WAC 197-11-970 Determination of Nonsignificance (DNS)

DETERMINATION OF NONSIGNIFICANCE

Description of proposal:
The proposed interim action, a soil and groundwater contaminant cleanup system, will treat the primary contaminant release area within the NuStar Energy LP leasehold in Port of Vancouver as required in the Amendment to Agreed Order No. DE 07-TC-S DE3938. Applicable SEPA regulations state that a SEPA determination shall be issued for a MTCA Interim Action (WAC 197-11-268). This environmental review complies with that requirement.

Under the current proposed Interim Action, soil vapor extraction (SVE) will be employed in the vadose zone (soil between the surface and the water table—approx 25 feet thick). Enhanced bioremediation (EBR) will be employed in the saturated zone (actual aquifer) to a total depth of approximately 50 feet below the ground surface. SVE uses an array of wells and a vacuum pump to withdraw soil gas and transport it to an activated carbon absorber for removal contaminant vapors. EBR involves injections of modified vegetable oil into the aquifer via multiple borings in a grid pattern. The oil creates a subsurface environment mostly devoid of dissolved oxygen, making it more conducive to *an*aerobic biological degradation of chlorinated solvents—primarily perchloroethylene, trichloroethylene, and dichloroethylene for this site. Most naturally occurring *aer*obic bacteria are ineffective in degrading these contaminants.

Potential minor negative effects on soil constituents (solubility shifts, etc.) were not found to be present to any significant degree in the area currently being treated by the existing (2008) Interim Action which used the same process on a smaller (half-acre) area, and therefore are not expected to be problematic in the expanded area of the new (2011) Interim Action. A potential minor negative effect of oil injection at this location is migration of the oil to the nearby Columbia River via groundwater transport. The Interim Action guards against such an impact by having a buffer zone (no oil injections) along the river.

Proponent:
NuStar Energy LP, the corporate parent of the subsidiary company that operates the facility (NuStar Terminals Services, Inc. or NTS). NTS had been named the *Potentially Liable Person* for this site (Ecology Facility Site ID#: 1026; Site Name: NuStar Energy LP).

Location of proposal, including street address, if any: 2565 NW Harborside Drive, Vancouver, WA 98660-1080

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 the lead agency. This information is available to the public on request.

☐ 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.

X 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 May 10, 2011.

Responsible official: Rebecca S. Lawson, P.E., LHG
Position/title: Section Manager, Toxics Cleanup Program/Southwest Regional Office **Phone:** (360) 407-6241
Washington Department of Ecology
Address: P.O. Box 47775, Olympia, WA 98504

Date: 3/31/2011 **Signature:** Rebecca S. Lawson

2011 Interim Action SEPA Checklist
NuStar Terminal Services, Inc.
Vancouver Main Terminal
Vancouver, Washington

March 30, 2011
1126-09

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A. BACKGROUND

1. Name of proposed project, if applicable:

2011 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 – Environmental Coordinator
NuStar Energy L.P.
2330 North Loop 1604 West
San Antonio, Texas 78248

Contact Person
Herb Clough, P.E.
Ash Creek Associates, Inc.
3015 SW First Avenue
Portland, Oregon 97201

4. Date checklist prepared:

November 1, 2010

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 one month to install. It is anticipated that the interim action will be implemented during the second quarter of 2011.

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

There are no present plans for future actions related specifically to this proposal, which is in accordance with an Agreed Order amendment requiring an interim action at this time and location. Any future actions would likely be related to a final Cleanup Action Plan developed by the Washington Department of Ecology under a new, separate Agreed Order.

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 design:

- Ash Creek Associates, 2006. Interim Action Analysis Report, ST Services, Vancouver, Washington. November 28, 2006.
- Ash Creek Associates, 2007. Release Area Interim Action Design, ST Services, Vancouver, Washington. May 28, 2007.
- 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 Associates, 2009c. Semi-Annual Groundwater Monitoring Report, July through December 2008, NuStar Terminals Services Vancouver Facility, Vancouver, Washington. February 12, 2009.
- Ash Creek, 2010b. Feasibility Study, NuStar Terminals Services, Inc., Vancouver Main Terminal, Vancouver, Washington (DRAFT). January 14, 2010.
- Ash Creek, 2010c. Draft Interim Action Performance Evaluation, NuStar Vancouver Facility, Vancouver, Washington. November 30, 2010.
- Ash Creek, 2011. Draft Interim Action Work Plan, NuStar Vancouver Facility, Vancouver Washington. November 30, 2010.

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 applicant is not aware of pending approvals for any other projects directly affecting the property involved in this application.

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

- Port of Vancouver – construction approval
- Washington State Department of Ecology – Approval of 2011 Interim Action Work Plan
- Bioremediation injection borings will be registered using the Washington Department of Ecology Underground Injection Control (UIC) online registration program. Permits are not required.
- Washington Department of Ecology - Notice of Intent (NOI) forms for installation of SVE wells.

Because the remedial 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 proposed 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 interim remedial action for the release area is enhanced bioremediation and soil vapor extraction (SVE). Both the SVE system and the bioremediation substrate would be installed/injected in the vicinity of the primary chlorinated ethene release area. The proposed SVE installation area encompasses an approximately 0.35-acre area in the south-central portion of the facility. The groundwater injection area encompasses approximately 2.3 acres in the south-central portion of the facility.

SVE System. The expanded SVE system will consist of the following elements:

- A total of 17 new vapor extraction well locations;
- Well spacing of 30 feet;
- Well screen extending from 5 to 25 feet below grade;
- Piping (below grade) to connect each well head to a blower;
- A Rotron EN909 blower (maximum flow of 600 cubic feet per minute [cfm], and a vacuum of about 50 inches of water at 450 cfm); and
- A vapor treatment system utilizing activated carbon.

The existing blower (2008 interim action) is suitable for operating both the existing and expanded SVE system, although operation would be conducted on a rotating basis with only a portion of the branches operating at any one time. However, the under-rail crossing for the piping is at capacity, so two blowers will be used, one on each side of the railroad. Because eight of the 10 well branches are on the south side of the tracks, the existing blower will be relocated to the south side of the tracks and connected to those eight branches. A new, lower-capacity blower will be installed north of the railroad tracks for the existing branches in that area.

Enhanced Bioremediation. Enhanced bioremediation will be conducted by installing up to 155 temporary injection points and injecting a substrate selected to enhance natural *in situ* degradation (reductive dechlorination). The layout of the proposed injection points is shown on Figure 4. The selected substrate is an emulsified oil substrate manufactured by EOS® Remediation, Inc. that consists of a blend of fast- and slow-release electron donors in a micro-emulsion form. EOS® is an emulsified product that includes easily biodegradable substrate (e.g., sodium lactate) and slowly degradable substrates (e.g., edible oil). The initial targeted injection rate is 10 to 20 gallons per minute and may be adjusted based on factors such as pressure losses through the piping, hydraulic conductivity of the soil, etc.

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 the layout of the SVE system.
- 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 small 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 600 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)?

The site is relatively flat with a very gentle gradient downward to the south. 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?

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 borings near the river encountered concrete or woody debris in the upper 20 feet of the sand layer. A gravelly sand is present in this upper sand unit in the central portion of the facility (above the water table), thinning to the northeast and becoming more silty to the southeast. As depth increases in the medium-grained sand unit, the percentage of sand tends to decrease and thin silt layers appear with increasing frequency. The silt lenses are observed at shallower depths as distance from the river increases.

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

No.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

No fill is required for this project. Small-diameter holes installed for the injection of the bioremediation substrate will be sealed with a cement 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 proposed 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, the nearest storm water catch basins will be surrounded with bio-bag filters.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and 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 SVE well and temporary injection point installations. Additional greenhouse gases will be emitted from staff travel to and from the facility in gasoline-powered vehicles as well as for electricity to operate the SVE system at the facility. 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 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.

Vapors being extracted from the SVE wells will be forwarded to an activated carbon treatment unit and minimal, if any, emissions are anticipated once the project is operational. Carbon treatment will not be installed on the new, lower-capacity blower to be installed at the existing treatment system. Based on recent monitoring, concentrations of emissions at potential exposure points are estimated to be within acceptable risk-based levels for industrial receptors.

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. In order to reduce electricity use for operation of the SVE system, it may be possible to pulse the system, rather than run it continuously. This will depend on air monitoring results that will be collected once the system has been operating for several months.

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.

Vancouver Lake is located approximately 2.5 miles from the project site and the Columbia River is located adjacent to the southern extent of the project site (Figure 3). 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).

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 SVE well is located approximately 40 feet from the Columbia River; however, this cleanup action will primarily affect the subsurface vadose zone. The nearest proposed biosubstrate injection into site groundwater is located approximately 125 feet from the Columbia River. The SVE system layout is provided on Figure 3; the bioinjection locations are shown on Figure 4.

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.

No.

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.

b. Groundwater:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No groundwater will be withdrawn at the site. Dechlorinated municipal water will be used to dilute the bioremediation injection oil prior to injection. Approximately 90 to 95 percent of the total fluid

volume will be comprised of dechlorinated municipal water. The total solution volume will be approximately 147,000 gallons.

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 aquifer at the site has not been observed at the maximum depth explored of 130 feet below bgs, but is anticipated to be located between approximately 140 and 200 feet bgs based on observations in the vicinity of the facility. 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.

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

Wet soil and water plants—None
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.

5. Animals

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

The following responses (in quotations) are excerpted from CH2M-Hill (2006).

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 Valero 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. The project does not have any in-water work associated with it; therefore, no impacts to fish are expected.

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

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:

The project would be located on an existing disturbed industrial developed area in the Port of Vancouver. Therefore, the construction and operation of the project would not modify suitable wildlife habitat nor impact wildlife species.

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.

Electricity will be used to operate the SVE treatment system. 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?

The SVE blower motor has been sized appropriately for the intended use, thereby limiting power usage to what is necessary for treatment of the unsaturated zone. The operational plan of alternating the areas of soil-gas extraction to allow rebound and maximize system performance is also an energy conservation practice.

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.

This project is a remediation system to address chemicals in soil and groundwater that may pose a risk to human health. The soil containing chemicals is located at depth and it is not anticipated that workers will be exposed to the chemicals. However, it is possible that the soil exposed while trenching could contain chlorinated solvents.

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 protocols for air monitoring to check for potential exposures. Workers at the site during earthwork activities will be trained in accordance with OSHA 1910.120, and controls will be ready to implement if needed based on air monitoring. In order of preference, controls will consist of engineering controls (e.g., fans to provide ventilation) followed by respirators.

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.

Noise sources during construction (short-term) will consist of excavators, trucks, compactors, and drilling rigs. These sources have typical noise levels in the range of 100 to 120 dB immediately adjacent to the equipment. During operation (long-term), the vapor extraction blower will operate continuously. The noise level near the fan is typically in the range of 110 dB.

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 or blower are required to wear noise protection consisting of ear plugs or ear muffs. The blower will have a noise-reducing housing.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?

The operations at this facility are associated with the storage and transfer of a variety of liquid chemicals. The current bulk liquid storage is 327,893 bbls (13,771,506 gals). Tank capacities range from 119 bbl (5000 gals) to 103,527 bbls (4,348,134 gals). Liquid products are distributed through 5 truck loading racks and three railcar loading racks. Bulk solids are no longer stored or handled by the terminal.

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

b. Has the site been used for agriculture? If so, describe.

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 proposed 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 proposed project area is *Industrial*.

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

The project area is not located within the shoreline master program designation.

h. Has any part of the site been classified as an "environmentally sensitive" area? 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?

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 proposed 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.

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. The project will include equipment mounted to a concrete pad. The equipment will not exceed 10 feet in height, with the exception of the blower discharge pipe, which may be taller.

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 proposed 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 places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

A cultural resources file and literature review was conducted by CH2M-Hill to complete the SEPA checklist for an adjacent construction project (CH2M-Hill, 2006). The review was conducted to determine the number and nature of previously documented archaeological sites and historic properties within a 1-mile radius. The literature review was conducted at the Washington Department of Archaeology and Historic Preservation (DAHP). The research indicated that three archaeological sites have been documented in the project vicinity. The three sites are located outside of the project footprint and are located off the facility.

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.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

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

There are no known historic, cultural, or archaeological sites; therefore, no measures are needed.

14. Transportation

a. Identify public streets and highways serving the site, 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 site currently served by public transit? 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 1 (Fruit Valley), which originates at the 7th Street Transit Center (located south of the project site in downtown Vancouver on 7th Street between Washington Street and Main Street) does provide service near the intersection of SR 501 and 4th Plain Boulevard

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 roads or streets, or improvements to existing roads or streets, 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.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None. A monthly operations and maintenance visit would be conducted to service the SVE equipment and collect any needed monitoring data.

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

There will be no transportation impacts; therefore, no measures are needed.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, 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

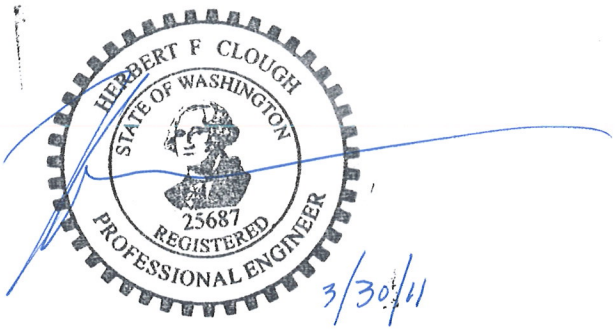
b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No additional utility connections will be needed. The SVE system would use electrical power supplied by the current service provided at the facility. There are no general construction activities on the site or in the immediate vicinity of the site which might be needed.

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:



Herbert F. Clough, P.E.
Principal Engineer, Ash Creek Associates

Date Submitted: 3/30/11

ATTACHMENTS

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.

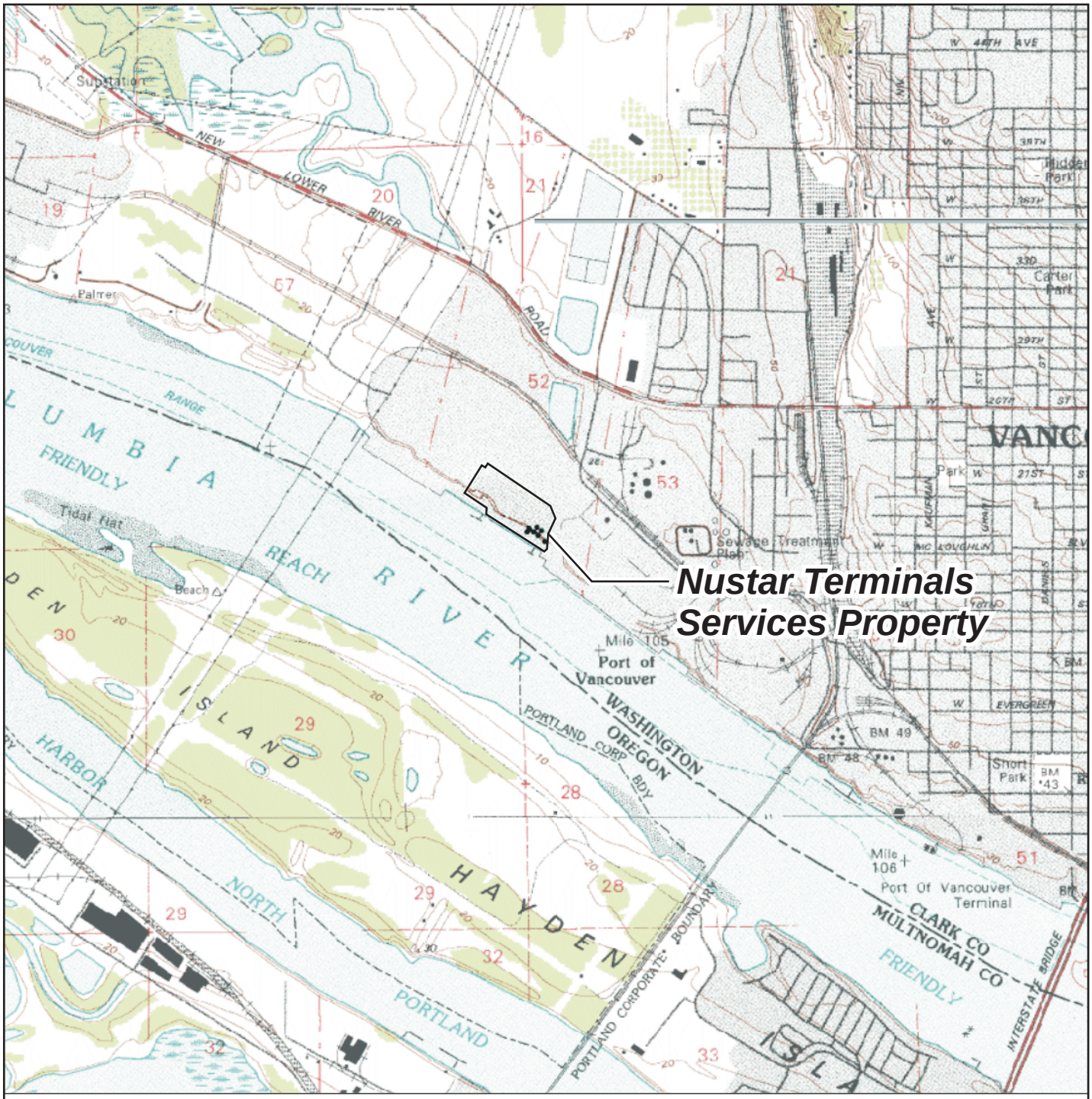
Figures:

Figure 1 – Facility Location Map
Figure 2 – Facility Site Plan
Figure 3 – Vapor Extraction Plan
Figure 4 – Layout of the Injection Points for the Bioremediation System

Appendix A:

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

Figures



NOTES: 1) Base map prepared from USGS 7.5-minute quadrangles as provided by Topozone.
2) Property defined based on 2006 leasehold boundary.

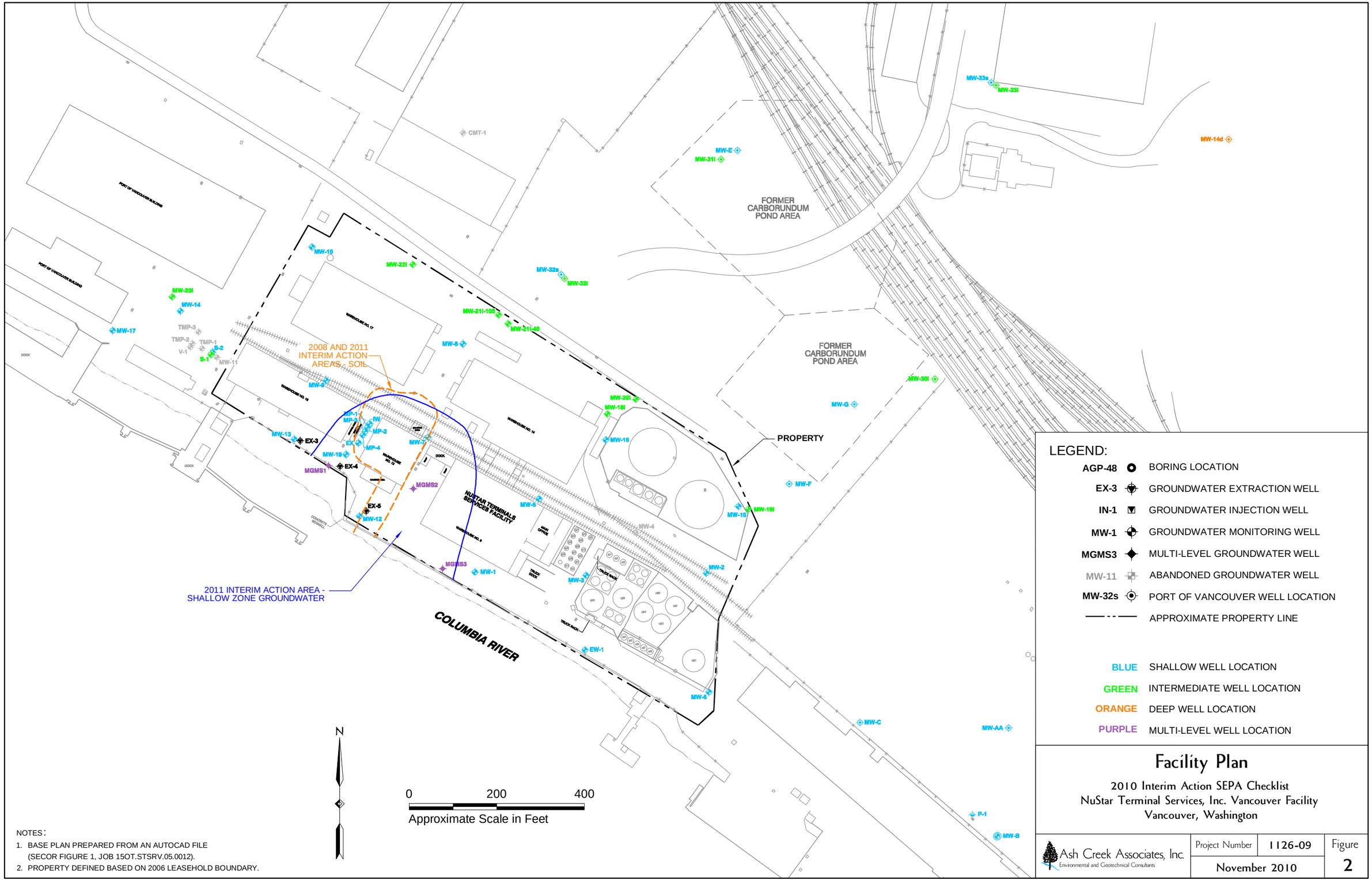
0 2000 4000
Scale in Feet

N

Facility Location Map

2010 Interim Action SEPA Checklist
NuStar Terminal Services, Inc. Vancouver Facility
Vancouver, Washington

Ash Creek Associates, Inc. Environmental and Geotechnical Consultants	Project Number 1126-09	Figure 1
	November 2010	



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.

LEGEND:

AGP-48	●	BORING LOCATION
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 Plan

2010 Interim Action SEPA Checklist
NuStar Terminal Services, Inc. Vancouver Facility
Vancouver, Washington

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number	1126-09	Figure
November 2010		2

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.

LEGEND:

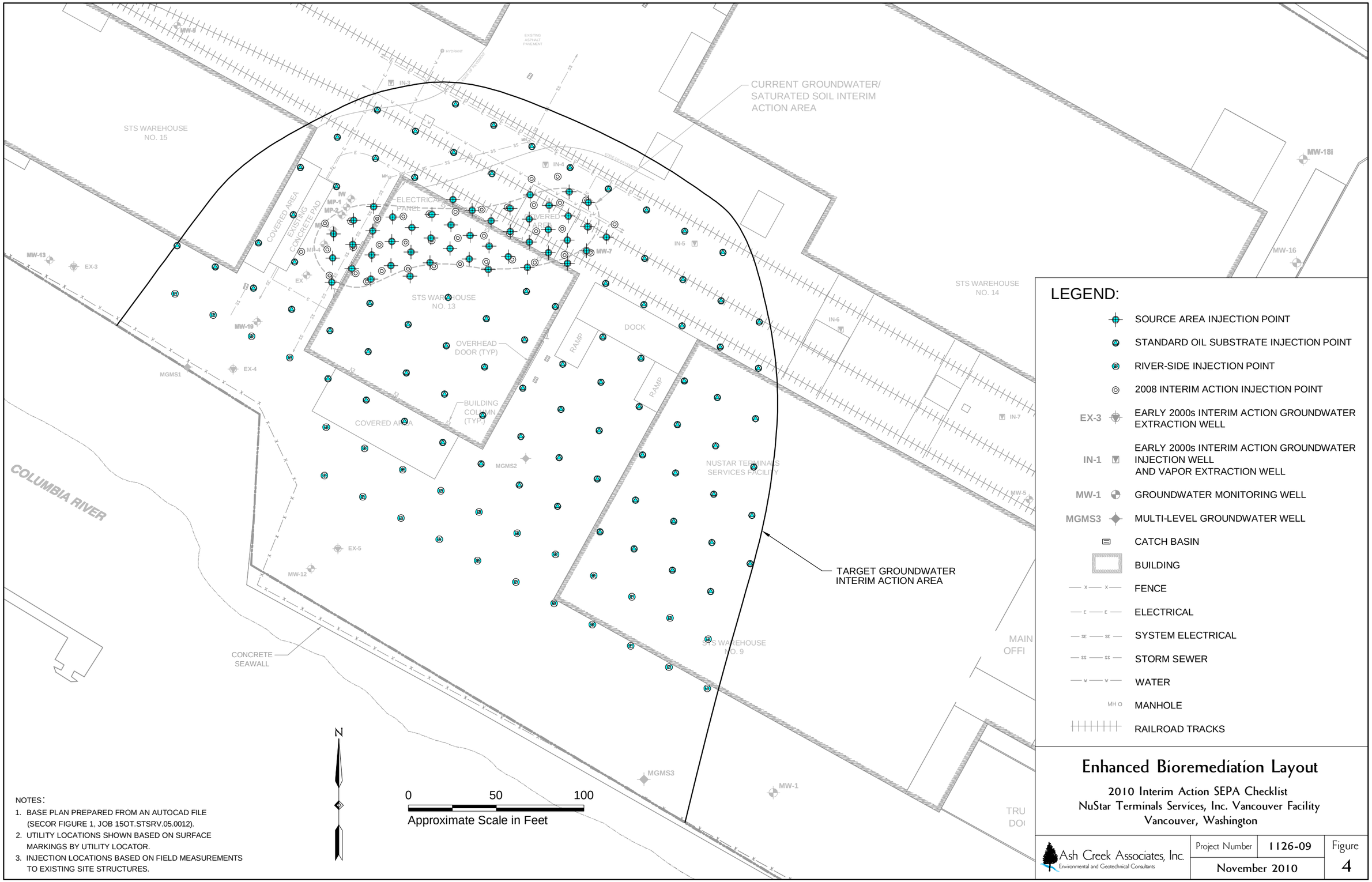
- VE-1-2 — 2008 INTERIM ACTION VAPOR EXTRACTION WELL LOCATION
- VAPOR EXTRACTION WELL (2000-2005)
- EX-3 — EARLY 2000s INTERIM ACTION GROUNDWATER EXTRACTION WELL
- IN-1 — EARLY 2000s INTERIM ACTION GROUNDWATER INJECTION WELL AND VAPOR EXTRACTION WELL
- MW-1 — GROUNDWATER MONITORING WELL
- MGMS3 — MULTI-LEVEL GROUNDWATER WELL
- CATCH BASIN
- BUILDING
- FENCE
- ELECTRICAL
- SYSTEM ELECTRICAL
- STORM SEWER
- WATER
- MH — MANHOLE
- RAILROAD TRACKS
- EXISTING UNDERGROUND SOIL VAPOR EXTRACTION (SVE) PIPING AND DIAMETER
- VE-1-2 — PROPOSED 2010 EXPANDED INTERIM ACTION WELL LOCATION AND VAULT
- 4" — NEW UNDERGROUND SVE PIPING AND DIAMETER
- 8" — NEW ABOVE-GROUND SVE PIPING AND DIAMETER

SVE System Layout

2010 Interim Action SEPA Checklist
NuStar Terminal Services, Inc. Vancouver Facility
Vancouver, Washington

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number	1126-09	Figure
November 2010		3



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.

LEGEND:

- SOURCE AREA INJECTION POINT
- STANDARD OIL SUBSTRATE INJECTION POINT
- RIVER-SIDE 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
- MH — MANHOLE
- RAILROAD TRACKS

Enhanced Bioremediation Layout

2010 Interim Action SEPA Checklist
NuStar Terminals Services, Inc. Vancouver Facility
Vancouver, Washington

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number	1126-09	Figure
November 2010		4

Appendix A

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

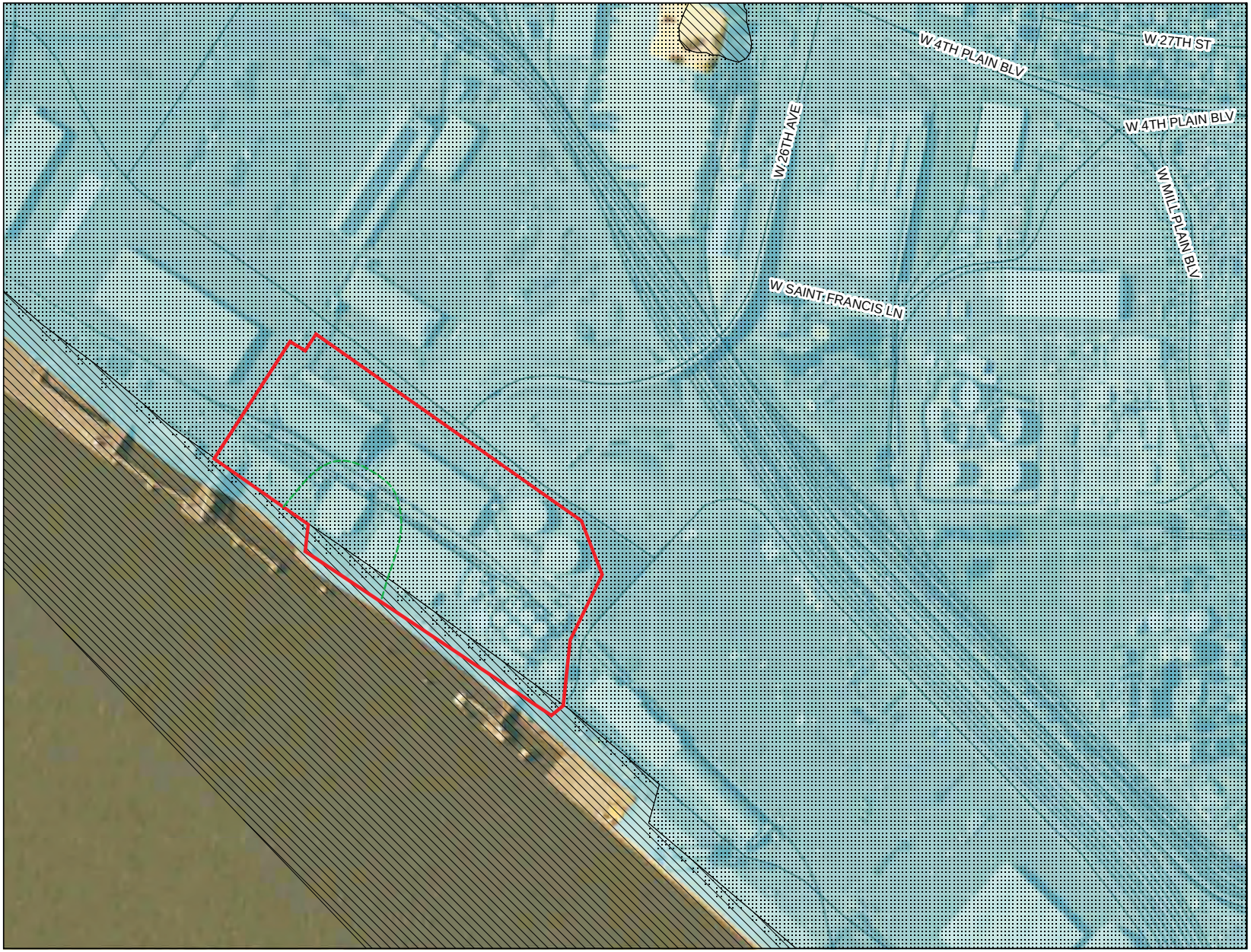


Figure 3

Designated Critical Areas: Geologic Hazards

Main Terminal

Support Terminals Operating Partnership, L.P., dba

Valero LP Vancouver

LEGEND

- Railroads
- Streets
- Approximate Property Line
- 2011 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.

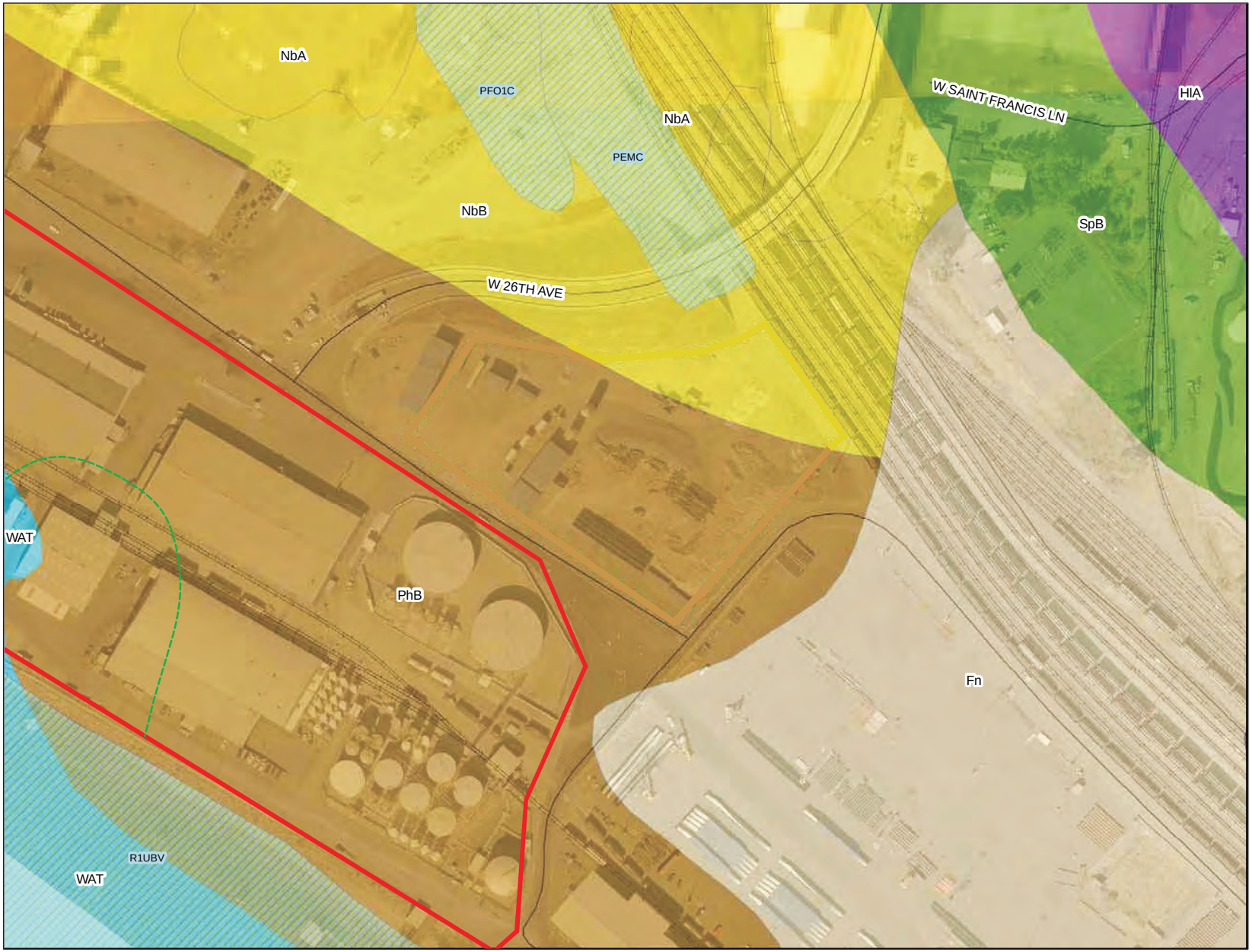


Figure 4

Designated Critical Areas: Wetlands

Main Terminal

Support Terminals Operating Partnership, L.P., dba

Valero LP Vancouver

LEGEND

- Streets
- Railroads
- County Wetlands
- Approximate Property Line
- 2011 Interim Action Area

NWI Wetlands, 1993

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

Soils

- HlA, 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
- 2011 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
- 2011 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.