STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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WAC 197-11-970
DETERMINATION OF NONSIGNIFICANCE
NUSTAR FACILITY INTERIM ACTION WORK PLAN
VANCOUVER, WA

Description of proposal:

In accordance with Agreed Order DE 11137 between the Department of Ecology (Ecology) and NuStar Terminals Services Inc. (NuStar), the proposed interim action is to sample sediment and surface water from the Columbia River in the area adjacent to the NuStar terminal and to conduct enhanced bioremediation injections at the NuStar facility, Port of Vancouver Terminal No. 2 at 2565 NW Harborside Drive, Vancouver, Clark County, Washington.

The purpose of this action is to clean up upland contaminated groundwater and Columbia River sediment. Sediment and surface water sample results will be used to assess river water quality and establish sediment baseline contaminant levels before groundwater cleanup.

Approximately 95 temporary subsurface borings will be placed at the NuStar terminal to inject an Edible Oil Substrate (EOS) remediation product (EOS Pro) for *in situ* anaerobic bioremediation of elevated levels of chlorinated solvent compounds in groundwater. Prior to implementing the injection program, six test injections will be performed at locations closest to the shoreline and the surface water will be monitored to ensure the injected material is not being introduced into the Columbia River.

This interim remedial action will reduce risks to humans and the environment resulting from elevated levels of chlorinated solvents (predominantly trichloroethene and perchloroethene and associated breakdown products) detected in upland groundwater and in Columbia River sediment. This interim remedial action was approved by Ecology in accordance with the Model Toxics Control Act, Washington Administrative Code 173-340-360. The design for and the basis of the interim remedial action are provided in the 2015 Interim Action Work Plan NuStar, dated April 15, 2016.

The conceptual site model for the site is depicted by migration of contaminated groundwater from the upland area at the terminal to the Columbia River sediments and potentially surface water. Reduction of contaminants from the upland groundwater will reduce the contaminant source to sediment, which will promote sediment contaminant reduction. Conducting sediment and surface water sampling before performing upland groundwater cleanup will provide baseline concentrations in order to confirm the conceptual site model and track the effectiveness of the sediment cleanup.

Best management practices will be applied to all aspects of the project, under Ecology oversight, to prevent EOS Pro from entering the Columbia River.

Project proponent:
NuStar Terminals Services, Inc., under Agreed Order with Ecology (Agreed Order No. 07-TC-S DE3938).

Location of proposal
Property located at the Port of Vancouver, Terminal 2, 2565 NW Harborside Drive, Vancouver, WA 98660, NW quarter of Section 52, Township 2 North and Range 1 East.

Lead Agency
Washington State Department of Ecology

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2) (c). This decision was made after review of a completed environmental checklist and other information on file with Ecology. This information is available to the public on request.

Compliance with requirements of local and state permits
Because the project is being completed under a Model Toxics Control Act Consent Decree, the NuStar is not required to obtain local or state permits that would otherwise be required for this type of work. However, Ecology must ensure that the project meets the substantive requirements of any local and state permits. No local or state permits are required for this action.

☐ There is no comment period for this DNS.

☐ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.

☒ This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted by June 10, 2016.

Comments should be directed to Craig Rankine, Site Manager, at Craig.Rankine@ecy.wa.gov or P. O. Box 47775, Olympia, WA 98504-7775

Responsible official: Rebecca Lawson, P.E., LHG
Position/title: Section Manager, Toxic Cleanup Program/Southwest Regional Office
Phone: (360) 407-6241

Date 5/5/2016 Signature Rebecca S. Lawson

2015 – 2016 Interim Action
SEPA Checklist
NuStar Vancouver Main Terminal
Vancouver, Washington

Prepared for:
NuStar Terminal Services, Inc.

April 27, 2016
1126-18

Table of Contents

A. BACKGROUND

1. Name of proposed project, if applicable:

2015-2016 Interim Action — NuStar Vancouver Facility, Vancouver, Washington

2. Name of applicant:

NuStar Terminal Services, Inc.

3. Address and phone number of applicant and contact person:

Applicant
Renee Robinson – Remediation Specialist
NuStar Energy L.P.
19003 I-H 10 West
San Antonio, Texas 78257

Contact Person
Stephanie Bosze Salisbury, L.G.
Apex Companies, LLC.
3015 SW First Avenue
Portland, Oregon 97201

4. Date checklist prepared:

September 18, 2015, updated March 17, 2016.

5. Agency requesting checklist:

Washington State Department of Ecology (Ecology)

6. Proposed timing or schedule (including phasing, if applicable):

Project will be implemented upon approval by Ecology and is anticipated to require approximately four to six weeks to complete. It is anticipated that the interim action will be implemented in 2016.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Yes, we anticipate that additional enhanced bioremediation may be conducted, consistent with the project Feasibility Study, as a cleanup interim action under the present Agreed Order (No. DE 11137), or as part of the (not yet prepared) final Cleanup Action Plan. We anticipate additional sediment sampling in the Columbia River to monitor sediment quality.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Several reports have been prepared supporting the development of the interim action work plan.

- Ash Creek Associates, 2008. Baseline Risk Assessment Report, NuStar Vancouver Main Terminal, Vancouver, Washington. September 4, 2008.
- Ash Creek Associates, 2009a. Revised Remedial Investigation Report, NuStar Terminals Services, Inc., Vancouver Main Terminal, Vancouver, Washington. October 1, 2009.
- Ash Creek Associates, 2009b. Interim Action Installation Report, NuStar Terminals Services, Inc.
  Vancouver, Washington. May 5, 2009.
- Ash Creek, 2010c. Draft Interim Action Performance Evaluation, NuStar Vancouver Facility, Vancouver, Washington. November 30, 2010.
- Ash Creek Associates, 2011. Interim Action Work Plan, NuStar Vancouver Facility, Vancouver Washington. March 25, 2011
- Ash Creek Associates, 2012. 2011 Interim Action Evaluation Report, NuStar Vancouver Facility, Vancouver Washington. March 29,2012
- Ash Creek Associates, 2012a. 2011 Groundwater Flow Evaluation Report, NuStar Vancouver Facility, Vancouver Washington
- Apex Companies, LLC (Apex), 2013. 2013 Final Remedial Investigation Report, NuStar Terminals Services Inc. Vancouver Terminal, Vancouver Washington. August 14, 2013
- Apex Companies, LLC (Apex), 2015. Semi-Annual Groundwater Monitoring Report January through June 2015. NuStar Vancouver Facility, Vancouver, Washington. August 14, 2015.
- Parametrix and Apex, 2015. DRAFT Feasibility Study Report, Port of Vancouver and NuStar Terminal Services. Vancouver, Washington. January 2015
- Apex, 2015. DRAFT Interim Action Work Plan, NuStar Vancouver Facility, Vancouver, Washington, April 15, 2016.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

- The Port of Vancouver performs maintenance dredging at the NuStar berthing area.
- An application is pending with the City of Vancouver for a retrofit project at the NuStar terminal. The existing rail tracks and existing plant and inter-plant piping system would be retrofitted to accommodate the storage and transfer of ethanol.
- A dry bulk modernization project at both the upland and shoreline portions of the property.

10. List any government approvals or permits that will be needed for your proposal, if known.

- Port of Vancouver – Access agreements and work approvals.

- Washington State Department of Ecology – Approval of 2015 Interim Action Work Plan (which was revised in April 2016).
- Bioremediation injection borings will be registered using the Washington Department of Ecology Underground Injection Control (UIC) online registration program. Permits are not required.

Because the interim action is being conducted under an agreed order, the action is exempt from procedural requirements under chapters 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 of the Revised Code of Washington (RCW) as well as the procedural requirements of laws requiring local government permits or approvals for the remedial action. However, the interim action will comply with the provisions of the above-referenced chapters as well as provisions of any laws requiring local government permits or approvals, such as, but not limited to, compliance with the City of Vancouver municipal code regarding Critical Areas Protection and the RCW 90.58 (Shoreline Management Act of 1971).

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The purpose of this action is to clean up upland contaminated groundwater and collect Columbia River water and sediment samples. Sample results will be used to assess river water quality and establish sediment baseline contaminant levels before groundwater cleanup.

Approximately 95 temporary subsurface borings will be placed at the NuStar terminal to inject an Edible Oil Substrate (EOS) Remediation product (EOS Pro) for *in situ* anaerobic bioremediation of elevated levels of chlorinated solvent compounds in groundwater. The groundwater injection will be done in two areas; approximately 0.87 acres in the southern portion of the facility and a 0.37 acre parcel to the northwest of the NuStar terminal property. Two similar successful groundwater cleanup actions were conducted at an adjacent portion of the terminal in 2008 and 2011.

The EOS Pro base is edible vegetable oil (soybean) emulsion that is water soluble and contains a blend of fast- and slow-release electron donors in a micro-emulsion form that are biodegradable. It contains food grade soluble substrates (e.g., sodium lactate), and food additives/preservatives, nutrient/extracts used to enhance solvent degradation by reductive dechlorination. Injection areas can be seen on Figure 4. Additional work in the Columbia River adjacent to the terminal includes water sampling from the surface water /sediment interface and sediment sampling. Water samples will be obtained from passive diffusion bags and sediment samples will be obtained from cores from river bottom sediment. The proposed sample locations are shown on Figure 3.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The interim action will be performed at the NuStar Vancouver Main facility (referred to herein as the "site" or "facility") located at the Port of Vancouver Terminal 2.

Facility Address:

Port of Vancouver, Terminal 2
2565 NW Harborside Drive Vancouver, Washington 98660

Coordinate Information:

45º 38' 12''N
122º 42'17"W
Township – 002N
Range – 001 E
Section – 52

Several maps are attached:

- Figure 1 is a site vicinity map identifying the location of the facility and shows the regional topography.
- Figure 2 is a site plan identifying the location on the facility where the interim action will occur.
- Figure 3 provides a map showing where the baseline sediment and surface water sampling will occur.
- Figure 4 provides a map showing the layout of the injection points for the bioremediation system.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site.

The site is a bulk storage terminal and contains rails, warehouses, and tanks that support these operations. The site is relatively flat with a very gentle gradient downward to the south. The site is located adjacent to the Columbia River, with the entire property located within 700 feet of the shoreline. Figure 1 shows the project location and Figure 2 shows the site layout.

b. What is the steepest slope on the site (approximate percent slope)?

Surface elevation varies from approximately 34 feet on the north end of the site to 30 feet on the south end (less than one percent grade).

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Geology across the facility is fairly uniform and is consistent with channel and floodplain deposits with some fills. Most of the facility is covered by asphalt concrete and underlain by gravel fill to a depth of 2 to 4 feet below the ground surface (bgs). Gravel fill is underlain by a layer of medium-grained sands to depths between 25 and 50 feet. The depth and thickness of the sand layer appears to be greatest along the river and thins to the northeast. Many of the historical borings near the river encountered concrete or woody debris in the upper 20 feet of the sand layer. Beneath the sand is a silty gravel layer that separates the sandy layer from underlying gravels. The silty gravel layer is thinnest near the river, ranging from approximately 45 to 55 feet bgs, and thickens towards the northern property boundary to a depth ranging from 9 to 40 feet bgs.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No. There are no surface indications of unstable soils at the site, nor is there any known history of unstable soils at the site.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

No grading or fill replacement is required for this project. Small-diameter holes installed for the injection of the bioremediation substrate will be sealed with a bentonite grout.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No clearing will be required and the activities are not anticipated to result in erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Currently, approximately 80 percent of the facility is covered with impervious surface and 100 percent of the upland interim action area is covered with impervious surface material. Any surface disrupted during construction activities will be replaced with impervious surface material after installation (asphalt or concrete).

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Activities are not anticipated to result in erosion. However, during earthwork activities, temporary catch basin inlet protection will be used including bio-bag filters.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Ecology's draft Greenhouse Gas Emissions and SEPA Working Paper (Ecology, 2010) suggests that potential sources of greenhouse gas emissions be identified and disclosed in the SEPA. Carbon dioxide emissions will be produced from gasoline- and/or diesel-powered probe installation rigs that will be used for the temporary injection point installations. Additional greenhouse gases will be emitted from staff travel to and from the facility in gasoline-powered vehicles. While limited emissions will be produced in implementing this interim action, the proposed energy usage for this technology is significantly less than other remedial technologies with comparable effectiveness.

The bioremediation installations are being completed on paved surfaces; therefore, dust generation will be minimal.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Fuel-powered equipment and/or vehicles will be operated in well ventilated areas. In order to reduce greenhouse gas emissions, travel to and from the facility will be limited by scheduling various field tasks for a given site mobilization. Additionally, staff car-pooling will be utilized to the maximum extent possible.

3. Water

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

This is a port facility on the Columbia River (Figures 1 and 2). The NuStar facility is located adjacent to the Columbia River (Figure 2).

No wetland indicators (e.g., hydric soils, hydrophytic vegetation, and hydrology) were identified within the project footprint. No U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) -mapped wetlands are located within or adjacent to the project site (CH2M-Hill, 2006). See Figure 4 in Attachment A.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes. The nearest proposed biosubstrate injection into site groundwater is located approximately 20 feet from the Columbia River. The bioinjection locations are shown on Figure 4. Sediment and surface water sampling will occur in the Columbia River at the locations shown on Figure 3

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

The interim action work scope involves collecting surface water samples from the river. The total withdrawals are estimated to be less than 1 liter of water.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

As shown on Figure 5 in Attachment A (Source: CH2M-Hill, 2006), the floodway fringe encroaches on the site along the Columbia River and the location of the interim action area is on the edge of the 100-year floodplain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No discharges of waste or other materials are proposed as a part of this interim cleanup action project. It is possible that a small amount of injection substrate may flow into the river emulsified in upland groundwater. The material is a non-toxic soybean oil product that will biodegrade in surface water. The *Interim Action Work Plan* (Apex, 2015) includes a procedure to limit oil in the river by modifying the injection scope after a few "test" borings advanced close to the river.

b. Groundwater:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No groundwater will be withdrawn at the site for this 2015-2016 Interim Action project. Dechlorinated municipal water will be used to dilute the bioremediation injection substrate oil prior

to injection. Approximately 90 to 95 percent of the total fluid volume will be comprised of dechlorinated municipal water.

The NuStar facility is located above the Troutdale Aquifer, which is designated by the United States Environmental Protection Agency (EPA) as a sole source aquifer. The top of the Troutdale Aquifer was observed at approximately 210 feet bgs at the NuStar facility during historical well drilling activities. The oil injections are targeted for Shallow Zone groundwater beneath the facility, which is located between approximately 20 and 50 feet bgs at the site, thus will not impact the Troutdale Aquifer.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . .; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material will be discharged into the ground. As described under paragraph (11) in Section A, an emulsified oil substrate will be injected into subsurface injection points to enhance *in situ* bioremediation.

c. Water runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Neither the installation nor the implementation of the interim action project will affect runoff (including storm water). Therefore, the method of collection and disposal will remain as described in the Facility Storm Water Pollution Prevention Plan, prepared in accordance with the General Industrial Storm Water Permit.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No. Any waste materials generated as a part of these activities will be containerized and disposed of off-site at an appropriate landfill facility.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If no, describe.

No. The proposed work will not affect drainage patterns in the vicinity of the site.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

No additional measures are needed.

4. Plants

a. Check or circle types of vegetation found on the site:

Deciduous tree – None
Evergreen tree – None

Shrubs – None
Grass – None
Pasture – None
Crop or grain – None
Orchards, vineyards or other permanent crops – None
Wet soil plants – Wet soil plants may be present along the shoreline of the Columbia River, although if present, are very limited due to the presence of rip-rap.
Water Plants – Water plants are present in Columbia River.
Other types of vegetation – None

b. What kind and amount of vegetation will be removed or altered?

None.

c. List threatened or endangered species known to be on or near the site.

No threatened or endangered species are known to be on or near the project site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The project will not involve any landscaping.

e. List all noxious weeds and invasive species known to be on or near the site.

None are known.

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

The underlined list of animals below are known to occur on or the site:

Birds: hawk, heron, eagle, songbirds, other: sandhill cranes, osprey
Mammals: deer, bear, elk, beaver, other: coyote, California and Steller sea lions, harbor seals.
Fish: bass, salmon, trout, herring, shellfish, other: smelt, sturgeon

The following responses (in quotations) are excerpted from CH2M-Hill (2006). More recent information is added, where applicable.

Avian Species

"The [Facility] is located on Port of Vancouver property which lies adjacent to the Columbia River. The lower Columbia River is an important waterfowl wintering area. A wide variety of waterfowl can be found utilizing the Columbia River and adjacent areas during the winter. Many leave the region in the spring and summer to nest in wetland areas further north. However, the grasslands with emergent wetland vegetation in the area provide good nesting and brood rearing habitat for waterfowl and other ground nesting species that nest in the area. In addition, many species of waterfowl, upland birds, raptors, and songbirds are frequently observed in the Vancouver Lake,

Vancouver Lake Wildlife Area, Shillapoo Wildlife Area, and the Columbia River. Vancouver Lake and the two wildlife areas are located approximately 0.75 mile north of the NuStar Main Terminal site. Vancouver Lake, the two wildlife areas, and surrounding wetland and upland habitats (considered priority habitats) provide the highest quality habitats for wildlife species in the area. These wildlife areas are primarily a resting and feeding area for up to thousands of migrating waterfowl, although many other species of wildlife also use the habitats on the wildlife areas (WDFW, 2006a). Large concentrations of Canada geese, tundra swans, mallard, widgeon, northern shoveler, canvasback, loons, and grebes are common species present at Vancouver Lake and in marshes and surrounding fields. Large numbers of waterfowl feed away from the wildlife areas on adjacent farm fields. Great egrets, sandhill cranes, white ibis, and great blue herons are among the variety of other bird species present during the fall and winter. There are two Great blue heron rookeries located in the wildlife areas. Bald eagles and peregrine falcons also are regular visitors. There is at least one active bald eagle territory with two alternate nests near Vancouver Lake.

"Habitat surrounding the [Facility] consists of developed industrial areas to the north, west, and east, the Columbia River and Portland are to the south. Areas at the [Facility] that are not developed or do not have structures are still highly disturbed. Limited habitat is available for wildlife other than perch sites or potentially nests sites on port buildings. The level of activity and noise at the port likely preclude many avian species from nesting or perching on building/structures on port property. Most avian use is likely transitory. The Columbia River borders the port to the south and provides the most available and preferable open water and aquatic habitat in the area. There is very limited riparian habitat on port property. Riparian habitat on the southern bank of the river provides terrestrial habitat in the immediate area as well as areas to the east and west of the port."

Mammals – Deer, Beaver, Other (Bat)

"Furbearing mammals are common in the Vancouver Lake area to the north and in the riparian areas to the east and west of the Port. The area of the [Facility], if used by these species, is primarily used by small transitory mammals (mice, kangaroo rats, etc). Deer and other mammals would not be expected on the [Facility] because of its developed and industrial nature."

Amphibians and Reptiles- Toad, Frog, Snake, Other

"Amphibian and reptile species are known to occur in suitable habitat in the Vancouver Lake area and along the Columbia River. There is very limited suitable habitat for these species at the Port of Vancouver and negligible habitat at the [Facility]."

Fish – Bass, Salmon, Trout, Other

"The Columbia River supports anadromous and resident fisheries. Pacific lamprey and many salmonid species pass through the area during migratory periods. Other native fish that can be found in the Columbia River include chiselmouth, northern pikeminnow, peamouth, sand roller, and suckers. Common introduced fishes include largemouth bass, smallmouth bass, crappie, walleye, common carp, and yellow perch."

Potential Impacts to Ecological Species:

- Potential Impact of the Project on Avian Species. The facility is located in a developed industrialized area at the Port of Vancouver. Currently, there is very limited habitat for resting, foraging, or nesting for avian species. The interim cleanup action will not alter the

facility with respect to avian habitat and potential impacts of the proposed project to avian species are negligible.

- Potential Impact of the Project on Mammal Species. Potential impacts to the mammal species is expected to be negligible because (a) small mammal use in the area is transitory in nature; (b) the area is currently developed; (c) the construction period for the project is of limited duration (less than one month); and (d) the operation of the SVE system is not significantly different than currently operating equipment at the facility and would not be expected to alter site use.
- Potential Impact of the Project on Amphibian and Reptile Species. There is no suitable habitat for these species in the interim action project area; therefore, no impacts are expected.
- Potential Impact of the Project on Fish Species. Sediment and surface water sampling will be conducted in the river. The surface water samples will be collected in passive membrane bags which will be slowly lowered to the river bottom and left in place for 2 to 4 days. The samplers are non-invasive and are not expected to impact fish. Sediment sample cores will be collected using a Vibracore mounted to a small vessel. The coring device will be slowly lowered to the river mudline giving any fish in the area adequate time to swim from the device. Vibration in the water from the coring device will be minimal and no impacts to fish are expected. Close observations will be made of the shoreline during injection activities. It is not anticipated that oil will enter the river, but if emulsified oil (which would present as a milky material) is identified, work will be stopped and boring locations will be adjusted in the direction away from the river. The boring injection order/plan is summarized in the 2015 Interim Action Work Plan (Apex, 2016).

b. List any threatened or endangered species known to be on or near the site.

Chinook salmon (Oncorhynchus tshawytscha)

Lower Columbia River Evolutionarily Significant Unit (ESU)

Upper Columbia River spring-run ESU

Snake River fall-run ESU

Snake River spring/summer-run ESU

Upper Willamette River ESU

Columbia River chum ESU (Oncorhynchus keta)

Lower Columbia River coho ESU (Oncorhynchus kisutch)

Steelhead (Oncorhynchus mykiss)

Lower Columbia River Distinct Population Segment (DPS)

Upper Columbia River DPS

Snake River Basin DPS

Middle Columbia River DPS

Upper Willamette River DPS

Snake River sockeye ESU (Oncorhynchus nerka)

Columbia River bull trout DPS (Salvelinus confluentus)

Southern DPS of Pacific eulachon/smelt (Thaleichthys pacificus)

Southern DPS of North American green sturgeon (Acipenser medirostris)

Steller sea lion (Eastern DPS) (Eumatopius jubatus)

Sandhill cranes (Grus canadensis) are listed as endangered by Washington, but are not listed by the federal government. Cranes are known to rest and feed on Parcel 3 but more commonly use parcels 4 and 5 at the Port of Vancouver, which are located between 2.5 and 3.5 miles west of the NuStar facility. Fall migration of cranes in the Vancouver Lowlands typically occurs in late September and early to mid-October. Spring migration through the Lowlands generally occurs from mid-March to mid-April. The Lowlands are used as stopover habitat during migration and for foraging by over-wintering birds. There is not suitable habitat for stopover at the NuStar facility.

Osprey (*Pandion haliaetus)* are not listed, but are considered a state-monitored species. Osprey nests have been noted in the vicinity of the site, but have not been observed at or directly near the NuStar facility.

The following response (in quotations) is excerpted from CH2M-Hill (2006).

"The Columbia River supports federally listed ESA salmonid species. The City of Vancouver Priority Habitats database (City of Vancouver, 2006) shows that a small portion, the southern edge along the Columbia River, of the Main Terminal site is within the Riparian Habitat Conservation Area for priority species and that listed and sensitive species utilize the area in the vicinity of the Main Terminal site (Figure 6 in Attachment A). The City of Vancouver Critical Areas Protection ordinance states that habitat for state or federally designated endangered, threatened, or sensitive species or priority species or habitats designated by the Washington Department of Fish and Wildlife (WDFW), water bodies, and habitats of local importance are to be protected. The WDFW Priority Habitats and Species Database (WDFW, 2006b) provide information showing that there are several sensitive species occurring in the vicinity of the [Main Terminal] site including the Columbia River. The [Main Terminal] site itself is an existing developed highly disturbed industrial area that provides very limited and suboptimal habitat for terrestrial species".

The Listed and Proposed Endangered and Threatened Species and Critical Habitat; Candidate Species; and Species of Concern in Clark County, as prepared by the U.S Fish and Wildlife Service and the WDFW was revised on December 15, 2010. The revised list includes additional endangered and threatened species, including the bull trout (Salmonidae family). The gray wolf, northern spotted owl, and three plant species were also added to the list, but given the developed industrial nature of the site, no suitable habitat for these species is present at the site.

- Potential Impact of the Project on Sensitive Species. The proposed project would be constructed on an existing developed area of the facility within an industrial complex of the Port of Vancouver. Therefore, negligible impacts to sensitive species would be expected.

c. Is the site part of a migration route? If so, explain.

The following response (in quotations) is excerpted from CH2M-Hill (2006).

"The proposed project is located at the Port of Vancouver which is adjacent to the Columbia River which is a migratory flyway for waterfowl. Migrating waterfowl travel at higher altitudes and would be expected to pass over the project site on most occasions. However, waterfowl may land on the river or in agricultural fields in the vicinity to feed. Songbirds likely migrate through the project area. Because the project area is lacking suitable habitat, it is unlikely that these birds would be drawn to

the site for resting or feeding during migration. Migrating birds generally travel at higher altitudes, and so would be expected to pass over the project site on most occasions. Mammals would not be expected to pass through the area on a frequent basis and therefore impacts would be expected to be negligible. The Columbia River is also a migratory route for anadromous salmonids. The [Main Terminal] site is located at the Port of Vancouver adjacent to the Columbia River. All construction activities would be on land and therefore aquatic migration routes would not be affected by the proposed project at the [Main Terminal] site".

Based on this evaluation and the fact that the site is a developed, active industrial site, there will be no impacts to migratory species.

d. Proposed measures to preserve or enhance wildlife, if any:

Work will be done during daylight hours to avoid impacts to animals from artificial lighting or glare. The selected remedial technology will leave no infrastructure behind that will alter plant or animal habitat. Injection activities will take place at a portion of the NuStar facility where there is little to no plant or animal habitat, so it is not anticipated that field activities will affect wildlife.

As discussed in Section 7, steps will be taken to avoid the injection of the soy-bean based oil product into the river, where aquatic species dwell. In the case of the unlikely spill of the oil substrate on upland property, the oil will be contained and cleaned using basic cleaning products (dish soap and water) so as not to migrate to the river.

e. List any invasive animal species known to be on or near the site.

None are known.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

With the exception of the initial injection using a probe rig, the bioremediation technology used for treatment of the saturated zone utilizes no non-renewable energy sources.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal?

A low energy input technology was selected for treatment of groundwater as compared to several other technologies requiring high energy input.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

No. The soybean based oil material is non-toxic and does pose any fire or explosion risk. While the oil substrate will be carefully handled it is possible that the material could be spilled during implementation of the interim action. If the soybean based oil is spilled onsite, it will be cleaned up using sorbent materials and disposed of as municipal waste. Residual oils on the ground surface will be cleaned with soapy water and contained for disposal.

1) Describe special emergency services that might be required.

No emergency services are anticipated to be required. However, work will be conducted in accordance with a health and safety plan prepared in accordance with OSHA 1910.120 that includes an emergency response plan, contacts for emergency services (police, fire, medical, spill), and a route-to-hospital map.

2) Proposed measures to reduce or control environmental health hazards, if any:

Health and safety plan includes MSDS information for the injection substrate and information regarding potential site-specific hazards including exposure to VOCs soil or groundwater.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Drilling rigs and excavators (vacuum trucks) will be a source of noise during injection activities. These sources have typical noise levels in the range of 100 to 120 dB immediately adjacent to the equipment.

Operational and construction noise from the project would comply with the State noise standard - 173-60 WAC. The City of Vancouver has not promulgated independent state-approved noise standards pursuant to 173-60-110 WAC.

3) Proposed measures to reduce or control noise impacts, if any:

All workers in the area of the machinery are required to wear noise protection consisting of ear plugs or ear muffs.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Currently, sodium hydroxide is received via marine vessel and transported out by rail and truck. Jet A fuel is received via vessel and transported out via barge. Calcium chloride is received via rail and transported out via truck, and dry bulk materials are received via vessel and transported out via truck.

The facility is located within the Port of Vancouver and is surrounded by other industrial properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No.

1) *Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tiling and harvesting? If so, how*.

No.

c. Describe any structures on the site.

There are five buildings at the facility, including product warehouses (Nos. 9, 13, 14, 15, and 17), a loading dock, three tank farms, five tank truck loading/unloading racks, three rail car loading racks, a marine vessel dock and piping, and an office (Figure 2).

d. Will any structures be demolished? If so, what?

No structures will be demolished as a part of this interim action cleanup project.

e. What is the current zoning classification of the site

The City of Vancouver Zoning Code designates the project site as *Heavy Industrial*.

f. What is the current comprehensive plan designation of the site?

The comprehensive plan designation of the project area is *Industrial*.

g. If applicable, what is the current shoreline master program designation of the site?

The project area is designated as a shoreline of statewide significance; however, the proposed work is consistent with the goals of the Clark County Shoreline Master Program as it will be used to support work that will enhance the quality of the shoreline.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The only "critical area" designated by the City of Vancouver *Critical Areas Protection Ordinance* (VMC 20.740) that is located within the project area is Geologically Hazardous Areas; the facility is located within a seismic hazard area (CH2M-Hill, 2006).

i. Approximately how many people would reside or work in the completed project?

None. No change.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Not Applicable.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The project is an interim cleanup action that is compatible with the existing and foreseeable projected use of the facility and land use of the property underlying and surrounding the facility.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

Not applicable.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing units would be provided.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing units would be eliminated.

c. Proposed measures to reduce or control housing impacts, if any:

There will be no impacts from this project to housing and, therefore, no measures are proposed.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

There are no structures proposed in the interim cleanup action project.

b. What views in the immediate vicinity would be altered or obstructed?

No views would be altered.

c. Proposed measures to reduce or control aesthetic impacts, if any:

There will be no aesthetic impacts; therefore, no measures are proposed.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

No light or glare would be produced.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

There will be no light or glare impacts; therefore no measures are proposed.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Several public boat launches are located in the vicinity of the project. Boating and fishing are permitted on the Columbia River.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No recreational uses would be displaced by the project.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None needed.

13. Historic and cultural preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, generally describe.

The Washington Information System for Architectural and Archaeological Records Data (WISAARD) was searched (in April 2016) for cultural or historical properties at or near the terminal property. No records were identified.

Property within the Port of Vancouver is located within the City of Vancouver's high predictive model for archeological resources. Should any unknown archaeological resources be encountered during project activities, ground-disturbing activities would be halted in the area of the find in accordance with the Revised Code of Washington (RCW) 27.53.060 (Archaeological Sites and Resources), RCW 27.44.020 (Indian Graves and Records); a professional archaeologist would be called in to assess the significance of the find; and the Washington State Department of Archaeology and Historic Preservation in Olympia would be notified so that a course of action could be implemented.

Inadvertent discovery protocols have been provided by the tribal entities in the event that archeological or historical materials are discovered during site investigation activities. Field staff will have copies of the protocol on hand during field activities.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No landmarks or evidence of historic, archaeological, scientific, or cultural importance are known to be on or next to the site (CH2M-Hill, 2006). No known archaeological sites would be impacted by the construction of the project.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

It is anticipated that, similar to the 2011 Interim Action, tribal entities may respond during the Interim Action Work Plan public comment period with a letter providing inadvertent discovery language. In the event that artifacts or human remains are encountered during field activities, the inadvertent discovery language will be consulted, which includes notification to the appropriate tribes.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

There are no known historic, cultural, or archaeological sites in the remediation area; therefore, no measures are needed. In the event that historic, cultural or archaeological sites are identified, the protocols identified in Section 13a will be followed.

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area, and describe proposed access to the existing street system. Show on site plans, if any.

The streets and highways serving the facility are shown on Figures 1 and 2. Access to the site would primarily be from Interstate 5 via westbound State Route 501 (also known as Mill Plain Boulevard). Vehicles would continue past 4th Plain Boulevard and turn south on West 26th Avenue.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The public transportation system in Clark County is C-TRAN. The proposed project area is not currently served by C-TRAN, but Route 25 (Fruit Valley), which originates at the intersection of Mill Plain and Fourth Plain Streets (a 0.7 mile walk from the facility) does provide service into downtown Vancouver.

c. How many parking spaces would the completed project have? How many would the project eliminate?

The completed project will not add nor eliminate parking spaces.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The sediment and surface water sampling portions of the interim action will occur in the Columbia River within the Port of Vancouver Berth #7 area. As with previous sediment sampling events, any work on the river will be coordinated with the Port of Vancouver and their vessel schedule.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

Monitoring of VOC concentrations in groundwater would occur on a quarterly basis after the injection process is completed. The largest vehicle utilized will be a pick-up sized passenger truck. Approximately semi-annually, monitoring well purge water will be picked up for disposal to a recycling facility using a commercial truck.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe:

No.

h. Proposed measures to reduce or control transportation impacts, if any:

Monitoring events, when possible, will be coordinated with other site related activities, to reduce vehicular trips to the site.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No additional public services would be needed to support this project

b. Proposed measures to reduce or control direct impacts on public services, if any.

None needed.

16. Utilities

a. Utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Current utilities available at the site include: electricity, natural gas, refuse service, telephone, sanitary sewer, and water

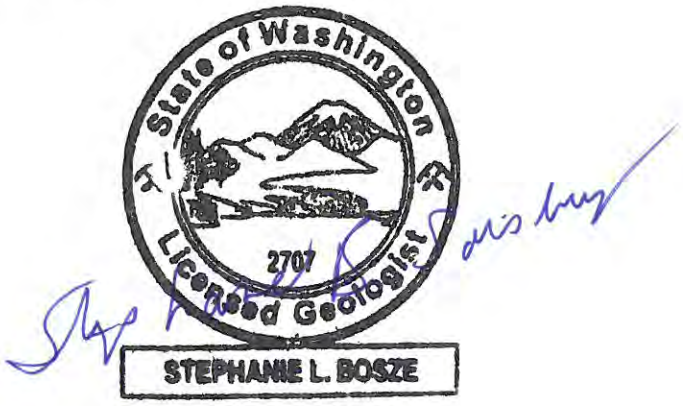
b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No additional utility connections will be needed. The bioinjection substrate will need to be mixed with municipal water provided by the Facility and the Port of Vancouver. The Port of Vancouver is the utility providing water service.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:



Stephanie Bosze Salisbury, L.G.
Associate Geologist, Apex Companies, LLC.

Date Submitted: April 27, 2016

Additional Reference:

Ecology, 2010. Greenhouse Gas Emissions and SEPA Working Paper. October 19, 2010.
CH2M-Hill, 2006. Valero LP Main Terminal 2 Expansion Project SEPA Checklist. October 2006.

ATTACHMENTS

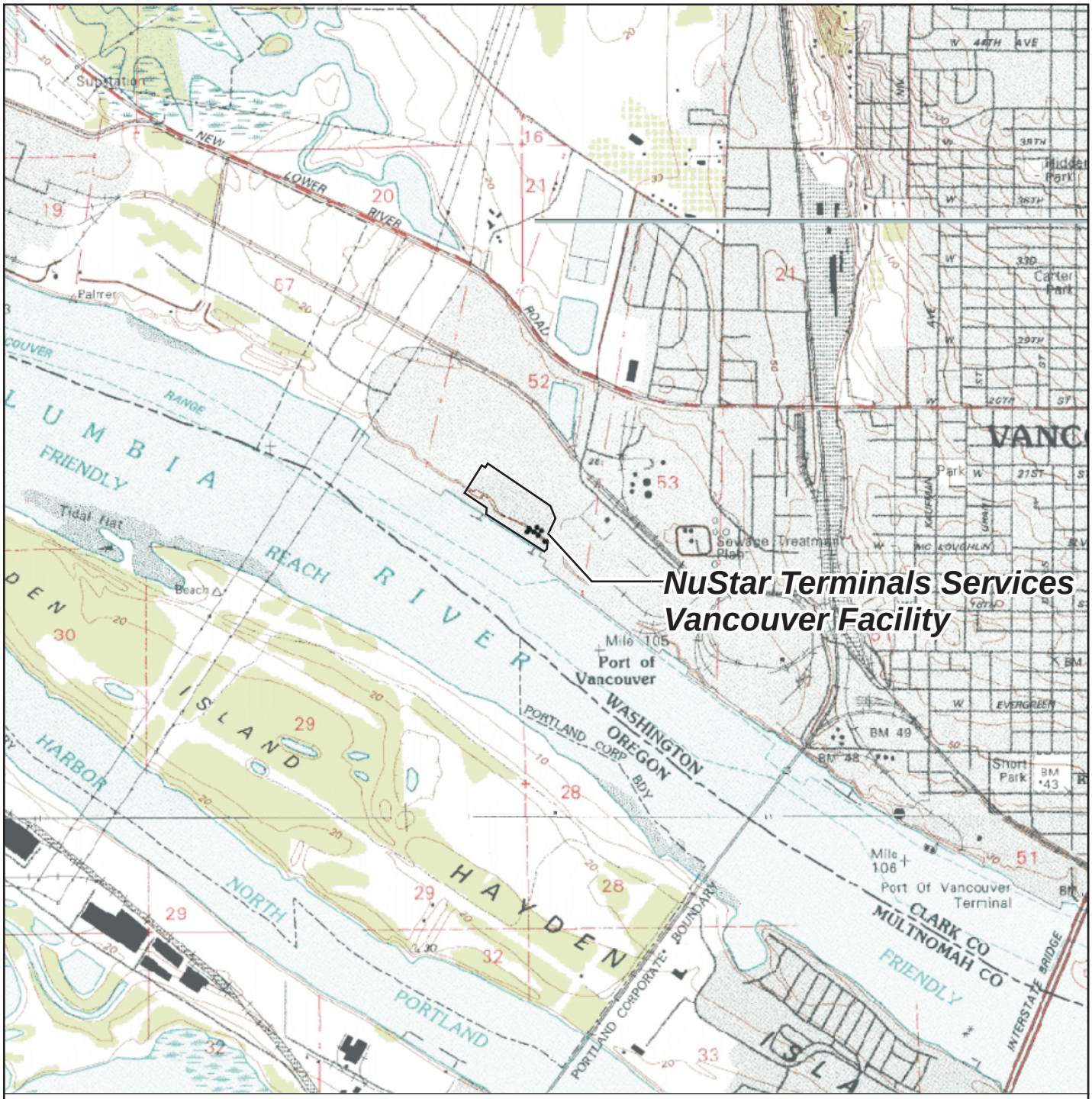
Figures

Figure 1 – Facility Location Map
Figure 2 – Facility Site Plan
Figure 3 – Proposed Sediment Sampling and Surface Water Sampling Locations
Figure 4 – Enhanced Bioremediation Injection Layout

Appendix A

Selected Figures from 2006 SEPA for Tank Construction at Main Terminal Prepared By CH2M-Hill

Figures



Base map prepared from USGS 7.5-minute quadrangles as provided by Topozone.

0 2,000 4,000

Approximate Scale in Feet

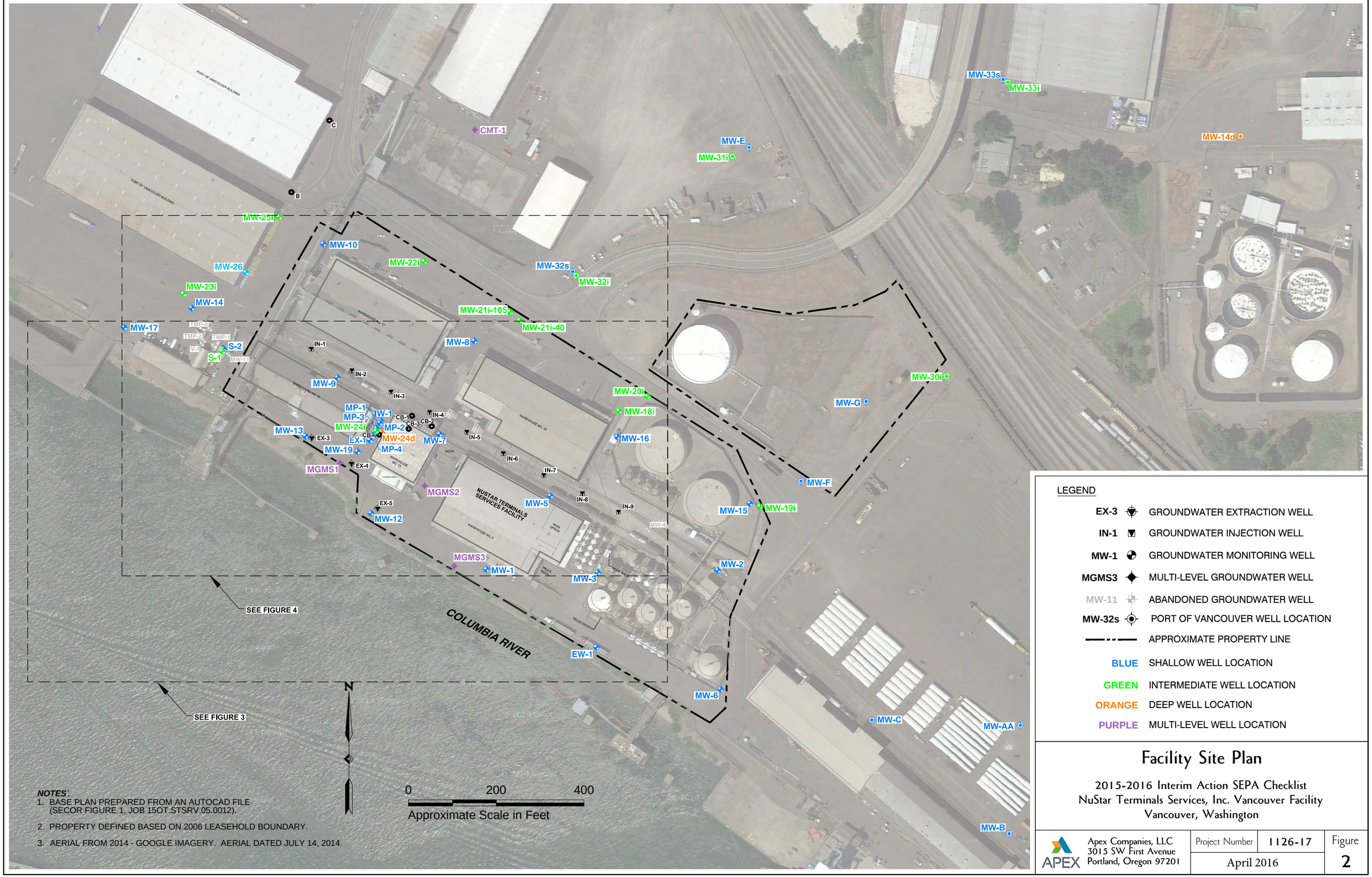
N

Facility Location Map

2015-2016 Interim Action SEPA Checklist
NuStar Terminals Services, Inc. Vancouver Facility
Vancouver, Washington

Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	1126-17	Figure
April 2016		1



NOTES:

1. BASE PLAN PREPARED FROM AN AUTOCAD FILE (SECOR FIGURE 1, JOB 15OT.STSRV.05.0012).
2. PROPERTY DEFINED BASED ON 2006 LEASEHOLD BOUNDARY.
3. AERIAL FROM 2014 - GOOGLE IMAGERY. AERIAL DATED JULY 14, 2014.

LEGEND

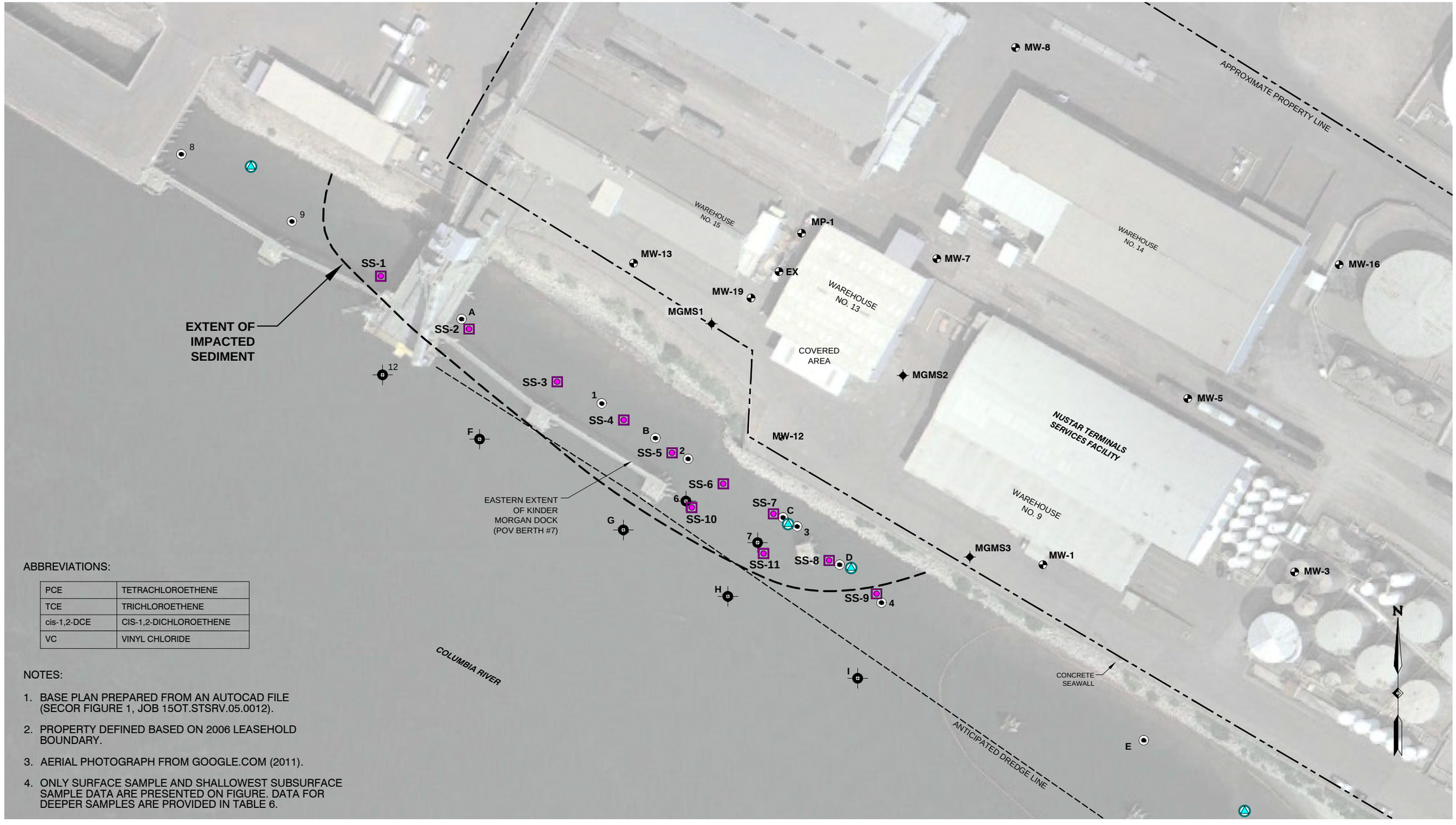
EX-3	GROUNDWATER EXTRACTION WELL
IN-1	GROUNDWATER INJECTION WELL
MW-1	GROUNDWATER MONITORING WELL
MGMS3	MULTI-LEVEL GROUNDWATER WELL
MW-11	ABANDONED GROUNDWATER WELL
MW-32s	PORT OF VANCOUVER WELL LOCATION
	APPROXIMATE PROPERTY LINE
BLUE	SHALLOW WELL LOCATION
GREEN	INTERMEDIATE WELL LOCATION
ORANGE	DEEP WELL LOCATION
PURPLE	MULTI-LEVEL WELL LOCATION

Facility Site Plan

2015-2016 Interim Action SEPA Checklist
NuStar Terminals Services, Inc. Vancouver Facility
Vancouver, Washington

Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	1126-17	Figure
April 2016		2



ABBREVIATIONS:

PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
cis-1,2-DCE	CIS-1,2-DICHLOROETHENE
VC	VINYL CHLORIDE

NOTES:

1. BASE PLAN PREPARED FROM AN AUTOCAD FILE (SECOR FIGURE 1, JOB 15OT.STSRV.05.0012).
2. PROPERTY DEFINED BASED ON 2006 LEASEHOLD BOUNDARY.
3. AERIAL PHOTOGRAPH FROM GOOGLE.COM (2011).
4. ONLY SURFACE SAMPLE AND SHALLOWEST SUBSURFACE SAMPLE DATA ARE PRESENTED ON FIGURE. DATA FOR DEEPER SAMPLES ARE PROVIDED IN TABLE 6.

LEGEND

- A — SEDIMENT SAMPLING LOCATION - 2011 AND 2012 (INTERSECTS SHALLOW ZONE GROUNDWATER)
- F — SEDIMENT SAMPLING LOCATION - 2011 AND 2012 (INTERSECTS INTERMEDIATE ZONE GROUNDWATER)
- MW-12 — GROUNDWATER MONITORING WELL
- MGMS3 — MULTI-LEVEL GROUNDWATER WELL (40 FOOT SAMPLE INTERVAL)
- SS-1 — PROPOSED SEDIMENT SAMPLING LOCATION (2015/2016)
- PROPOSED SURFACE WATER SAMPLING LOCATION

0 100 200

Approximate Scale in Feet

Proposed Sediment Sampling and Surface Water Locations

2015-2016 Interim Action SEPA Checklist
NuStar Terminals Services, Inc. Vancouver Facility
Vancouver, Washington

Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number 1126-17

April 2016

Figure 3

PROPOSED INTERIM ACTION INJECTION AREA

PROPOSED INTERIM ACTION INJECTION AREA

INJECTION #5

INJECTION #3

INJECTION #4

INJECTION #1
(See Note 4 Below)

INJECTION #2

INJECTION #6

2008 GROUNDWATER INTERIM ACTION AREA

WAREHOUSE NO. 17

WAREHOUSE NO. 15

WAREHOUSE NO. 14

WAREHOUSE NO. 9

DOCK

COLUMBIA RIVER

CONCRETE SEAWALL

N

0 80 160

Approximate Scale in Feet

NOTES:

1. BASE PLAN PREPARED FROM AN AUTOCAD FILE (SECOR FIGURE 1, JOB 15OT.STSRV.05.0012).
2. UTILITY LOCATIONS SHOWN BASED ON SURFACE MARKINGS BY UTILITY LOCATOR.
3. INJECTION LOCATIONS BASED ON FIELD MEASUREMENTS TO EXISTING SITE STRUCTURES.
4. LOCATIONS 1 THROUGH 6 DEPICT THE ORDER OF THE FIRST 6 BIOINJECTIONS. SEE SECTION 3.0 OF TEXT FOR ADDITIONAL INFORMATION.

LEGEND:

- PROPOSED ENHANCED BIOREMEDIATION INJECTION POINT
- INJECTION #1 — INITIAL INJECTION ORDER (SEE NOTE 4)
- 2011 INTERIM ACTION STANDARD OIL SUBSTRATE INJECTION POINT
- 2011 INTERIM ACTION ANGLED INJECTION POINT
- 2008 INTERIM ACTION INJECTION POINT
- EX-3 — EARLY 2000s INTERIM ACTION GROUNDWATER EXTRACTION WELL
- IN-1 — EARLY 2000s INTERIM ACTION GROUNDWATER INJECTION WELL AND VAPOR EXTRACTION WELL
- MW-1 — GROUNDWATER MONITORING WELL
- MGMS3 — MULTI-LEVEL GROUNDWATER WELL
- CATCH BASIN
- BUILDING
- FENCE
- ELECTRICAL
- SYSTEM ELECTRICAL
- STORM SEWER
- WATER
- MANHOLE
- RAILROAD TRACKS

Enhanced Bioremediation Design

2015-2016 Interim Action SEPA Checklist
NuStar Terminals Services, Inc. Vancouver Facility
Vancouver, Washington

Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	1126-17	Figure
April 2016		4

Appendix A

Selected Figures from 2006 SEPA for Tank Construction at Main Terminal Prepared by CH2M Hill

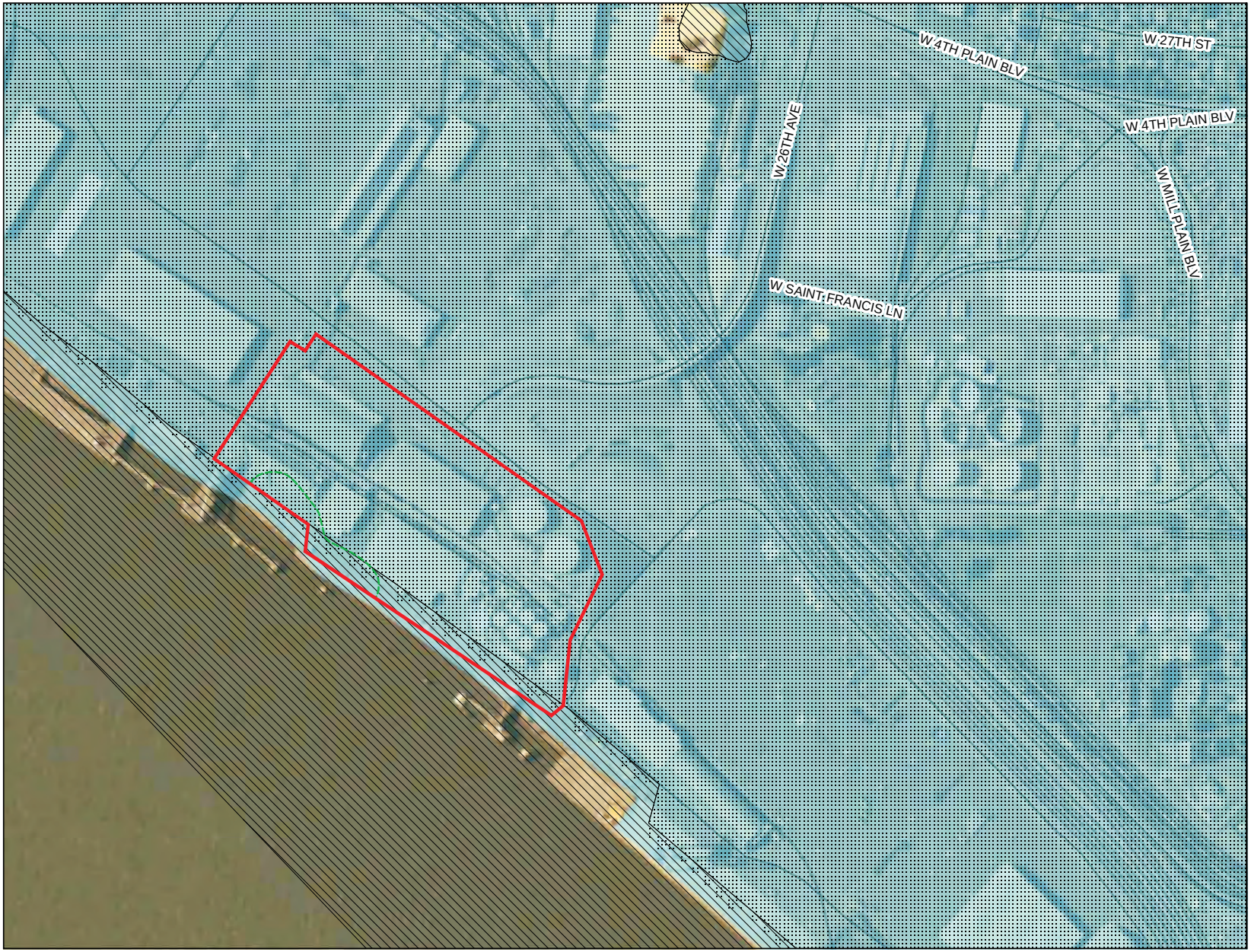


Figure 3

Designated Critical Areas: Geologic Hazards

Main Terminal

Support Terminals Operating Partnership, L.P., dba

Valero LP Vancouver

LEGEND

- Railroads
- Streets
- Approximate Property Line
- 2015-2016 Interim Action Area

Earthquake Hazards by Sediment Condition

- Semi-consolidated sediments
- Unconsolidated sediments

Potential Earthquake Damage

- Zone A - Greatest Hazard

Source: Clark County GIS, 2006

N

0 300 600

Feet

CH2MHILL

File Path: \\Rosa\proj\Valero\344992\Valero Vancouver\GIS\MapDocuments\SEPA_Checklist\Figure3_MainTerminal_GeologicHazards.mxd Date: October 5, 2006 6:59:43 AM

NOTE: Base map provided by CH2MHILL and modified by Ash Creek in 2011.

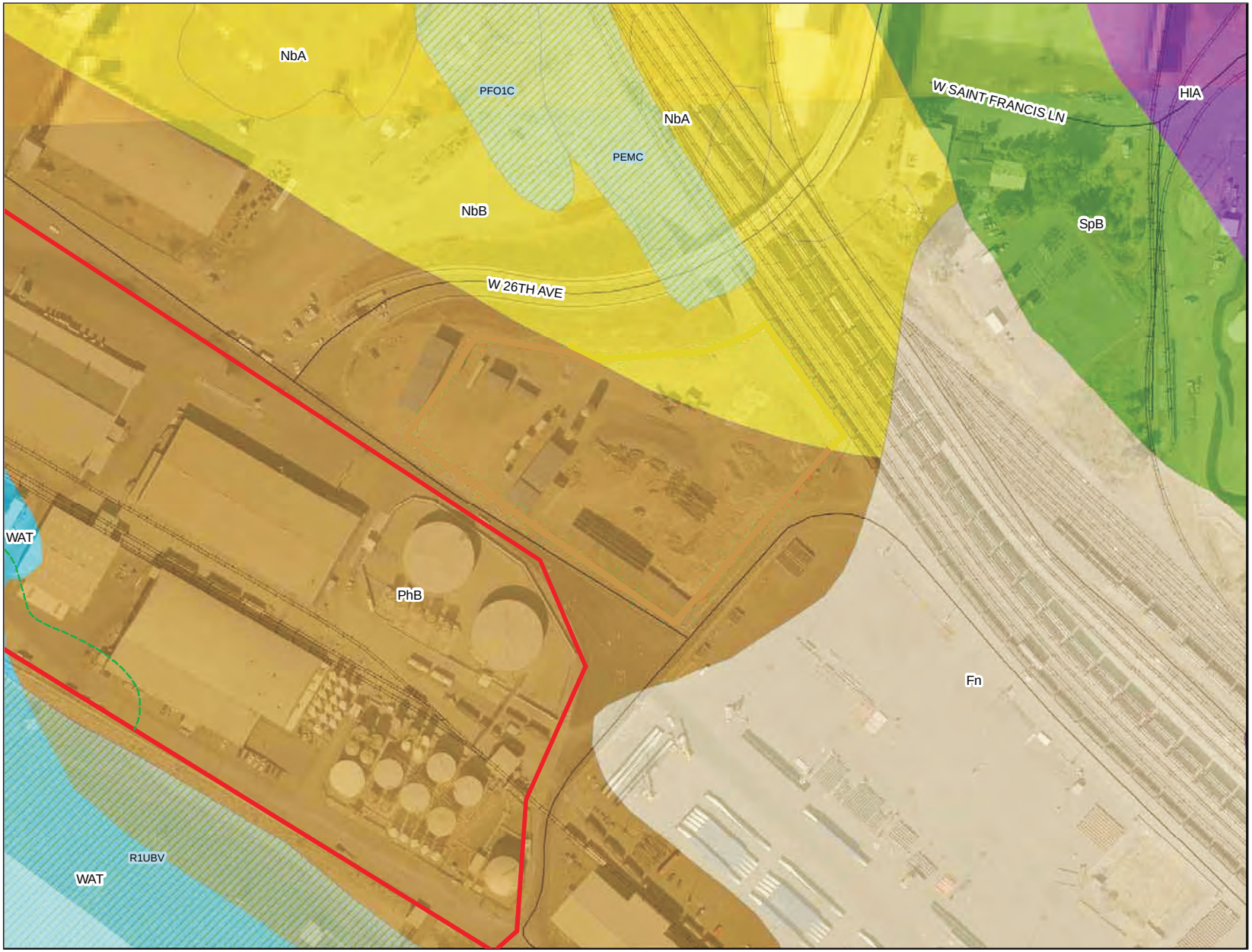


Figure 4

Designated Critical Areas: Wetlands

Main Terminal

Support Terminals Operating Partnership, L.P., dba

Valero LP Vancouver

LEGEND

- Streets
- Railroads
- County Wetlands
- Approximate Property Line
- 2015-2016 Interim Action Area

NWI Wetlands, 1993

- PEMC - Palustrine Emergent Seasonally Flooded
- PFO1C - Palustrine Forested Broad-leafed Deciduous Seasonally Flooded
- R1UBV - Riverine Tidal

Soils

- HIA, Hillsboro Silt Loam
- NbA, NbB, Newberg Silt Loam
- PhB, Pilchuck Fine Sand
- SpB, Sauvie Silt Loam
- Fn, Fill Land
- WAT, Water

Source: Clark County GIS, 2006

N

0 150 300

Feet

CH2MHILL

NOTE: Base map provided by CH2MHILL and modified by Ash Creek in 2011.

Figure 5

Designated Critical Areas: Water Resources

Main Terminal

Support Terminals Operating Partnership, L.P., dba

Valero LP Vancouver

LEGEND

- Railroads
- Streets
- Shoreline
- Floodway Fringe
- Approximate Property Line
- 2015-2016 Interim Action Area

Source: Clark County GIS, 2006

N

0 200 400

Feet

CH2MHILL

File Path: \\Rosa\proj\Valero\344992\Valero Vancouver\GIS\MapDocuments\SEPA_Checklist\Figure5_MainTerminal_Water_Resources.mxd Date: October 9, 2006 7:55:11 AM

NOTE: Base map provided by CH2MHILL and modified by Ash Creek in 2011.

Figure 6

Designated Critical Areas: Biological Resources

Main Terminal

Support Terminals Operating Partnership, L.P., dba

Valero LP Vancouver

LEGEND

- Railroads
- Streets
- Approximate Property Line
- 2015-2016 Interim Action Area

Priority Habitats and Species Information

- Riparian Habitat Conservation Area

Source: Clark County GIS, 2006; Washington Dept. of Fish and Wildlife, 1995

N

0 300 600

Feet

CH2MHILL

File Path: \\Rosa\proj\Valero\344992\Valero Vancouver\GIS\MapDocuments\SEPA_Checklist\Figure6_MainTerminal_Biological_Resources.mxd, Date: October 5, 2006 7:23:36 AM

NOTE: Base map provided by CH2MHILL and modified by Ash Creek in 2011.