individual signing this document on e side and that he or she has the authorit 2/21	y to sign this document on beh	ges that he or she has read and half of the customer.	d understands the t	erms and conditions	5	NET AMOUNT TENDERED CHANGE CHECK#

Old C 1002 Aubur	3rd and lander Seattle, WA					TICKET # 905820 IASTER E B. ME IN 9-2014 10: 3ICI NCE	22 am (CELL DATE/TIME OUT 03-19-2014 CONTAINER IN	10:22 am IVOICE
	TARE OUT TARE WEIGHT 41,300 NET					29.88 59,760		INBOUND	
0.00 29.88	YD TN	TRACKING SW-CONT	G QTY	T/SNOH	RATE	EXTENSIO	DN TAX	TOTAL	
					SE SA				NET AMOUNT
The	undersig	ned individual cig	ning this document on behalf	of Customer acknowledge	tes that he or she has rea	d and understands the	terms and cons	litions	CHANGE
on t RS-F042UPI	he revers	e side and that he 2/21	or she has the authority to sig	gn this document on beh	SIGNATURE		terms and conc		CHECK#

TE REGIONAL DISPOSAL INTERM 3rd and lander Seattle, WA		SITE TICK 01 WEIGHMASTE JAMIE E			CELL				
ISTOMER 163888 Old Castle Precast Inc 1002 15th St SW, Ste 110		VEHICLE 03-34IC	2014 10:3 I	31 am	DATE/TIME OUT 03-19-2014 CONTAINER	10:31 am			
Auburn, WA 98001 LW-14062	Auburn, WA 98001				REFERENCE INVOICE BILL OF LADING				
SCALE IN GROSS WEIGHT TARE OUT TARE WEIGHT		NET TONS IET WEIGHT	31.17 62,340		INBOUNE)			
OTY. UNIT DESC 0.00 YD TRACKING QTY	CRIPTION		RATE	EXTENS	ION TAX	TOTAL			
	Is the Rep	S TY							
						NET AMOUNT			
						OUTAMOL			
The undersigned individual signing this document on behalf of on the reverse side and that he or she has the authority to sign	Customer acknowledges that this document on behalf of	at he or she has read and the customer.	understands the t	erms and co	nditions	CHANGE			

1002 15t	63888 ld Castle Precast Inc 002 15th St SW, Ste 110 uburn, WA 98001 W-14062					^{ET} 905823 B. 2014 10:4 I	8 am 0.	ATE/TIME OUT 3-19-2014 ONTAINER	10:48 am VOICE
LW-14062					BILL OF LADI	NG			
TARE OUT TARE WEIGHT 40,820 NET					TONS EIGHT	32.31 64,620		INBOUND	,
QTY. UNIT	TRACKI		CRIPTION			RATE	EXTENSION	I TAX	TOTAL
32.31 Th	SW-CON		Isi	T/SNOH	10				
The under on the rev RS-F042UPR (07	erse side and that 2/2	signing this document on behalf o he or she has the authority to sig 21	n this document on be	iges that he or si half of the custor	he has read and mer.	understands the t	erms and condit	tions	NET AMOUNT TENDERED CHANGE CHECK#

TE			AL DISPOSAL INTER 3rd and lander	RMODAL	SITE TICK 01 WEIGHMASTEI JAMIE E	905824		CELL		
USTOMER		Sea	attle, WA		JAMIE E DATE/TIME IN 03-19-2		7 am	BATE/TH	м <mark>е онт</mark> 9-2014	10:57 am
	Castl	e Precas	st Inc Ste 110		VEHCLE 8IC			CONTAI		10.07 41
	rn, W	A 98001			BILL OF LADIN	G			INV	VOICE
	SCALE TARE		GROSS WEIGHT TARE WEIGHT	105,900 41,080	NET TONS NET WEIGHT	32.41 64,820		II	IBOUND	
QTY.	UNIT	and a second	DE	SCRIPTION		RATE	EXTENS	ION	TAX	TOTAL
0.00 32.41	YD TN	TRACKI SW-CON			T/SNOH					
The	e undersid	med individual	signing this document on behalf	of Customer acknowled	ges that he or she has read and	understands the te	erms and co	nditions		NET AMOUNT TENDERED CHANGE
			the or she has the authority to sig							CHECK#

REGIONAL DISPOSAL INTERMODAL 3rd and lander		сет 905825		CELL			
Seattle, WA	WEIGHMASTE	R.					
romer 163888	PAJE/TIME_IN	2014 11:0)5 am	BATE/TIM	<u>e 90</u> 14	11:05 ar	
Old Castle Precast Inc	VEHICLE 9IC	CI		CONTAINE	ER		
1002 15th St SW, Ste 110 Auburn, WA 98001	REFERENCE		1		TNV	OICE	
LW-14062	BILL OF LADING						
SCALE IN GROSS WEIGHT 103,280 N	ET TONS	31.12					
	r weight	62,240		INI	BOUND		
TY. UNIT DESCRIPTION		RATE	EXTENSI	ON	TAX	TOTAL	
0.00 YD TRACKING QTY 31.12 TN SW-CONT SOIL EVERETT/SNOP	A STATE OF					NET AMOUNT	
The undersigned individual signing this document on behalf of Customer acknowledges that he	or she has read and	understands the 1	erms and con	ditions		TENDERED	
on the reverse side and that he or she has the authority to sign this document on behalf of the c						CHECK#	

SITE	3	DISPOSAL INTERN Brd and lander tle, WA -	MODAL	WEIGHMAST JAMIE	WEIGHMASTER JAMIE B.					
LOSTOMER 163888				DATE/TIME 1 03-19-	DATE/TIME IN 03-19-2014 11:50 am 03-19-2014 11:					
Old Cast	le Precast			VEHICLE 03-221	CI		CONTAINER			
	h St SW, WA 98001	Ste 110		REFERENCE			I	NVOICE		
LW-14062				BILL OF LAD	ING					
			101 010		21.00					
	LE IN RE OUT	GROSS WEIGHT	104,840	NET TONS	31.86		TNPOLINI			
IAr	U 001	TARE WEIGHT	41,120	NET WEIGHT	63,720		INBOUNI			
			CRIPTION	line and	RATE	EXTENSI	ON TAX	TOTAL		
0.00 Y 31.86 T			FVFRFT	T/SNOH				8		
				SETY FETY Regins Through						
								TENDERED		
The unde	rsigned individual si	gning this document on behalf o ee or she has the authority to sign	f Customer acknowled	ges that he or she has read ar	d understands the t	erms and con	ditions	CHANGE		
RS-F042UPR (07	2/2			SIGNATURE				CHECK#		

		NAL DISPOSAL INTER 3rd and lander attle, WA		SITE 1 TICKET #05832 CELL WEIGHMASTER JAMIE B.					
1002 15	stle Preca 5th St SW, WA 9800	st Inc Ste 110	DATE-TIME IN 03-TIME I	2014 12:2 CI	mq 8	CONTAI		12:28 pm 70ICE	
SC	ALE IN RE OUT	GROSS WEIGHT TARE WEIGHT	94,240 41,300	NET TONS NET WEIGHT	26.47 52,940	1	II	NBOUND	
	D TRACKI	DES NG QTY	SCRIPTION		RATE	EXTENS	ION	TAX	TOTAL
			1	ST CAR					

1002 15t	Sea the Preca th St SW, WA 9800	st Inc Ste 110	MODAL	SITE 1 TICH WEIGHMASTE JAMIE H DATE/TIME IN 03-19-2 VEHICLE 03-34 I C REFERENCE BILL OF LADII	3. 2014 12:4 I	2 pm	CELL DATE/TIME OUT 03-19-2014 CONTAINER IN	12:42 pm NVOICE
	ALE IN RE OUT	GROSS WEIGHT TARE WEIGHT	101,440 40,280	NET TONS NET WEIGHT	30.58 61,160		INBOUND	
QTY. UNIT 0.00 Y		DES ING QTY	CRIPTION		RATE	EXTENSIO	ON TAX	TOTAL
			15 Units Units	SAT SAT				
							-	NET AMOUNT
		signing this document on behalf o t he or she has the authority to sign			understands the te	erms and con	ditions	CHANGE
RS-F042UPR (07		2/21					CHECK#	

SITE			L DISPOSAL INTER 3rd and lander ttle, WA -	WEIGHMASTE	SITE 01 905836 CELL WEIGHMASTER JAMIE B.					
1002	Castl 15th rn, W	e Precas St SW, A 98001	Ste 110	DATE/TIME IN 03-19-2 VEHICLE 03-37IC REFERENCE BILL OF LADIN	2014 12:5 I	7 pm	DATE/T 03-1 солта		12:57 pr 70ICE	
	SCAL TARE		GROSS WEIGHT TARE WEIGHT	106,320 40,820	NET TONS NET WEIGHT	32.75 65,500		1	INBOUND	
оту. 0.00	UNIT	TRACKI		CRIPTION	Are and a second	RATE	EXTENS	ION	TAX	TOTAL
				The second secon	FETY Right Thing!					
					10					
										NET AMOUNT
			signing this document on behalf c he or she has the authority to sig	of Customer acknowled	ges that he or she has read and	understands the te	erms and co	nditions		

TE	3	DISPOSAL INTEN Brd and lander tle, WA	RMODAL		SITE TICKE	* 905837		CELL		
	le Precast	Inc			DATE/TIME IN 03-19-2 VEHICLE 8IC	014 1:2	2 pm	BATE/I CONTA	ME OUT 9-2014 INER	1:22 pm
Auburn, N LW-14062		Ste IIU			BILL OF LADIN	G		1	INV	YOICE
	E IN COUT	GROSS WEIGHT TARE WEIGHT	101,840 41,080		TONS WEIGHT	30.38 60,760		I	NBOUND	
QTY. UNIT 0.00 YD	TRACKING		SCRIPTION	Sec. and		RATE	EXTENS	ION	TAX	TOTAL
30.38 TN	SW-CONT	POIT		T/SNOH						
			THE THE	10	121	4		1		
		ning this document on behalf	of Customer acknowled	ges that he or s	the has read and u	understands the te	erms and co	nditions		NET AMOUNT TENDERED CHANGE

	REGIONAL DISPOSAL INTE 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	SITE 11CKET # 905838 WEIGHMASTER Kim L. DATE/TIME IN 03-19-2014 1:27 pm 03-19-2014 1:2 VEHICLE 03-09ICI CONTAINER REFERENCE INVOICE BILL OF LADING					
SCALE TARE		,	NET TONS T WEIGHT	31.92 63,840		INBOUND	
QTY. UNIT	Di	ESCRIPTION		RATE	EXTENSION	TAX	TOTAL
31.92 TN	SW-CONT SOIL	EVERETT/SNO	AND N				NET AMOUNT
	ned individual signing this document on behalf se side and that he or she has the authority to si			understands the ter	rms and condition	ns	TENDERED CHANGE CHECK#
RS-F042UPR (07/12	?)	SIGNATUR	E				

Old C 1002 Aubur	L63888 Dld Castle Precast Inc L002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062 SCALE IN GROSS WEIGHT 95,980 TARE OUT TARE WEIGHT 41,120 NH TY. UNIT DESCRIPTION 0.00 YD TRACKING QTY					SITE TICKET #05840 WEIGHMASTER JAMIE B. DATE/TIME IN 03-19-2014 1:56 pm 03-19-2014 1: VENCLE 22ICI CONTAINER REFERENCE INVOICE BILL OF LADING						
					NET NET W	TONS EIGHT	27.43 54,860		IN	BOUND		
0.00 27.43			ΤY		r/snoh		RATE	EXTENSI		TAX	TOTAL	
The on t	the revers	se side and that he or s	this document on behalf o she has the authority to sign	f Customer acknowledg a this document on beh	jes that he or she alf of the custom	e has read and	understands the te	erms and con	ditions		NET AMOUNT TENDERED CHANGE CHECK#	

1002	Castle 15th n, W2	REGIONAL DISPOSAL INTE 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	RMODAL	01 WEIGHMASTE IN - J2 DATE/TIME IN 03-19-2 VEHICLE 03-12IC REFERENCE	01 905842 WEIGHMASTER IN - JAMIE B. OUT - Drinda L. DATE/TIME IN DATE/TIME OUT 03-19-2014 1:50 pm VEHICLE CONTAINER 03-12ICI CONTAINER					
	SCALE SCALE		97,480 41,400	NET TONS NET WEIGHT	28.04 56,080		INBOUND			
QTY.	UNIT	DI	SCRIPTION		RATE	EXTENSION	TAX	TOTAL		
28.04	TN	SW-CONT SOIL	A SI	T/SNOH						
The on t RS-F042UP	he reverse	ned individual signing this document on behalf a side and that he or she has the authority to si 2/21	gn this document on beh	ges that he or she has read and half of the customer.	understands the to	erms and conditions		TENDERED CHANGE CHECK#		

TE			L DISPOSAL INTER 3rd and lander tle, WA	MODAL	SITE TIC 01 WEIGHMASTE Kim L.	KET # 905857 ER		CELL		
1002	astle 15th	e Precast St SW, A 98001	: Inc		VEHICLE VEHICLE SOIL REFERENCE 03-23/I	2014 7:4	13 am	DATE/TIN 03-20 CONTAIN)-2014 NER	7:55 am VOICE
LW-14	1062				BILL OF LAD				TIV	OICL
	SCALE SCALE	IN OUT	GROSS WEIGHT TARE WEIGHT	93,260 41,500	NET TONS NET WEIGHT	25.88 51,760		IN	IBOUND	
QTY.	UNIT	the state	DES	SCRIPTION		RATE	EXTENS	ION	TAX	TOTAL
25.88	TN	SW-CONT		Contract	PETY VIC					
									_	NET AMOUNT
			gning this document on behalf one or she has the authority to sig			d understands the to	erms and cor	nditions	-	CHANGE

Old (1002 Aubur	ACCOMPANY NAME OF CONTRACT OF						SITE TICKET # CELL 901 905858 CELL WEIGHMASTER IN JAMIE B. OUT - Kim L. DATE/TIME IN 03-20-2014 8:32 am 03-20-2014 8:32 am 03-20-2014 VEHICLE CONTAINER 03-37ICI REFERENCE INVOI BILL OF LADING 00.000					
					NET NET WE		30.90 61,800		I	NBOUND		
QTY.		MD A CHAN		CRIPTION		al-s	RATE	EXTENSI	ON	TAX	TOTAL	
30.90	TN	SW-CONT	F SOIL		F/SNOH							
			igning this document on behalf of ne or she has the authority to sign				understands the te	erms and con	ditions		TENDERED CHANGE	
RS-F042UP		2/2			GNATURE		_		_		CHECK#	

1002	Castle 15th rn, WA	Seat	Ste 110	MODAL	01 WEIGHMAST	AMIE B. 2014 9: CI		CELL im L. DATE/TIME 03-20- CONTAINER	-2014 R	10:31 an OICE
	SCALE SCALE		GROSS WEIGHT TARE WEIGHT	113,780 40,920	NET TONS NET WEIGHT	36.43 72,860		INE	BOUND	
QTY.	UNIT	41 - 10-		CRIPTION	Lan and	RATE	EXTENSI	ON	TAX	TOTAL
0.00 36.43	YD TN	TRACKI SW-CON	-	A SI	TT/SNOH			,		
The on t	the reverse	e side and that 2/2	signing this document on behalf o he or she has the authority to sigr 21	n this document on bel	Iges that he or she her read and half of the customer.	d understands the	terms and con	ditions		NET AMOUNT TENDERED CHANGE CHECK#

1002	Castl 15th n, W	Sea [.] e Precas	Ste 110	RMODAL		JAMIE E	3. 2014 10:4 21	40 am	CELL DATE/TI 03-2 CONTAI		10:40 am VOICE
	SCALI TARE		GROSS WEIGHT TARE WEIGHT	106,420 41,200		T TONS WEIGHT	32.61 65,220		II	NBOUND	
QTY.	UNIT	The state	DE	SCRIPTION			RATE	EXTENS	ION	TAX	TOTAL
32.61	TN	SW-CONT	SOIL	EVERETT	PETY						
											NET AMOUNT
on		se side and that	signing this document on behalf he or she has the authority to si	gn this document on beha			understands the	terms and co	nditions		CHANGE CHECK#

1002	Castl 15th rn, W	Sea e Precas	Ste 110	MODAL 		SITE 11CF 01 WEIGHMASTE Kim L. DATE/TIME IN 03-25-2 VEHICLE SOIL REFERENCE US-ST/T BILL OF LADIN	2014 9:0 CI)4 am	CELL DATE/T 03-2 CONTA		9:04 am /OICE
		AL IN AL OUT	GROSS WEIGHT TARE WEIGHT	106,360 40,880	NET NET W	TONS EIGHT	32.74 65,480		3	INBOUND	
0.00	UNIT YD	TRACKI		CRIPTION	and the second	1	RATE	EXTENS	ION	TAX	TOTAL
32.74	TN	SW-CON		AND STREET	TT/SNOH						
											NET AMOUNT
	the revers	e side and that 2/	signing this document on behalf o he or she has the authority to sigr 21	n this document on bel			understands the te	erms and co	nditions		CHANGE CHECK#

1002 :	astle 15th n, WA	Seat		MODAL		01 EIGHMASTE	im L. OUT 2014 8:5 CCI		TIME OUT 25-2014 AINER	9:11 am 70ICE
	SCALE SCALE	C IN E OUT	GROSS WEIGHT TARE WEIGHT	104,880 41,300	NET TO NET WEI		31.79 63,580		INBOUND	
QTY .0.00	UNIT YD	TRACKIN		CRIPTION	Carlo San A		RATE	EXTENSION	TAX	TOTAL
31.79	TN	SW-CONT			STR CA					
on th		e side and that h	gning this document on behalf o le or she has the authority to sign 1	this document on beha			understands the te	erms and conditions		NET AMOUNT TENDERED CHANGE CHECK#

1002	Castl 15th rn, W	Sea e Precas	Ste 110	IODAL -		WEIGHMASTE	.m L. OU7 2014 9:0 CI	2 - Dri)1 am	DATE/TI	ME OUT 5-2014 INER	9:20 am 70ICE
	SCALI SCALI	E IN E OUT	GROSS WEIGHT TARE WEIGHT	98,300 40,560	NET NET W	TONS EIGHT	28.87 57,740		I	NBOUND	
0.00	UNIT	TRACKI		CRIPTION	-		RATE	EXTENS	ION	TAX	TOTAL
28.87	TN	SW-CON'	1 3011		TT/SNOH						
The on 1	e undersig the revers	ned individual s e side and that	signing this document on behalf of he or she has the authority to sign	Customer acknowled	ges that he or s half of the custo	she has read and omer.	understands the te	erms and cor	nditions		NET AMOUNT TENDERED CHANGE
	PR (07/12	2/	21		SIGNATURE						CHECK#

E			AL DISPOSAL INTER 3rd and lander ttle, WA	RMODAL		SITE 01 WEIGHMASTER IN - Ki	^{ET #} 906054 m L. OUT	' - Dri	CELL nda	L.	
STOMER 16388 Old C		e Precas	t Inc			DATE/TIME IN 03-25-2 VEHICLE	014 9:2	2 am	DATE/T	IME OUT 5-2014	9:38 am
	rn, Wi	St SW, A 98001	Ste 110			REFERENCE 03-23/I BILL OF LADIN				INV	VOICE
	SCALE SCALE		GROSS WEIGHT TARE WEIGHT	101,360 41,460		TONS WEIGHT	29.95 59,900		I	NBOUND	
QTY.	UNIT	and marked	DE	SCRIPTION		-	RATE	EXTENS	ION	TAX	TOTAL
29.95	TN	SW-CONI	' SOIL	A SI	TT/SNOH						
			igning this document on behalf he or she has the authority to sic				understands the te	erms and cor	ndítions		NET AMOUNT TENDERED CHANGE
	PR (07/12				SIGNATURE	YOM					CHECK#

1002	Castl 15th rn, W	Seat e Precas	Ste 110	MODAL	SITE TIC 01 WEIGHMASTI IN - K DATE/TIME IN 03-25- VEHICLE SOIL REFERENCE 03-09/ BILL OF LAD	LIM L. OU' 2014 9: ICI	T <u>– Dri</u> 20 am	DATE/TI	ME OUT 5-2014 NER	9:46 am VOICE
	SCAL SCAL	E IN E OUT	GROSS WEIGHT TARE WEIGHT	103,940 40,840	NET TONS NET WEIGHT	31.55 63,100		I	NBOUND	
оту. 0.00	UNIT YD	TRACKIN		CRIPTION		RATE	EXTENSI	ION	TAX	TOTAL
					PETY TO PETY TO Reput Thing!					
										NET AMOUNT
-	e undersia	ned individual si	igning this document on behalf o	f Customer acknowledg	tes that he or she has read and	d understands the t	arms and oor	ditions		CHANGE
			he or she has the authority to sign				erms and con	landona		

BITE			AL DISPOSAL INTE 3rd and lander ttle, WA	RMODAL		01 WEIGHMASTE IN - JF	AMIE B. O	UT - Ki		
	Castl	e Precas St SW.	t Inc Ste 110			DATE/TIME IN 03-25-2 VEHICLE 03-22IC			DATE/TIME OUT 03-25-2014 CONTAINER	10:01 am
	m, W	A 98001				BILL OF LAD	NG		IN	VOICE
	SCALE SCALE	E IN E OUT	GROSS WEIGHT TARE WEIGHT	102,280 41,140		TONS WEIGHT	30.57 61,140		INBOUND	
QTY.	UNIT	Man Inter	DE	SCRIPTION			RATE	EXTENSIC	N TAX	TOTAL
30.57	TN	SW-CONT	SOIL	A STATE	"T/SNOH					
										NET AMOUNT
			signing this document on behalf he or she has the authority to si				understands the te	erms and conc	litions	CHANGE

1002	lostl 15th	Sea e Precas	Ste 110	RMODAL			CI)UT - E 9 am		ME OUT 5-2014 NER	10:09 am OICE
	SCALE SCALE		GROSS WEIGHT TARE WEIGHT	107,080 41,320		TONS WEIGHT	32.88 65,760		IN	IBOUND	
QTY. 0.00	UNIT	TRACKIN		SCRIPTION			RATE	EXTENS	ION	TAX	TOTAL
32.88	TN	SW-CON]	. 5011		TT/SNOH						
The	e undersig	ned individual	signing this document on behalf	of Customer acknowled	dges that he or	she has read and	understands the to	erms and co	nditions		TENDERED CHANGE
on RS-F042UF			he or she has the authority to sig		SIGNATURE	omer.					CHECK#

	lastl	Seat	: Inc	MODAL		SITE 01 WEIGHMASTE IN - JF DATE/TIME IN 03-25-2 VEHICLE 03-2010	014 9:4	UT - D 7 am		меоит 5-2014	10:25 am
	n, W.	St SW, A 98001	Ste 110			BILL OF LADI				INV	OICE
	SCALE SCALE	IN OUT	GROSS WEIGHT TARE WEIGHT	98,740 40,860		TONS WEIGHT	28.94 57,880		II	NBOUND	
QTY.	UNIT	-	DES	CRIPTION			RATE	EXTENS	ION	TAX	TOTAL
28.94	TN	SW-CONT	SOIL	EVERET	T/SNOH						
											TENDERED
	the rever	se side and that h	gning this document on behalf o le or she has the authority to sign	n this document on bel			understands the te	erms and co	nditions		CHANGE CHECK#

1002	lastl 15th	Seat	Ste 110	IODAL -		01 WEIGHMASTE IN - JZ	AMIE B. C 2014 11:C CI		DATE/TI	ME OUT 5-2014 NER	11:55 am OICE
	SCALI SCALI	E IN E OUT	GROSS WEIGHT TARE WEIGHT	97,160 40,680	NET NET W	TONS EIGHT	28.24 56,480		I	NBOUND	
QTY. 0.00	UNIT YD	TRACKI		CRIPTION	and a		RATE	EXTENS	ION	TAX	TOTAL
					FETY Right Tr						
-											NET AMOUNT
											TENDERED
			signing this document on behalf of he or she has the authority to sign				d understands the to	erms and co	nditions		CHANGE
on RS-F042UF		2/	ne or she has the authority to sign 21			omer.					CHECK#

1002	8 astle 15th n, WF	REGIONAL DISPOSAL IN 3rd and lande Seattle, WA e Precast Inc St SW, Ste 110 A 98001		01 WEIGHMAST IN - F DATE/TIME	<u>(im L. OU'</u> N -2014 8:2 ICI	24 am 04-	L. E/TIME OUT 2-2014 FAINER	9:15 am VOICE
	SCALE SCALE			NET TONS NET WEIGHT	32.56 65,120		INBOUND	
QTY.	UNIT	In the second	DESCRIPTION	the later of the later	RATE	EXTENSION	TAX	TOTAL
32.56	ΤΝ	SW-CONT SOIL	· Alst	TT/SNOH				
		ned individual signing this document on b e side and that he or she has the authority			nd understands the t	erms and condition	s	NET AMOUNT TENDERED CHANGE
	R (07/12)	2/21						CHECK#

1002	38 Castle 15th rn, WA	Seat	Ste 110	MODAL	01 WEIGHMAS	Kim L. OUT N -2014 8:3 FICI		TIME OUT 2-2014	9:21 am OICE
	SCALE SCALE		GROSS WEIGHT TARE WEIGHT	107,420 41,220	NET TONS NET WEIGHT	33.10 66,200	1	INBOUND	
QTY.	UNIT	and the second	DES	SCRIPTION	4.5	RATE	EXTENSION	TAX	TOTAL
33.10	ΤN	SW-CONT	' SOIL		T/SNOH				
on		side and that l	igning this document on behalf o he or she has the authority to sig 1	n this document on bet		nd understands the t	erms and conditions		TENDERED CHANGE CHECK#

									10	
ΓE	F	3	DISPOSAL INTERN rd and lander tle, WA -	MODAL		01 WEIGHMASTE Kim L.		CEI		
	5th S	Precast St SW, 98001				DATE/TIME IN 04-02-2 VEHICLE SOIL REFERENCE 03-38/1	2014 8:3	9 am 04	TE/TIME OUT -2-2014 NTAINER	9:39 am VOICE
LW-140		30001				BILL OF LAD	ING			
	CALE		GROSS WEIGHT TARE WEIGHT	107,260 41,220	NET NET W	TONS EIGHT	33.02 66,040		INBOUND	
QTY. U	TIN	No.	DES	CRIPTION	1. O.		RATE	EXTENSION	TAX	TOTAL
33.02		TRACKING SW-CONT			T/SNOH					
The ur	dersigne	d individual sig	ning this document on behalf o	f Customer acknowled	nes that he or s	she has read and	i understands the t	erms and conditio		NET AMOUNT TENDERED CHANGE
	reverse		e or she has the authority to sig	n this document on beh						CHECK#

1002	Castle 15th	Seat Precas St SW,	Ste 110	MODAL	SITE TIC 01 WEIGHMASTE Kim L. DATE/TIME IN 04-02-: VEHICLE SOIL REFERENCE 03-23/1	2014 8:4	4 am 04	E/TIME OUT -2-2014 ITAINER	9:57 am
Aubu: LW-14		A 98001			BILL OF LAD				OICE
	SCALE SCALE		GROSS WEIGHT TARE WEIGHT	105,720 41,300	NET TONS NET WEIGHT	32.21 64,420		INBOUND	
QTY.	UNIT		DE	SCRIPTION	1	RATE	EXTENSION	TAX	TOTAL
0.00 32.21		TRACKII SW-CONT		di si	T/SNOH				
			igning this document on behalf of he or she has the authority to sic			d understands the to	erms and condition	ns	NET AMOUNT TENDERED CHANGE

1002 1	stle 5th	REGIONAL DISPOSAL INT 3rd and lander Seattle, WA Precast Inc St SW, Ste 110 98001		SITE 01 WEIGHMAST Kim L. DATE/TIME 04-02- VEHICLE SOIL REFERENCE 03-34/	-2014 8:4	16 am	CONTAINER	10:03 am WOICE
LW-140	62 CALE		/	NET TONS NET WEIGHT	32.06 64,120		INBOUND	
	NIT YD	TRACKING QTY	DESCRIPTION		RATE	EXTENSIO	DN TAX	TOTAL
				SE CA				
								NET AMOUNT
								TENDERED
								CHANGE
The ur	ndersign	ed individual signing this document on be side and that he or she has the authority t	half of Customer acknowled o sign this document on be	ges that he or she has read a half of the customer.	nd understands the t	terms and con-	ditions	CHANGE

1002	38 Castle 15th rn, WA	Seat Precas	Ste 110	MODAL	01 WEIGHMAST	AMIE B. C N 2014 8:5 CI		TIME OUT 2-2014 1 AINER	10:16 am YOICE
	SCALE SCALE		GROSS WEIGHT TARE WEIGHT	105,980 41,220	NET TONS NET WEIGHT	32.38 64,760		INBOUND	
QTY.	UNIT		DES	SCRIPTION	and a present of	RATE	EXTENSION	TAX	TOTAL
0.00 32.38	YD TN	TRACKIN SW-CONI			T/SNOH				
Th			igning this document on behalf o	of Customer acknowled		d understands the t	erms and conditions		NET AMOUNT TENDERED CHANGE

1002	Castl 15th rn, W.	Sea e Precas	Ste 110	MODAL	01 WEIGHMAS Drinda DATE/TIME	a L. IN -2014 12:(CI EST)4 pm 04-	TIME OUT 2-2014 AINER	12:04 pm /OICE
	SCALI TARE		GROSS WEIGHT TARE WEIGHT	107,540 41,220	NET TONS NET WEIGHT	33.16 66,320		INBOUND	
QTY.	UNIT	in Later	DES	SCRIPTION	and a state of the	RATE	EXTENSION	TAX	TOTAL
33.16	TN	SW-CON	T SOIL		T/SNOH				
The	e undersig	ned individual	signing this document on behalf o	of Customer acknowled	ges that he or she has read a	nd understands the t	erms and conditions	3	NET AMOUNT TENDERED CHANGE
on RS-F042UF		21	he or she has the authority to sig /21		SIGNATURE				CHECK#

		IAL DISPOSAL INTERM 3rd and lander attle, WA -		SITE TICH 01 WEIGHMASTE Drinda		CELL		
1002 15	, WA 9800	Ste 110		DATE/TIME IN	2014 12:1 T ST			12:11 pm 70ICE
	CALE IN ARE OUT	GROSS WEIGHT TARE WEIGHT	99,020 40,620	NET TONS NET WEIGHT	29.20 58,400		INBOUND	
QTY. UN	NIT	DES	CRIPTION	at the second second	RATE	EXTENSION	TAX	TOTAL
29.20	TN SW-CO	NT SOIL	ASI SI	TT/SNOH				
			16=.04	Right Hongi				NET AMOUNT

1002 Aubu	Castl 15th rn, W	REGIONAL DIS 3rd an Seattle, e Precast Inc St SW, Ste A 98001	nd lander WA -		01 WEIGHMASTE Drinda DATE/TIME IN	I 2014 12:2 I	2 pm 04	DNTAINER	12:22 pm 70ICE	
LW-1	SCAL TARE	0.117	SS WEIGHT RE WEIGHT	96,680 41,220	NET T NET WE		27.73 55,460		INBOUND	
ΟΤΥ.	UNIT		DES	CRIPTION	Land allow	11	RATE	EXTENSION	TAX	TOTAL
27.73	TN	SW-CONT SOIL		A SI	TT/SNOH					
										NET AMOUNT
									_	
		ned individual signing this se side and that he or she h					understands the to	erms and conditi	ons	CHANGE CHECK#

•.

Old C 1002 Aubur	63888 ld Castle Precast Inc 002 15th St SW, Ste 110 uburn, WA 98001 W-14062 SCALE IN GROSS WEIGHT 95,140 N TARE OUT TARE WEIGHT 41,300 NE						KET # 906406 IR L. 2014 12:3 CI NG	32 pm	CELL DATE/TIN 04-2- CONTAIN	-2014] IER	.2:32 pm OICE
					NET NET W	TONS EIGHT	26.92 53,840		II	NBOUND	
QTY. 0.00	UNIT YD	TRACKII		CRIPTION			RATE	EXTENS	ION	TAX	TOTAL
				A Start	ST CO						
											NET AMOUNT
The	undersig	ned individual s	signing this document on behalf of	Customer acknowled	ges that he or s	the bas read and	d understands the to	erms and co	nditions		CHANGE
on S-F042UP		21	he or she has the authority to sign		SIGNATURE	Jon	1				CHECK#

1002	Castl 15th rn, W	Sea e Precas	Ste 110	40DAL -	01 WEIGHMASTE Drinda DATE/TIME IN 04-02-2 VEHICLE 03-34IC REFERENCE ICI	01 906409 WEIGHMASTER Drinda I Date/TIME IN DATE/TIME OUT 04-02-2014 12:41 pm VEHICLE CONTAINER 03-34ICI REFERENCE					
	SCAL TARE		GROSS WEIGHT TARE WEIGHT	96,440 40,780	NET TONS NET WEIGHT	27.83 55,660		INBOUND			
0.00 27.83	YD TN	TRACKI SW-CON	NG QTY		T/SNOH	RATE	EXTENSIO	IN TAX	TOTAL		
									NET AMOUNT		

1002	astle 15th n, WA	REGIONAL DISPOSAL INTH 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	ERMODAL	01 WEIGHMASTE Drinda 04-02-2 VEHICLE 03-22IC REFERENCE INTERWE	01 906410 WEIGHMASTER Drinda L. DATE/TIME IN 04-02-2014 12:48 pm 04-2-2014 12:					
	SCALE TARE		99,600 41,220	NET TONS NET WEIGHT	29.19 58,380		INBOUND			
QTY.	UNIT		DESCRIPTION		RATE	EXTENSION	TAX	TOTAL		
0.00 29.19	YD TN	TRACKING QTY SW-CONT SOIL		T/SNOH			-			
								NET AMOUNT		
	he reverse	ned individual signing this document on beha e side and that he or she has the authority to 2/21	sign this document on be		understands the t	erms and conditions		CHANGE CHECK#		

	Castl	REGIONAL DISPOSAL IN 3rd and lander Seattle, WA e Precast Inc			SITE 01 WEIGHMASTEF IN - Dr DATE/TIME IN 04-03-2 VEHICLE SOIL	906427 inda L.	OUT - O am	CELL Kim L DATE/TIM 04-3- CONTAIN	<mark>е оит</mark> 2014	8:22 am
	rn, W	St SW, Ste 110 A 98001			REFERENCE 03-22 II BILL OF LADIN	NTERWEST IG			INV	VOICE
	SCALE SCALE	E IN GROSS WEIGHT E OUT TARE WEIGHT	•		T TONS WEIGHT	30.12 60,240		IN	BOUND	
QTY. 0.00	UNIT YD	TRACKING QTY	DESCRIPTION	-	and Room in the	RATE	EXTENSI	ON	TAX	TOTAL
30.12	TN	SW-CONT SOIL		TYSNOH						
										NET AMOUNT
		gned individual signing this document on be se side and that he or she has the authority t				understands the te	erms and con	ditions		CHANGE

TE			L DISPOSAL INTER 3rd and lander :tle, WA -	MODAL	WE K.	E TICK 01 IGHMASTER IM L. TE/TIME IN	906428		TE/TIME OUT	
1002	Castle 15th		Ste 110		0 VEI SC	4-03-2 HICLE DIL BERENCE		25 am 04	4-3-2014 DNTAINER	8:34 am VOICE
Aubu: LW-1		A 98001				L OF LADIN			IN	VOICE
	SCALE		GROSS WEIGHT TARE WEIGHT	105,220 41,260	NET TO NET WEIG		31.98 63,960	1	INBOUND	
QTY. 0.00	UNIT YD	TRACKIN		CRIPTION	Barren		RATE	EXTENSION	TAX	TOTAL
31.98	TN	SW-CONT		SI	TT/SNOH					NET AMOUNT
	the reverse	e side and that h 2/2	igning this document on behalf o ne or she has the authority to sign	n this document on beh		s read and	understands the to	erms and conditi	ons	TENDERED CHANGE CHECK#

1002 1. Auburn	163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062 SCALE IN GROSS WEIGHT 101,740 N SCALE OUT TARE WEIGHT 41,440 NET					SITE 01 TICKET # 906429 CELL WEIGHMASTER IN - Kim L. OUT - Drinda L. DATE/TIME OUT 04-3-2014 DATE/TIME OUT 04-3-2014 DATE/TIME OUT 04-3-2014 04-03-2014 8:43 am CONTAINER SOIL CONTAINER BILL OF LADING INVOI					
	SCALE OUT TARE WEIGHT 41,440 NE 						30.15 60,300		INB	OUND	
		TONCETN		CRIPTION	-	areas a	RATE	EXTENSIO	ON	TAX	TOTAL
				Canalina	Signt In						
										-	NET AMOUNT
											TENDERED
			gning this document on behalf of				understands the te	erms and cond	ditions		CHANGE
on the S-F042UPR (side and that he	e or she has the authority to sign 1		SIGNATURE _	omer.					CHECK#

1002	Castl 15th rn, W		Ste 110	MODAL	01 WEIGHMASTE IN - K: DATE/TIME IN 04-03-2 VEHICLE SOIL REFERENCE	01 906431 WEIGHMASTER IN - Kim L. OUT - Drinda L. DATE/TIME IN 04-03-2014 8:52 am DATE/TIME OUT 04-3-2014 9: VEHICLE CONTAINER						
		E IN E OUT	GROSS WEIGHT TARE WEIGHT	105,280 41,400	NET TONS NET WEIGHT	31.94 63,880		INBOUND				
QTY. 0.00	UNIT YD	TRACKIN		CRIPTION		RATE	EXTENSION	TAX	TOTAL			
				1 SI	ST S							
			gning this document on behalf o e or she has the authority to sig			l understands the t	erms and conditi	ions	TENDERED CHANGE			

and the second s

1002 1 Auburn	S3888 d Castle Precast Inc 02 15th St SW, Ste 110 burn, WA 98001 H-14062 SCALE IN GROSS WEIGHT 104,300					# # 906432 ER	l6 am	DATE/TII 04-3 CONTAI	-2014 NER	9:28 am VOICE
					NET TONS NET WEIGHT	31.78 63,560		I	NBOUND	
		If let -		CRIPTION		RATE	EXTENS	ION	TAX	TOTAL
					SS					
									1	
										NET AMOUNT
										NET AMOUNT
			igning this document on behalf o re or she has the authority to sign			d understands the te	erms and cor	nditions		

E STOMER 163888 Old Cast1	Seat	L DISPOSAL INTER 3rd and lander ttle, WA -	MODAL	SITE TIC 01 WEIGHMAST Drinda DATE/TIME II 04-03- VEHICLE 03-1210	L. 2014 9:2	25 am 04	E/TIME OUT -3-2014	9:33 am
1002 15th Auburn, W LW-14062	n St SW,	Ste 110		BILL OF LAD			11	IVOICE
	LE IN LE OUT	GROSS WEIGHT TARE WEIGHT	101,640 40,840	NET TONS NET WEIGHT	30.40 60,800		INBOUND	- de
0.00 YD	TRACKI	the local data and the second s	CRIPTION	and the state of the second	RATE	EXTENSION	TAX	TOTAL
				FETY Right Toing!		<i>22</i>		
		signing this document on behalf o he or she has the authority to sig			d understands the te	erms and condition	ns	NET AMOUNT TENDERED CHANGE

1002	Castl 15th cn, W	REGIONAL DISPOSAL INTEF 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	RMODAL	SITE 01 WEIGHMASTEI Drinda DATE/TIME IN 04-03-2 VEHICLE 03-221C REFERENCE INTERWE BILL OF LADIM	L. 2014 11:0 CI ST	06 am	CONTAINER	Ul:06 am OICE
	SCALI TARE		99,700 41,160	NET TONS NET WEIGHT	29.27 58,540		INBOUND	
QTY,	UNIT	DE	SCRIPTION	and the second s	RATE	EXTENSIO	N TAX	TOTAL
29.27	TN	SW-CONT SOIL						
			of Customer acknowledges					NET AMOUNT

	ONAL DISPOSAL INTER 3rd and lander Seattle, WA	MODAL	WEIGHMASTE			CELL		
JSTOMER 163888 Old Castle Pre			VEHICLE	2014 11:1	9 am	DATE/TIN 04-3- CONTAIN	2014	11:19 am
1002 15th St S Auburn, WA 98 LW-14062	W, Ste 110	03-37IC REFERENCE BILL OF LADII				INV	/OICE	
SCALE IN TARE OUT	GROSS WEIGHT TARE WEIGHT	104,760 41,260	NET TONS NET WEIGHT	31.75 63,500		II	NBOUND	
QTY. UNIT	DES CKING QTY	CRIPTION		RATE	EXTENS	ION	TAX	TOTAL
31.75 TN SW-0	CONT SOIL	N SI	TT/SNOH					
		of Customer acknowled						NET AMOUNT

1002	astle 15th	3r		01 WEIGHMAST IN - D DATE/TIME I	<u>rinda L.</u> 2014 11: CI		TIME OUT 3-2014 AINER	11:43 a VOICE	
	SCALI SCALI	E IN E OUT	GROSS WEIGHT TARE WEIGHT	102,780 41,540	NET TONS NET WEIGHT	30.62 61,240		INBOUND	
QTY.	UNIT	TRACKING		CRIPTION		RATE	EXTENSION	TAX	TOTA
30.62	TN	SW-CONT	SOIT	a si	T/SNOH				
									NET AMOU
			ng this document on behalf o or she has the authority to sign		ges that he or she has read an nalf of the customer.	d understands the	terms and conditions		CHANGE
		2/21							CHECK#

TE			AL DISPOSAL INTER 3rd and lander attle, WA	MODAL		SITE 01 WEIGHMASTE Drinda			CELL		
USTOMER 1638 Old (e Preca	st Inc			DATE/TIME IN 04-03-2	2014 11:4	4 am	DATE/TI 04-3 CONTAI	-2014	11:44 am
Aubu	rn, W	St SW, A 9800	Ste 110 1			03-23IC REFERENCE				INV	/OICE
LW-1	4062 SCAL TARE		GROSS WEIGHT TARE WEIGHT	103,300 41,400	NET NET WE	TONS	30.95 61,900	_	I	NBOUND	
QTY.	UNIT		DES	CRIPTION			RATE	EXTENS	ION	TAX	TOTAL
30.95	ΤN	SW-CON	IT SOIL	1 SI	TT/SNOH						
The											NET AMOUNT TENDERED CHANGE
on S-F042UF	the revers	e side and that 2	signing this document on behalf c t he or she has the authority to sig 2/21	n this document on beh	SIGNATURE	ler.		anns anu co	nutions		CHECK#

TE		NAL DISPOSAL INTER 3rd and lander attle, WA -	MODAL	WEIGHMAS Drind	SITE 11CKET # CELL 01 906445 WEIGHMASTER Drinda L. DATE/TIME IN DATE/TIME OUT						
	tle Prec			04-03 VEHICLE 03-34	-2014 11:	53 am 04	-3-2014	11:53 am			
	WA 980	, Ste 110 01		BILL OF LA			IN	VOICE			
	ALE IN RE OUT	GROSS WEIGHT TARE WEIGHT	103,980 40,740	NET TONS NET WEIGHT	31.62 63,240		INBOUND				
0.00	the second se	DES KING QTY	SCRIPTION		RATE	EXTENSION	TAX	TOTAL			
31.62	IN SW-CC	NT SOIL		STATES							
The und on the m RS-F042UPR ((everse side and t	al signing this document on behalf o hat he or she has the authority to sig 2/21	n this document on beh	ges that he or she has read a lalf of the customer.	nd understands the t	terms and conditio	ins	NET AMOUNT TENDERED CHANGE CHECK#			

1002	Castl 15th n, W.	Sea e Precas	Ste 110	RMODAL	Drin	da L. 8-2014 12: 2ICI ce	11 pm 04	DNTAINER	12:11 pm /OICE
	SCALE TARE		GROSS WEIGHT TARE WEIGHT	104,920 40,840	NET TONS NET WEIGHT	32.04 64,080		INBOUND	
0.00 32.04	YD TN	TRACKI SW-CON	NG QTY		T/SNOH	RATE	EXTENSION	TAX	TOTAL
		<u>.</u>							NET AMOUN
			signing this document on behalf he or she has the authority to si			and understands the	terms and condition	ons	CHANGE
on			,		ian of the oustomer.				CHECK#

E STOMER 163888 Old Cast	REGIONAL DISPOSAL INTE 3rd and lander Seattle, WA	RMODAL	SITE 01 WEIGHMAS Drinda DATE/TIME 04-03- VEHICLE 03-222	a L. -2014 1:		TIME OUT	1:43 pm
	n St SW, Ste 110		03-22			IN	VOICE
	E IN GROSS WEIGHT OUT TARE WEIGHT	101,520 41,160	NET TONS NET WEIGHT	30.18 60,360		INBOUND	
QTY. UNIT	D	ESCRIPTION	and the state	RATE	EXTENSION	TAX	TOTAL
0.00 YD 30.18 TN	TRACKING QTY SW-CONT SOIL		T/SNOH				
	igned individual signing this document on behall rse side and that he or she has the authority to s	ign this document on bel		id understands the	terms and conditions	5	NET AMOUNT TENDERED CHANGE CHECK#

1002	astl 15th n, W	Sea e Preca:	Ste 110	MODAL	WEIGHMAST Leslie DATE/TIME II 04-03- VEHICLE 03-3710 REFERENCE	SITE 11CKET # 206452 WEIGHMASTER Leslie U. DATE/TIME IN 04-03-2014 2:05 pm 04-3-2014 VEHICLE 03-37ICI REFERENCE IN BILL OF LADING					
	SCALI TARE		GROSS WEIGHT TARE WEIGHT	101,160 41,260	NET TONS NET WEIGHT	29.95 59,900		INBOUND			
QTY. 0.00	UNIT	Lot Ranks	DES	CRIPTION	the second second	RATE	EXTENSION	TAX	TOTAL		
29.95	TN		T SOIL	A SI	T/SNOH						
	undersia	ned individual	signing this document on behalf o	f Customer acknowled	ues that he or she has read an	d understands the	terms and condition		NET AMOUN TENDERED		
		e side and that	he or she has the authority to sign /21	n this document on beh					CHECK#		

Old C 1002 Aubur	.63888 Old Castle Precast Inc .002 15th St SW, Ste 110 Auburn, WA 98001 .W-14062 SCALE IN GROSS WEIGHT 100,800 N TARE OUT TARE WEIGHT 41,540 NE					TICKET # 906453 MASTER lie U. IME IN 03-2014 2: E 88ICI ENCE F LADING	ME OUT -2014 NER IN ¹	2:17 pm VOICE		
					NET TONS NET WEIGHT	29.63 59,260		I	NBOUND	
QTY.		1. Salar		SCRIPTION	· · · · ·	RATE	EXTENS	SION	TAX	TOTAL
				A SH	Property Party Par					
										NET AMOUNT
										TENDERED
			signing this document on behalf c he or she has the authority to sig			ad and understands the	terms and co	nditions		CHANGE

	Castl	Sea e Precas		10DAL -	Les DATE/ 04-	IIIASTER Lie U. TIME IN 03-2014 2	2:31 pm 0	ATE/TIME OUT 4-3-2014 ONTAINER	2:31 pm
	n, W	St Sw, A 9800:	Ste 110 1		BILL C	IENCE		IN	VOICE
	SCALI TARE		GROSS WEIGHT TARE WEIGHT	99,880 41,400	NET TONS NET WEIGH			INBOUND	
QTY. 0.00	UNIT YD	the sector	DES NG QTY	CRIPTION	toplate the	RATE	EXTENSION	I TAX	TOTAL
29.24	TN	SW-CON	T SOIL	ST ST	T/SNOH				
									NET AMOUN TENDERED CHANGE
The on 1 RS-F042UP	he revers	e side and that 2	signing this document on behalf of the or she has the authority to sign /21	this document on bel	ges that he or she has re half of the customer.	and understands t	he terms and condit	ions	CHECK#

1002	astle 15th n, W	Sea e Precas	Ste 110	MODAL	7 7 7 7	SITE 01 TICI Drinda DATE/TIME IN 04-03-2 VEHICLE 03-34IC REFERENCE BILL OF LADI	L. 2014 2:4 CI	48 pm	DATE/TII 04-3 CONTAI		2:48 pm 70ICE
	SCALI TARE		GROSS WEIGHT	105,960	NET T		32.61		Ŧ	NDOUND	
		001	TARE WEIGHT	40,740	NET WEI	IGHT	65,220			NBOUND	
0.00	UNIT YD	TRACKI		CRIPTION		-	RATE	EXTENSI	UN	TAX	TOTAL
											NET AMOUN
			signing this document on behalf o he or she has the authority to sig				understands the t	erms and cor	ditions		CHANGE
S-F042UP		2/	/21		SIGNATURE	FI 4					CHECK#

	Seat e Precast st SW,		VEIGHMASTE Leslie DATE/TIME IN 04-03-2 VENCLE REFERENCE	SITE 11CKET # 06461 WEIGHMASTER Leslie U. DATE/TIME IN 04-03-2014 3:17 pm 04-3-2014 3: VEHICLE 03-12ICI CONTAINER REFERENCE INVOID BILL OF LADING						
SCAL TARE		GROSS WEIGHT TARE WEIGHT	104,940 40,840	NET TONS NET WEIGHT	32.05 64,100		INBOUND			
0.00 YD	TRACKIN		SCRIPTION		RATE	EXTENSIO	N TAX	TOTAL		
32.05 TN	SW-CONT	SOIL		T/SNOH						
		gning this document on behalf ie or she has the authority to sig		ges that he or she has read and nalf of the customer.	I understands the	terms and cond	itions	NET AMOUN TENDERED CHANGE CHECK#		

Old 1002 Aubur	63888 ld Castle Precast Inc 002 15th St SW, Ste 110 uburn, WA 98001 W-14062 SCALE IN GROSS WEIGHT 89,940 N SCALE OUT TARE WEIGHT 41,480 NET C. UNIT DESCRIPTION 0.00 YD TRACKING QTY					SITE TICI 01 WEIGHMASTE IN - KI DATE/TIME IN 04-07-2 VEHICLE SOIL BEFERENCE 03/20/1 BILL OF LADI	E OUT 2014 ER	8:26 am OICE			
						TONS WEIGHT	24.23 48,460		IN	IBOUND	
QTY.	UNIT		DES	CRIPTION			RATE	EXTENS	ON	TAX	TOTAL
24.23	TN	SW-CON'	T SOIL		TT/SNOH						
											NET AMOUNT
	the revers	se side and that	signing this document on behalf o he or she has the authority to sigr 21	this document on be			I understands the t	erms and con	ditions	E	CHANGE CHECK#

1002	l5th	REGIONAL DISPOSAL INTE 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	RMODAL	SITE TICK 01 WEIGHMASTE IN - Ki DATE/TIME IN 04-07-2 VEHICLE SOIL REFERENCE 03-23/I BILL OF LADIN	L. OU 2014 8:4 CI	14 am 04-	L. TIME OUT 7-2014 TAINER	9:01 am OICE
	SCALE SCALE		98,900 41,420	NET TONS NET WEIGHT	28.74 57,480		INBOUND	
0.00 28.74	YD TN	TRACKING QTY SW-CONT SOIL	EVERET	T/SNOH				
							1	
								NET AMOUN

1002	Castl 15th cn, W	Sea e Precas	Ste 110	01 WEIGHMASTE IN - JJ DATE/TIME IN 04-07-2 VEHICLE 03-1210 REFERENCE	01 906546 WEIGHMASTER IN - JAMIE B. OUT - Kim L. DATE/TIME IN DATE/TIME OUT 04-07-2014 9:06 am DATE/TIME OUT VEHICLE CONTAINER 03-12ICI CONTAINER					
	SCALE SCALE	E IN E OUT	GROSS WEIGHT TARE WEIGHT	93,180 40,940	NET TONS NET WEIGHT	26.12 52,240		I	NBOUND	
QTY.	UNIT	100 - 20-	DE	SCRIPTION		RATE	EXTEN	SION	TAX	TOTAL
26.12	TN	SW-CON	F SOIL		T/SNOH					
			signing this document on behalf o			understands the	terms and co	onditions		NET AMOUNT TENDERED CHANGE
on S-F042UP			the or she has the authority to sig		alf of the customer.					CHECK#

1002	astle 15th n, W2	REGIONAL DISPOSAL INTE 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	RMODAL	01 WEIGHMASTI IN - D DATE/TIME IN 04-08- VEHICLE SOIL REFERENCE 03-30	01906619WEIGHMASTERIN - Drinda L. OUT - JAMIE B.DATE/TIME INDATE/TIME OUT04-08-201412:22 pm04-8-201404-8-2014VEHICLE						
	SCALE SCALE		92,300 40,920	NET TONS NET WEIGHT	25.69 51,380		INBOUND				
QTY.	UNIT		DESCRIPTION	The second se	RATE	EXTENSION	TAX	TOTAL			
0.00 25.69	YD TN	TRACKING QTY SW-CONT SOIL		TT/SNOH							
							6	NET AMOUN			
								TENDERED			
The	undersia	ned individual signing this document on beha	If of Customer acknowled	lges that he or she has read an	d understands the t	terms and conditions	-	CHANGE			
		e side and that he or she has the authority to						CHECK#			

Old 1002 Aubu	53888 Id Castle Precast Inc D02 15th St SW, Ste 110 uburn, WA 98001 W-14062 SCALE IN GROSS WEIGHT 87,600 N SCALE OUT TARE WEIGHT 40,940 NET					SITE TICKET # CELL 01 906624 VEIGHMASTER IN - Drinda L. OUT - Leslie U. DATE/TIME OUT 04-08-2014 1:13 pm 04-8-2014 VEHICLE CONTAINER SOIL CONTAINER BILL OF LADING INV					
					NET TON NET WEIGH		23.33 46,660		I	NBOUND	
QTY.	UNIT		DES	CRIPTION			RATE	EXTENS	ION	TAX	TOTAL
				A SI	FETY Congi						
										-	NET AMOUNT
			signing this document on behalf of he or she has the authority to sign			read and un	derstands the t	erms and cor	nditions	-	CHANGE
00					half of the customer						

			L DISPOSAL INTER 3rd and lander	MODAL	WEIGHMAST			CELL		
		Seat	tle, WA			Drinda L.	OUT -			
1638	88				DATE/TIME I 04-08-	2014 1:5	59 pm	DATE/T 04-8	<mark>₩E OUT</mark> -2014	2:11 pm
		e Precast	Inc		VEHICLE			CONTAI	INER	
		St SW,	Ste 110		REFERENCE					
		A 98001			03-23				INV	OICE
LW-1	4062				BILL OF LAD	DING				
	SCALE	E IN	GROSS WEIGHT	88,520	NET TONS	23.84				
	SCALE	E OUT	TARE WEIGHT	40,840	NET WEIGHT	47,680		II	NBOUND	
QTY.	UNIT	ALC: NO	DES	SCRIPTION		RATE	EXTENSI	ON	TAX	TOTAL
0.00		TRACKIN	G QTY							
23.84	TN	SW-CONT	SOIL	EVERET	T/SNOH					
					FETY Venu Word					
									6	NET AMOUNT
						1				TENDERED
			gning this document on behalf c			id understands the t	erms and con	ditions		

1002	astle 15th	REGIONAL DISPOSAL IN 3rd and lande: Seattle, WA e Precast Inc St SW, Ste 110 A 98001		IN DATE/T 04-1 VEHICL SOII	MASTER - Kim L. OU' IME IN 09-2014 8:5 E	58 am 04-1	L. 11ME OUT 9-2014 AINER	9:10 am VOICE
LW-14				BILL O	FLADING			
	SCALE SCALE	E IN GROSS WEIGH E OUT TARE WEIGH	,	NET TONS NET WEIGHT	25.24 50,480		INBOUND	
QTY.	UNIT		DESCRIPTION		RATE	EXTENSION	TAX	TOTAL
25.24	TN	SW-CONT SOIL		TT/SNOH				
								NET AMOUNT
								TENDERED
The	undersig	ned individual signing this document on b	ehalf of Customer acknowle	dges that he or she has re	ad and understands the	terms and conditions		CHANGE
on ti	he revers	e side and that he or she has the authority	to sign this document on b	ehalf of the customer.				CHECK#

Old (1002 Aubus	63888 Old Castle Precast Inc 002 15th St SW, Ste 110 Nuburn, WA 98001 LW-14062 SCALE IN GROSS WEIGHT 104,420 N SCALE OUT TARE WEIGHT 41,420 NE					MEIN	10	CELL rinda L. DATE/TIME OUT 04-9-2014 CONTAINER II	9:32 am NVOICE
				•	NET TONS NET WEIGHT	01000		INBOUND	
QTY. 0.00	UNIT YD	TRACKING		SCRIPTION		RATE	EXTENSIO	DN TAX	TOTAL
31.50	TN	SW-CONT	SOIL	EVERET	T/SNOH	in the second			
									NET AMOUNT

	REGIONAL DISPOSAL INTER 3rd and lander Seattle, WA e Precast Inc 5t SW, Ste 110 IA 98001	IN - JA DATE/TIME IN 04-09-2 VEHICLE 03-2010 REFERENCE 03-20						
SCAL SCAL	E IN GROSS WEIGHT E OUT TARE WEIGHT	NET TONS NET WEIGHT	26.29 52,580		INBOUND			
QTY. UNIT		SCRIPTION	1	RATE	EXTENSION	TAX	TOTAL	
0.00 YD 26.29 TN	TRACKING QTY SW-CONT SOIL	EVERET	T/SNOH					
2			ST SA					
		113-214	itgat innge a				NET AMOUNT	
	igned individual signing this document on behalf	of Customer acknowledg	ges that he or she has read and	understands the to	erms and condition	ons	NET AMOUNT TENDERED CHANGE	
	igned individual signing this document on behalf rse side and that he or she has the authority to sig	of Customer acknowledg	ges that he or she has read and	understands the to	erms and conditio	ons	TENDERED	

ISTOMER	3888 d Castle Precast Inc					DATE/TIME IN 04-09-2	906658 MIE B. C 014 12:3		DATE/T 04-9	ME OUT -2014 1	12:42 pm	
1002 Aubur	02 15th St SW, Ste 110 burn, WA 98001 7-14062					REFERENCE 03-23				INVOICE		
		IN OUT	GROSS WEIGHT TARE WEIGHT	93,560 41,240		I TONS WEIGHT	26.16 52,320		II	NBOUND		
QTY.	UNIT	141-11-	DES	CRIPTION			RATE	EXTENS	SION	TAX	TOTAL	
26.16	TN	SW-CONT :	SOIL		T/SNOH							
											NET AMOUNT	
The on RS-F042UF	the revers	se side and that he	ning this document on behalf or or she has the authority to sig	n this document on be	iges that he or half of the cus SIGNATURE	omer.	understands the te	erms and co	onditions		CHECK#	

1002	astle 15th n, W2	REGIONAL DISPOSAL INTER 3rd and lander Seattle, WA - e Precast Inc St SW, Ste 110 A 98001	MODAL -	01 WEIGHMAST IN - P DATE/TIME	Kim L. OU N 2014 10: ICI	38 am 04-:	TIME OUT 21-2014 AINER	10:47 am 70ICE
	SCALE SCALE	E IN GROSS WEIGHT E OUT TARE WEIGHT	NET TONS NET WEIGHT	24.13 48,260		INBOUND		
QTY.	UNIT	DES	CRIPTION		RATE	EXTENSION	TAX	TOTAL
0.00 24.13	YD TN	TRACKING QTY SW-CONT SOIL	and set	TT/SNOH				
		ned individual signing this document on behalf o e side and that he or she has the authority to sig			nd understands the	terms and conditions		TENDERED CHANGE
RS-F042UP		2/21		SIGNATURE				CHECK#

Old 1002 Aubu	SCALE IN GROSS WEIGHT 95,160 NE					SITE 01 TICKET # 07017 WEIGHMASTER IN - JAMIE B. OUT - Drinda L. DATE/TIME IN 04-21-2014 1:29 pm 04-21-2014 1:39 VEHICLE 03-30ICI RESERSIVE INVOICE BILL OF LADING					1:39 pm VOICE
					NET TO NET WEI		26.90 53,800		INBC	DUND	
QTY.	UNIT	122 -1-2		RIPTION	and the state of		RATE	EXTENS	ION T	AX	TOTAL
26.90	TN	SW-CONT		a st	T/SNOH						
on	e undersig the revers PR (07/12	e side and that I	igning this document on behalf of ne or she has the authority to sign	this document on bet	ges that he or she h half of the customer	nas read and	(understands the to	erms and co	nditions		NET AMOUNT TENDERED CHANGE CHECK#

USTOMER		REGIONAL DISPOSAL INTEN 3rd and lander Seattle, WA	RMODAL	WEIGHMASTE	im L. OU	T - Drin			
16388 Old C	astle	e Precast Inc		DATE/TIME IN 04-22-2014Date/TIME OUT 04-22-2014Date/TIME OUT 04-22-2014VEHICLECONTAINER					
	n, WA	St SW, Ste 110 A 98001		REFERENCE 03-37/1 BILL OF LADI			IN	VOICE	
	SCALE		NET TONS NET WEIGHT	31.94 63,880		INBOUND			
QTY.	UNIT	DE	SCRIPTION		RATE	EXTENSION	I TAX	TOTAL	
0.00 31.94	YD TN	TRACKING QTY SW-CONT SOIL	EVERETT/	ETY					
		ned individual signing this document on behalf			understands the	terms and condit	tions	TENDERED CHANGE	
on t RS-F042UPI		e side and that he or she has the authority to sig	-	of the customer.			t	CHECK#	

	33888 d Castle Precast Inc 002 15th St SW, Ste 110 aburn, WA 98001 W-14062 SCALE IN GROSS WEIGHT 104,520 SCALE OUT TARE WEIGHT 40,640 NI					SITE 01 WEIGHMASTER IN - Le DATE/TIME IN 04-22-2 VEHICLE	nda L. TIME OUT 22-2014 AINER	2:11 pm				
Aubu						REFERENCE 37 ici INVOICE BILL OF LADING						
						T TONS WEIGHT	31.94 63,880	•	INBOUND			
QTY.		All southers		SCRIPTION		Litter H	RATE	EXTENSION	TAX	TOTAL		
0.00 31.94		TRACKING QT SW-CONT SOI		EVERET	P SS							
		ned individual signing these side and that he or she					understands the t	erms and conditions	_	TENDERED CHANGE		
on										CHECK#		

1002	astle 15th n, W2	REGIONAL DISPOSAL INTER 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	01 WEIGHMAS DATE/TIME 04-24- VEHICLE SOIL REFERENCE 34 ICI	WEIGHMASTER JN Drinda L. OUT - JAMIE BUT DATE/TIME IN 04-24-2014 9:35 am 04-24-2014 11:52 VEHICLE						
	SCALI SCALI		93,780 41,040	NET TONS NET WEIGHT	26.37 52,740		INBOUND			
QTY.	UNIT	DI	SCRIPTION	Predestalle share and the	RATE	EXTENSION	TAX	TOTAL		
0.00 26.37	YD TN	TRACKING QTY SW-CONT SOIL		TT/SNOH						
							F	TENDERED		
		ned individual signing this document on behalf a side and that he or she has the authority to si			nd understands the	terms and conditions		CHANGE CHECK#		

1002	astle 15th n, WA	REGIONAL DISPOSAL INT 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	01 WEIGHMAS IN - I DATE/TIME 04-24- VEHICLE SOIL REFERENC	Drinda L. N 2014 10:0	OUT - 0	CELL IAMIE B. DATE/TIME OUT 04-24-2014 CONTAINER IN	12:26 pm VOICE	
	SCALE SCALE		94,780 41,260	NET TONS NET WEIGHT	26.76 53,520		INBOUND	
QTY.	UNIT		DESCRIPTION	a saugura da sa	RATE	EXTENSIO	ON TAX	TOTAL
0.00 26.76	YD TN	TRACKING QTY SW-CONT SOIL	EVERET	T/SNOH				
								TENDERED
Th	e undersio	gned individual signing this document on beh	alf of Customer acknowled	dges that he or she has read a	nd understands the t	terms and con	ditions	CHANGE
on	the revers	se side and that he or she has the authority to	sign this document on be	half of the customer.				CHECK#

1002	Castl 15th cn, W.	REGIONAL DISPOSAL INTER 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	01 WEIGHMAST	AMIE B. (2014 9:(CI)UT - Dr. 00 am 0	ATE/TIME OUT 4-25-2014 ONTAINER	9:21 am /OICE	
	SCALE SCALE		91,900 41,400	NET TONS NET WEIGHT	25.25 50,500		INBOUND	
QTY.	UNIT	DE	SCRIPTION	and the second second	RATE	EXTENSION	XAT I	TOTAL
25.25	TN	SW-CONT SOIL	EVERETT	'SNOH				
								TENDERED
on		gned individual signing this document on behalf or se side and that he or she has the authority to sig	n this document on behalf		d understands the t	erms and condi	tions	CHANGE CHECK#

ſE		REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA	SITE 01 WEIGHMASTER IN - Ki		' - Drii	nda L.	
1002	astl 15th n, W	e Precast Inc St SW, Ste 110 A 98001	DATE/TIME IN 04-25-2 VEHICLE SOIL REFERENCE 03-30/I	DATE/TIME IN 04-25-2014 10:00 am VEHICLE SOIL			10:09 am VOICE
	SCALI SCALI		ET TONS 7 WEIGHT	28.30 56,600	- 10 -	INBOUND	
QTY. 0.00	UNIT YD	DESCRIPTION TRACKING QTY		RATE	EXTENSIO	DN TAX	TOTAL
28.30	TN	SW-CONT SOIL					
							NET AMOUNT
						-	CHANGE
The	e undersi	gned individual signing this document on behalf of Customer acknowledges that he one side and that he or she has the authority to sign this document on behalf of the cu	or she has read and	understands the t	erms and con	ditions	

1002	Castle 15th rn, W2	REGIONAL DISPOSAL INTER 3rd and lander Seattle, WA - Precast Inc St SW, Ste 110 A 98001	SITE TICKET # CELL 01 907252 WEIGHMASTER IN - JAMIE B. OUT - Leslie U. DATE/TIME IN DATE/TIME OUT 04-25-2014 10:57 am 04-25-2014 10:57 am 04-25-2014 10:57 am 04-25-2014 04-25-2014 VEHICLE CONTAINER 03-38ICI INVO BILL OF LADING INVO						
	SCALE SCALE		I TONS WEIGHT	31.77 63,540		INBOUND			
QTY.	UNIT	DES	CRIPTION		RATE	EXTENSION	TAX	TOTAL	
31.77	TN	SW-CONT SOIL	EVERETT/SNOH						
							-	NET AMOUNT	
	the reverse	ned individual signing this document on behalf o e side and that he or she has the authority to sig 2/21		stomer.	I understands the t	erms and conditions		CHANGE CHECK#	

TE REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA USTOMER 163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062			SITE TICKET # CELL 01 907266 WEIGHMASTER IN - Drinda L. OUT - Leslie U. DATE/TIME IN 04-25-2014 12:08 pm 04-25-2014 12: VEHICLE SOIL REFERENCE 03-35 ICI INVOICIE					
	SCALE SCALE		97,280 41,000 N	NET TONS ET WEIGHT	28.14 56,280		INBOUND	
QTY.	UNIT	DE	SCRIPTION	L'asserts the	RATE	EXTENSIO	N TAX	TOTAL
28.14	ΤΝ	SW-CONT SOIL	EVERETT/SN	THE				
								NET AMOUNT
							-	CHANGE
Th	e undersig	ned individual signing this document on behalf se side and that he or she has the authority to si	of Customer acknowledges that on this document on behalf of th	he or she has read and the customer.	understands the	terms and cond	attions	CHECK#

SITE REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA CUSTOMER 163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062					SITE TICKET # CELL 01 907275 CELL WEIGHMASTER IN - Drinda L. OUT - JAMIE B. DATE/TIME IN DATE/TIME OUT 04-25-2014 12:43 pm VEHICLE CONTAINER SOIL CONTAINER REFERENCE 03-30 INTERWEST BILL OF LADING INVOICE					
	SCALE SCALE		102,140 41,000	NET J NET WE		30.57 61,140		INBOUND		
QTY.	UNIT	DF	ESCRIPTION			RATE	EXTENSION	TAX	TOTAL	
30.57	TN	SW-CONT SOIL	EVERETT	/SNOH						
									NET AMOUNT	
		ned individual signing this document on behalf se side and that he or she has the authority to si				I understands the te	rms and condition	ns	CHANGE	
RS-F042UP	R (07/12)	SIC	GNATURE					CHECK#	

REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA CUSTOMER 163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062				01 WEIGHMAST IN - D DATE/TIME II 04-25- VEHICLE SOIL REFERENCE 03-38	01 907283 WEIGHMASTER IN - Drinda L. OUT - Leslie U. DATE/TIME IN DATE/TIME OUT 04-25-2014 1:31 pm 04-25-2014 2:1 VEHICLE CONTAINER					
					NET TONS 33.26 T WEIGHT 66,520 INBOUND					
0.00	UNIT YD	DE TRACKING QTY	SCRIPTION		RATE	EXTENSION	TAX	TOTAL		
33.26	TN	SW-CONT SOIL	T/SNOH							
The	undersig	ned individual signing this document on behalf o	of Customer acknowledg	es that he or she has read and	1 understands the te	rms and condition	IS	NET AMOUNT TENDERED CHANGE		
on t RS-F042UP	the reverse	e side and that he or she has the authority to sig	n this document on beh	alf of the customer,			t	CHECK#		

SITE REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA CUSTOMER 163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062				Drir DATE/TI 04-2 VEHICLI SOII REFERE 03-3	OLLE .					
	SCALE SCALE	IN GROSS WEIGHT OUT TARE WEIGHT	NET TONS NET WEIGHT							
QTY.	UNIT	DES	SCRIPTION		RATE	EXTENSIO	N TAX	TOTAL		
0.00 26.82	YD TN	TRACKING QTY SW-CONT SOIL	EVERETI	Y/SNOH						
The	undersig	ned individual signing this document on behalf o	f Customer seknowledge					TENDERED		
on t RS-F042UP	he revers	e side and that he or she has the authority to sign	n this document on beha	If of the customer.	a and understands the	terns and condi	tions	CHECK#		

1002	lastl 15th n, W	REGIONAL DISPOSAL INTER 3rd and lander Seattle, WA e Precast Inc St SW, Ste 110 A 98001	01 WEIGHMASTE IN - Ki DATETIME IN 04-28-2 VEHICLE SOIL REFERENCE 03-35/I	01 907359 WEIGHMASTER IN - Kim L. OUT - Drinda L. DATE/TIME IN 04-28-2014 9:24 am 04-28-2014 10 VEHICLE SOIL CONTAINER					
	SCALE IN GROSS WEIGHT 56,100 SCALE OUT TARE WEIGHT 26,700				NET TONS 14.70 NET WEIGHT 29,400 INBOUND				
0.00	UNIT YD	DES TRACKING QTY	SCRIPTION	and the second second	RATE	EXTENSION	TAX	TOTAL	
14.70	TN	SW-CONT SOIL	EVERETT	/SNOH					
								TENDERED	
The on f	undersig the revers	ned individual signing this document on behalf o se side and that he or she has the authority to sigr	f Customer acknowledge n this document on beha	es that he or she has read and If of the customer.	understands the t	erms and conditio	ns	CHANGE	
RS-F042UP				GNATURE				CHECK#	

SITE REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA CUSTOMER 163888 Old Castle Precast Inc 1002 15th St SW, Ste 110 Auburn, WA 98001 LW-14062				WEIGHMAS Drind DATETIME 04-29 VEHICLE SOIL RESERSING	WEIGHMASTER Drinda L. DATE/TIME IN 04-29-2014 9:04 am 04-29-2014 2:2 VEHICLE CONTAINER					
QTY. 0.00	UNIT	TRACKING QTY	DESCRIPTION	and the second second	RATE	EXTENSION	TAX	TOTAL		
28.52	ΤΝ	SW-CONT SOIL	17.SP	"T/SNOH						
	he reverse	ned individual signing this document or a side and that he or she has the author 2/21	ity to sign this document on beh		nd understands the t	erms and conditions		NET AMOUNT TENDERED CHANGE CHECK#		

CONTE OUT					SITE TICKET # 907526 VEIGHMASTER IN - JAMIE B. OUT - Kim L. DATE/TIME IN 04-30-2014 9:57 am 04-30-2014 9:57 am 04-30-2014 11:42 VEHICLE CONTAINER 03-34ICI CONTAINER FESERSACE ICI INVOICE BILL OF LADING 9.03 T WEIGHT 18,060 INBOUND					
9.03	ΤΝ	SW-CONT SOIL	EVERET							
							-	NET AMOUNT		
	he reverse	ned individual signing this document e side and that he or she has the aut 2/21	nority to sign this document on beh		and understands the	terms and conditions		CHANGE CHECK#		