Environmental Checklist

Implementation of Cleanup Action Plan (CAP) at the Port of Seattle Terminal 30 Cleanup Site

A. BACKGROUND

1. Name of proposed project, if applicable:

Implementation of Cleanup Action Plan (CAP) at the Port of Seattle Terminal 30 (T30) Cleanup Site

2. Name of applicant:

Port of Seattle

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

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4. Date checklist prepared:

December, 2015

5. Agency requesting checklist:

Washington State Department of Ecology (Ecology)

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

In 1991, Ecology, and the Port of Seattle (Port), entered into a legal agreement in the form of an Agreed Order (AO). This AO specified that the Port shall prepare and submit a final remedial investigation and feasibility study (RI/FS) for the site. A 2013 RI/FS was prepared to update the status of petroleum contamination at the site and to identify a final, preferred remedial action. The requirements under the 1991 Agreed Order were completed to Ecology's satisfaction in 2013.

An amendment to the AO requires the Port to prepare a draft Cleanup Action Plan (CAP) and an Environmental Checklist in accordance with the State Environmental Policy Act (SEPA) process. The checklist is essential in determining the environmental impacts anticipated from the CAP proposed for the site. This document is the SEPA checklist.

Ecology conducted a 30-day public comment period for the CAP and RI/FS in the second quarter of 2015. Final design and cleanup will commence once the final CAP is approved under a new Consent Decree (CAP CD). This schedule anticipates the design and construction of the cleanup system will occur during the 2018 to 2019 timeframe. Ongoing operation of the below ground systems will occur over 10 years in conjunction with long term monitoring.

Cleanup Action Task	Estimated Completion Date
Public Review of Draft CAP and CD	Q2 2015 (actual)
Finalize CAP	Q2 2016
Finalize Consent Decree (CAP CD)	6 months from CAP finalization
Draft and Finalize Engineering Design Report	18 months from CAP CD effective date
Cleanup Action Construction	2018-2019
Operation -AS/SVE and LNAPL recovery	2018-2028
Monitoring	30 years from construction completion

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

The Port will maintain the project area in a manner consistent with the terms of the CAP CD following implementation of the cleanup remedy. The site is currently operated as an active marine cargo facility, a use that is not expected to change in the future. As an active terminal, the site is currently paved and fenced and access is restricted to industrial adults with appropriate identification and clearance. The Port will coordinate with Ecology as required by the restrictive environmental covenant so that the site remains protective of human health and the environment.

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

The following documents are related to this proposal:

- Ecology, 1991. In the Matter of Remedial Action by: Port of Seattle Agreed Order: Terminal 30. Effective Date: August 30, 1991.
- GeoEngineers, Inc., 1998. Terminal 30 Final Report Remedial Investigation/ Feasibility Study. Prepared for the Port of Seattle. December.
- Ecology, 2013. First Amendment to Agreed Order: Terminal 30. Port of Seattle. Effective Date: October 23, 2013.
- Pacific Groundwater Group, 2013. Terminal 30 Remedial Investigation / Feasibility Study. November 2013.
- WA Department of Ecology, 2015. Cleanup Action Plan, Port of Seattle Terminal 30. December 15, 2015.

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 CAP received public comment and review in Q2 2015 with final CAP anticipated in 2016 Q2. The CAP will direct the work to meet CAP CD remedial requirements.

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

Remedial actions at a facility under an AO are exempt from state and local government permits or approvals for the remedial actions. Ecology ensures substantive compliance with requirements of state and local authorization and permits.

11. Give 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 Port of Seattle is proposing a cleanup action for the T30 site (Figure 1) to fulfill requirements of Ecology's proposed CAP and subsequent CAP CD. The Ecology-preferred cleanup action plan and is described in the CAP, which was prepared by the Port with Ecology review.

The selected alternative described in the CAP focuses on approximately 7 acres in the northern portion of the larger 33.9 acre Terminal 30 property. Cleanup actions at the T30 site will include construction and operation of an air sparging/soil vapor extraction (AS/SVE) treatment system, a non-aqueous phase liquid (LNAPL) product recovery system, long-term compliance monitoring, and institutional controls (Figure 2).

The AS/SVE system injects pressurized air into contaminated groundwater enabling the soluble hydrocarbons to transition from a water-dissolved phase to a vapor phase in the injected bubbles. The injected air and contaminated vapor is extracted from the subsurface through vacuum pipes installed in soil above the water table that transport the vapors to a treatment system above ground. The AS/SVE system's primary purpose is to reduce the concentrations of contaminants in groundwater to below state cleanup levels. AS/SVE is most effective on lighter petroleum mixtures such as gasoline. The AS/SVE system will consist of approximately 20 sparge wells, three soil vapor extraction trenches, one equipment shed, and trenching for utilities to connect the system components. The AS/SVE system will include two phases: phase 1 will include 14 wells to be activated upon system completion; phase 2 will consist of 6 additional air-sparge wells to be activated after completion of LNAPL recovery.

The LNAPL recovery system will include 10 new extraction wells. A vactor truck will apply a vacuum to these wells to recover total fluids (includes groundwater, dissolved petroleum in the groundwater, and free-phase LNAPL) from each extraction well. LNAPL recovery operations will continue at each recovery well (anticipated for about 5 to 10 years) until equilibrium LNAPL thicknesses measured in wells are 0.01-feet or less.

The compliance monitoring phase of the project will assess the effectiveness of remediation efforts. Specified wells will be monitored for an estimated 30 years after remediation efforts are completed. Any deviations from compliance will be documented and preventive actions implemented.

Institutional controls will prevent contact with subsurface soil and groundwater contamination by maintaining an asphalt pavement cover over the treatment area as a protective barrier and by establishing procedures that prevent exposure below the asphalt cap without appropriate health and safety procedures and Ecology notification.

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.

Terminal 30 is located at 2715 E Marginal Way South, Seattle, Washington 98134. It is located on the East Waterway that drains directly to Elliot Bay and the Puget Sound. The approximate latitude and longitude of the site is 47.579 by -122.34013. The Township /Range/Section is 24N/4E/7 respectively

(Figure 1). T30 is bordered on the north by an area of public shoreline access to the East Waterway, on the east by East Marginal Way South, on the south by the southern portion of T30, and on the west by the East Waterway. The East Waterway is an operable unit of the Harbor Island Superfund Site as ordered by the U.S. Environmental Protection Agency (EPA).

The 2013 RI/FS and this CAP focus on approximately 7 acres in the northern portion of the larger 33.9 acre T30 property. The term "T30 site" or "site" refers to the extent of petroleum contamination in the northern portion of T30, inclusive of light non-aqueous phase liquid (LNAPL), soil, and groundwater contamination (Figure 2).

B. ENVIRONMENTAL ELEMENTS

1) Earth

a) General description of the site (circle one): (Flat), rolling, hilly, steep slopes, mountainous, other…..

The site is generally flat and entirely paved by asphalt.

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

The entire site is comprised of impervious surface with very little elevation change. The maximum slope at the site stays within the range of 2% to 5%. The elevation change from the east edge of the property to the west edge does not exceed +/-7 feet.

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 prime farmland.

Studies undertaken by the Port at T30 in general have identified several geologic units. Most of T30 is covered with undifferentiated fine-grained fill material designated as the "Shallow Sand Unit" that overlies native glacial sediment. The fill material layer extends to depths of 15- to 20-feet below ground surface in the cleanup vicinity. The fill material was taken from upland sources as well as dredging material from the construction of Harbor Island in the Lower Duwamish Waterway. Groundwater levels at the site generally range from 8- to 9-feet below ground surface.

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.

An air sparging/soil vapor extraction (AS/SVE) treatment system will be installed to reduce contaminant mass in the subsurface soil and groundwater. The air sparging well network will include 20, 2-inch diameter sparge wells, installed to a depth of approximately 25 feet below ground surface. Well screens will be installed in the lower 2 feet of the sparge wells.

Soil vapor extraction trenches will be constructed by placing a horizontal PVC pipe running below ground surface in trenches parallel to air sparging well alignments. A narrow, shallow trench for electric utilities and air-supply and vapor return piping will connect the AS/SVE system to an equipment shed.

The LNAPL recovery system will consist of 10 new extraction wells, each of which will be approximately 15-feet deep. New recovery wells will be constructed of 4-inch diameter Schedule 40 PVC in a 12-inch borehole.

AS/SVE system well installation will produce approximately 15 cubic yards of soil cuttings. These cuttings will be profiled for soil disposal and sent off-site to an appropriate and Ecology-approved disposal facility, likely a Subtitle D landfill. The wells will be decommissioned as per Washington State regulations (Washington Administrative Code [WAC] 173-160) when they are no longer needed for remediation.

Approximately 1,100 lineal feet of trenching is expected for utility placement and the SVE trenches, each about 5 feet deep. In total, an estimated 550 cy of material will be excavated for the utility and SVE trenches. All excavated materials will be evaluated as to their presence of contamination and geotechnical suitability. Based on this evaluation, material will either be disposed of offsite at an appropriate and Ecology-approved disposal facility, or re-used as fill to cover the utility and pipes. Native fill material purchased from sand and gravel vendors from offsite sources may be required to backfill utility trenches and SVE trenches to replace any contaminated soils encountered during excavation.

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

The site is located in an urban environment; the erosion hazard is slight before and after construction because all areas to be affected by this cleanup action are currently and will be covered with impervious surfaces. Construction associated with planned cleanup could have erosion impacts on soils exposed during construction and temporary soil stockpiles needed during construction. Some migration of sediment could occur over short distances within the work area in rainy conditions.

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

The entirety of the cleanup site is now covered with asphalt. An asphalt surface will be reapplied over the trenches after installation.

a) **Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**

During construction, temporary erosion and sediment control measures and Best Management Plans (BMPs) meeting the substantive requirements of the City of Seattle stormwater control and grading regulations and the Construction General National Pollutant Discharge Elimination System (NPDES) permit will be implemented as necessary to control erosion. Any exposed soils will be within an excavated area, below grade, and unlikely to cause off-site sediment transport. Any stockpiled materials from the project will be contained or covered using appropriate erosion control BMPs.

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.**

Air emissions are expected from the following sources: emissions from construction equipment, fugitive dust during trenching and filling, and VOC-impacted vapor from air sparging (AS) and soil vapor extraction (SVE) process.

Air sparging increases the rate of volatilization and potential for migration of VOC-impacted vapor to human and/or ecological receptors at potential levels of concern. Exhaust vapors from the AS/SVE system will require treatment prior to discharge because of elevated volatiles. The system will be equipped with emissions control equipment (thermal oxidizer or activated carbon adsorption).

During the three months of construction, approximately 150 diesel truck trips are expected for deliveries and removal of trenching material. A truck-mounted drill rig will install the 30 wells for LNAPL and air sparging system over approximately 10 days. A diesel-powered backhoe will construct the utility and SVE trenches.

During the operation of the AS/SVE system, support vehicles transporting field operators and monitoring technicians will visit the site on an average of 10- to 12-times a year. These visits will decline over time as the product mass is reduced according to schedule in the CAP.

LNAPL will be recovered from the wells by vacuum-truck total fluid recovery. Vacuum enhanced recovery will be conducted for approximately 1- to 2-hours at each well event. Each recovery event will last 12- to 24-hours. Well recovery events are scheduled bi-monthly for the first five years of operation, reducing to quarterly and then semi-annually over the remaining 5 years of vacuum enhanced recovery.

Air emissions could result from exposure related to future site development activities. However, there are currently no plans for the property after the paving is completed and no way to estimate what air emissions may be associated with future use of the property.

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:

Fugitive dust will be controlled using best management practices such as spraying exposed soil and storage areas with water during dry periods and/or covering exposed earth stockpiles and loads of excavated material being transported from the site.

Vehicular emissions associated with construction are anticipated to be short-term in nature. Measures to minimize vehicular emissions would be implemented as required and may include:

- Requiring contractors to use best available control technologies.
- Proper vehicle maintenance.
- Minimizing vehicle and equipment idling.

Measures will be taken to minimize emissions and worker exposure to contaminated soil and vapors exposed during construction and remediation. A Health and Safety Plan (HASP) developed for the project will address potential worker exposure to air emissions resulting from construction activities. The HASP will include a vapor monitoring component and all workers on the project will be required to adhere to the elements of the HASP to limit potential exposure to air emissions.

Pollution control devices will be installed to mitigate impacts from AS/SVE exhaust. Exhaust vapors from the SVE system will require treatment prior to discharge because of elevated volatiles. Initial pre-treatment vapor concentrations are likely to exceed 1,000 parts per million by volume (ppmV), above which thermal oxidation is generally the most cost-effective treatment technology. Thermal oxidation air treatment uses either a catalytic oxidizer or propane flame to combust

volatile laden exhaust vapors; thermal oxidizers typically achieve approximately 99% reduction in VOC concentrations. SVE exhaust vapor concentrations will be periodically monitored in the airstream before treatment to estimate mass loss from the SVE system. The system will be transitioned to carbon filtration as concentrations decrease to below 1,000 ppm. Exhaust treatment equipment will be specified in the engineering design report.

After construction, the cleanup area will be covered with impervious surfacing and institutional controls will be implemented to minimize exposure to workers or trespassers.

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.**

The East Waterway of the Duwamish River is directly to the west of the project location.

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.**

No overwater work is anticipated for this cleanup. No direct negative impacts are anticipated due to the minimal land disturbing activity and restriction of work to wells and shallow trenches protected by impervious surfaces after construction.

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.**

No fill or dredge material will be placed in or removed from surface waters or wetlands.

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.**

No

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.**

The proposal does not involve any discharges of waste materials to surface waters.

b) **Ground Water:**

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

Groundwater will be withdrawn during LNAPL total fluid recovery events. Total fluid extraction volumes are expected to average approximately 1,500-gallons per event with some variation depending on the saturation and porosity of the aquifer immediately around each recovery well, and time spent at each recovery well.

The project will not have water discharges to groundwater.

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.

c) **Water runoff (including stormwater):**

Remediation system installation and operation will not generate new surface water runoff. Stormwater and surface runoff on the site is managed by a permitted stormwater system.

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.**

Stormwater generated by precipitation during construction that contacts contaminated material will be collected and detained within the work area until tested and profiled for appropriate disposal. Incident precipitation and runoff on existing paved surfaces will be allowed to flow to the existing on-site permitted storm water system. Analytical testing performed on detained stormwater will be focused on sanitary discharge requirements or off-site disposal requirements. Other stormwater management controls include requirements to minimize or eliminate stormwater contact to exposed, potentially contaminated soils by:

1. covering stockpiles to protect from weather;
2. minimizing the footprint of the open work area;
3. protecting existing catch basin inlets; and
4. sweeping the ground surface in work areas to avoid migration of soils.

A construction Stormwater Pollution Prevention Plan/Temporary Erosion and Sedimentation Control Plan will be prepared that will detail the proposed plan for stormwater management, containment, and control; protection of catch basin inlets; and methods of covering soil stockpiles. Some stormwater falling into the excavated area may infiltrate into the ground.

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

No waste materials are anticipated to enter the ground or surface waters. Liquid contaminated material will be removed as a result of the cleanup process reducing the amount of contamination in groundwater at the site.

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

All excavated and fill areas will be covered with asphalt to prevent surface water or precipitation from coming in contact with any remaining contaminated soils. During construction, all stormwater from the construction site will be collected, routed, and treated in accordance with Ecology and City of Seattle requirements. Best management practices will be implemented during construction to minimize surface water, groundwater, and runoff water impacts. The proposed cleanup actions are designed to prevent and reduce contaminant mass in soil and groundwater.

Scientists at the University of Washington Climate Impacts Group project that sea level will rise in the Puget Sound region as a result of climate change. In a range of possible scenarios, the medium estimate is that the sea level will rise approximately six inches by 2050 (Ecology's August 19, 2010 news release "Ecology helps communities plan for rising sea level"). The post-cleanup monitoring

of groundwater was projected to continue for a period of 30 years, during which time the projected medium estimate of sea level rise would be less than 6 inches. Minimal changes in groundwater levels that might be associated with a 6-inch rise in water levels are not anticipated affect fuel product recovery or air sparging operations. The monitoring phase of the groundwater sampling program will monitor potential changes in the chemistry of groundwater and adaptively manage changes caused by unanticipated seawater rise.

4) Plants

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

No vegetation exists where the work will occur on the site.

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
____shrubs
____grass
____pasture
____crop or grain
____wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

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

No vegetation will be removed or altered.

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

No threatened or endangered plant species are known to occur on the T30 site.

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

None

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:

birds: (hawk, heron, eagle, songbirds,) other: osprey, geese, ducks
mammals: deer, bear, elk, beaver, other: raccoons
fish: bass, (salmon, trout, herring, shellfish,) other:

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

No threatened or endangered animal species are known to occur on the site. Elliott Bay is known to, or may, be used by federally listed animal species including the Georgia Basin/Puget Sound Distinct Population Segments (DPSs) of bocaccio rockfish (*Sebastes paucispinis*), canary rockfish (*S. pinniger*), and yelloweye rockfish (*S. Ruberrumis*); the Puget Sound Evolutionary Significant Unit (ESU) of Chinook salmon (*Oncorhynchus tshawytscha*); the Puget Sound DPS of steelhead

(*O. mykiss*); and the Coastal-Puget Sound DPS of bull trout (*Salvelinus confluentus*). No additional Washington State listed species are known to occur in Elliott Bay.

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

The site is within the Pacific Flyway, a major north-south route of travel for migratory birds in the Americas.

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

BMPs will be employed to prevent materials resulting from remedial activities from entering the East Waterway and Elliot Bay or being available to terrestrial 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.**

The site will require the use of electrical utilities already located on the site. These will drive the blower and pump system essential to the AS/SVE system. In addition to electricity usage, gasoline/diesel generators may be used at the site as a backup system. The site has a substantial electrical system in place for day to day operations at the Terminal.

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? List other proposed measures to reduce or control energy impacts, if any:**

None

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.**

The proposed CAP has been designed to protect human health and the environment from site-related contamination. The nature of this work, however, may expose workers to levels of toxic and carcinogenic vapor, soil, and groundwater during construction. Post-construction air sparging and soil venting include a vapor treatment system to degrade and remove harmful compounds from the extracted air. Exhaust vapors from the SVE system will require treatment prior to discharge because of elevated volatiles.

To address potential risks to workers, a HASP will be developed prior to and implemented during construction of the project. Public safety concerns have been considered during the development of the Draft CAP and safeguards are included as part of the project to minimize risks to the public. Access to and from the areas to be remediated will be controlled to limit the potential for the public to enter the site.

b) **Describe special emergency services that might be required.**

No special emergency services are required for the project.

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

The purpose of the project is the reduction of contaminant mass in soil and groundwater. The HASP for the project will be strictly followed throughout construction to minimize human and environmental exposure to contaminated soils and groundwater. Site access will be controlled to prevent public access and limit public safety concerns.

8) **Noise**

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

The noise generated at the site consists of industrial container transportation and cargo handling at Terminal 30, vessel traffic in the Duwamish Waterway and traffic noise from Alaskan Way and State Route 99. These activities will continue during construction and post-construction cleanup air sparging operations, and noise from these activities is not expected to affect the project.

b) **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 from worker vehicle traffic, support vehicle, and construction equipment including a backhoe for trenching and hollow stem auger for well drilling will occur during construction of the project. Such noise could increase the general drone from activity during construction. Noise generated by construction will be in compliance with the timing restrictions and the noise limits included in the Seattle noise regulations, Seattle Municipal Code [SMC] 25.08.

The AS/SVE will operate until groundwater monitoring meets the shutdown criteria. The air sparge compressor, soil vapor extraction blower, and exhaust gas treatment/filtering equipment will be housed in an on-site equipment shed near the wells. Noise generated from the system will be mitigated by the building enclosure. The system is expected to operate for 5 years beginning at construction completion.

LNAPL will be recovered from the wells by vacuum-truck total fluid recovery. Vacuum enhanced recovery will be conducted for approximately 1- to 2-hours at each well event. Each recovery event will last 12- to 24-hours. Well recovery events are scheduled bi-monthly for the first five years of operation, reducing to quarterly and then semi-annually over the remaining 5 years of vacuum enhanced recovery. Vacuum trucks are significant contributors to the noise environment. However, the activity will occur within an industrial, marine container cargo terminal.

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

Noise generated by construction and during operation of the system will comply with the timing restrictions and the noise limits included in the Seattle noise rule (SMC 25.08). These regulations limit hours of construction and place limits on noise levels from construction impacts and ongoing operations.

9) **Land and shoreline use**

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

The Site is a shipping container transfer and storage facility. Adjacent facilities, including T-25 and T-46, are also used for container and berthing activity for the Port.

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

The site has never been used for agriculture.

c) **Describe any structures on the site.**

Multiple structures exist on the entirety of T30; however, these structures will not be impacted by the remediation activities. The T30 Vessel Tower, used for daily crane operations at the Terminal is located adjacent to the site.

d) **Will any structures be demolished? If so, what?**

No structures will be demolished.

e) **What is the current zoning classification of the site?**

General Industrial 1 (IG1) - U/85

f) **What is the current comprehensive plan designation of the site?**

Industrial Area

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

The shoreline of the East Waterway is designated Urban Industrial.

h) **Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

The site itself has not been classified as an environmentally sensitive area. However, the adjacent East Waterway is a Superfund site as designated by the EPA.

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

No people would reside or work in the area under this proposal. Future development of the site may include as of yet unidentified industrial uses, parking, or light open storage of equipment. Future uses will be addressed under a separate SEPA process when those uses are identified.

j) **Approximately how many people would the completed project displace?**

None

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

None

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

The proposal will remediate an existing industrial area that will remain an industrial area after construction. Existing and projected land uses for the area are also industrial in nature. Therefore, the project is compatible with existing and projected land uses and plans.

10) Housing

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

None

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

None

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

None

11) **Aesthetics**

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

A small utility building less than 12 feet in height will be constructed to house monitoring equipment, compressors, and air quality equipment.

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

None

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

None

12) **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 from the project.

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:**

None

13) **Recreation**

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

Jack Perry Memorial Park is a 1.1 acre park located directly north of T30 and south of Terminal-46. The amenities include 120 feet of shoreline access, views of T30 and T-18 crane operations, views of the U.S. Coast Guard station, and parking facilities.

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

No recreational uses would be displaced from remediation activities.

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

None.

14) **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.**

Two sites of historical importance occur north of the site. The first site, known as the 'First Service Station Site' (Smithsonian #: 45KI00132), is nationally recognized as the first fuel filling station directly dispensing gasoline to motorists. The site is approximately on the North East side of T30, address: Holgate Street and Alaskan Way, and was built in 1907 for the Standard Oil Company (Chevron) and declared a historical building in 1970. No negative effects from the cleanup activities are expected at the historical station site.

The second site is characterized as the Pacific Maritime Institute (Historic name: California Ink Company) and sits on the North side of T30. Although it shows up on the Washington Department of Archaeology & Historic Preservation's database, the site carries an 'Unable to Determine' tag on its criteria to meet the requirements of a national historic property. The only reason it is noted in this document is because of its appearance on the WISAARD database. Regardless, no adverse effects are anticipated at the property due to cleanup activities.

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

None. Undifferentiated fine-grained fill material designated as the "Shallow Sand Unit" overlies native glacial sediment. The fill material layer extends to depths of 15 to 20 feet below ground surface in the cleanup vicinity. Excavations will stop at native soil level where pre-contact or ethno-historic archaeological materials could be encountered.

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

No measures are proposed to reduce or control impacts to cultural or historic resources.

15) 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 site is accessed via the Alaskan Way Viaduct and E Marginal Way S. S Stacy St. provides direct access to the site along with S Lander St. Because the entirety of T30 is paved for everyday operations of a functioning container terminal, direct access to the site is not an issue.

b) Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The site is not directly served by any public transportation system. The closest bus stop is found at the corner of 1st Avenue South and S Hanford St. From there, it is approximately a 0.3 mile walk to the site.

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

The project would neither create 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).

The proposal will not require any new roads, streets, or improvements to existing public roadways.

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.**

During the three months of construction, approximately 150 diesel truck trips are expected for deliveries and removal of trenching material. A truck mounted drill rig will bore the 24 wells for LNAPL and air sparging system for approximately 10 days. A diesel powered backhoe will construct the utility and SVE trenches.

During the operation of the AS/SVE system, one to two support pickup trucks and monitoring equipment trucks transporting field operators and monitoring technicians will visit the site on an average of 12 times a year over a period of up to 10 years. These visits will decline over time as the product mass is reduced according to schedule in the CAP.

The LNAPL will be recovered from the wells by vacuum-truck total fluid recovery. Vacuum enhanced recovery will be conducted for approximately 1 to 2 hours at each well event. Each recovery event will last 12- to 24-hours. Well recovery events are scheduled bi-monthly for the first five years of operation, reducing to quarterly and then semi-annularly over the remaining 5 years of vacuum enhanced recovery.

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

None. The number of vehicles from project actions is inconsequential to total vehicle traffic entering and exiting the site.

16) **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.

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

None.

17) **Utilities**

a) **Circle utilities currently available at the site:**

(electricity), (natural gas), (water), refuse service, (telephone), (sanitary sewer), septic system,

other _____

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 new utilities are proposed for the project. Existing utilities will be modified to supply power to utility shed to run compressors and blowers associated with AS/SVE system.

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: _____

Name of signee: Paul Meyer

Position and Agency/Organization: Port of Seattle, Manager, Environmental Permitting and Compliance

Date Submitted: -December 15, 2015

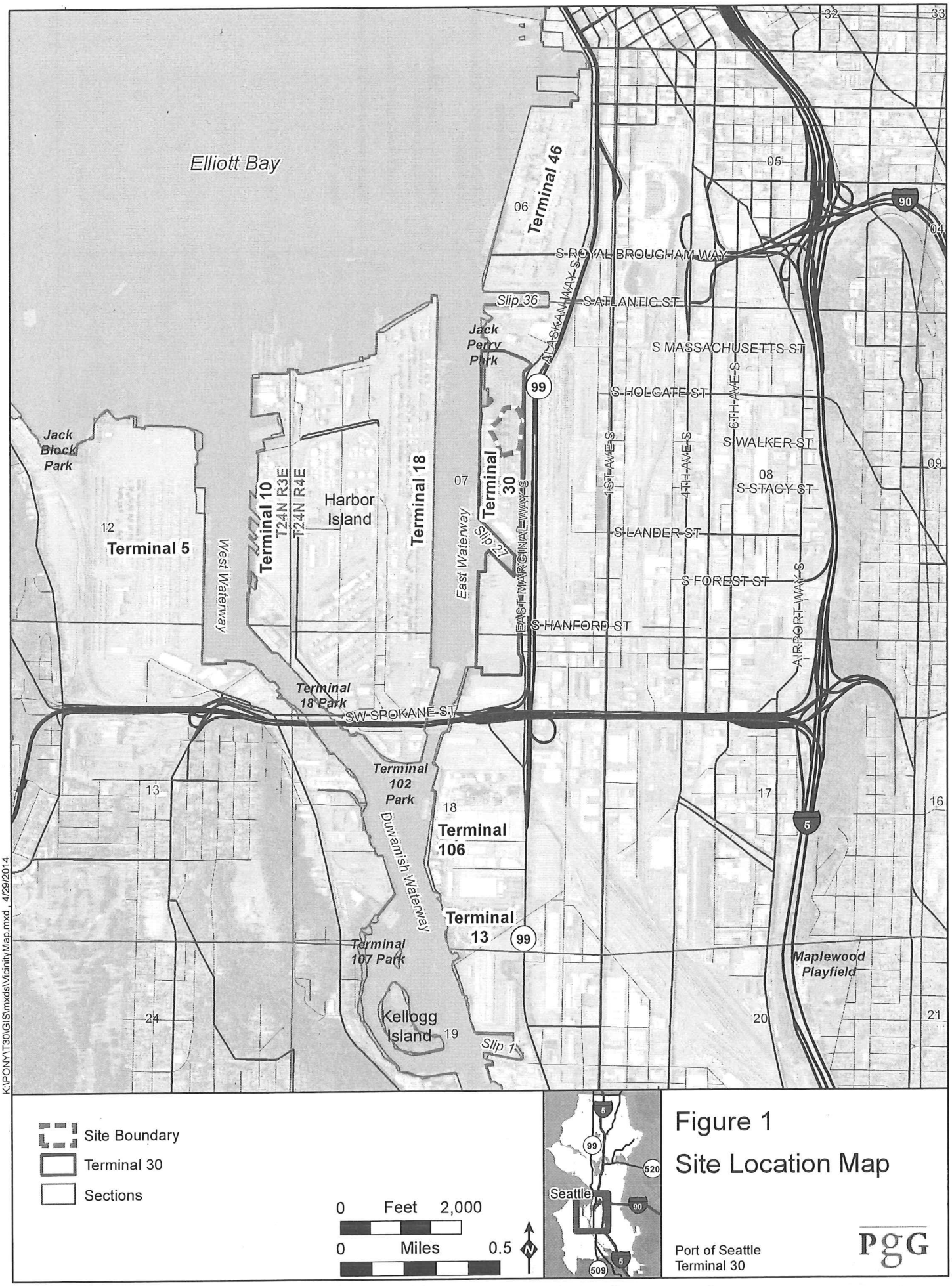

Figure 1
Site Location Map

Port of Seattle
Terminal 30

PgG

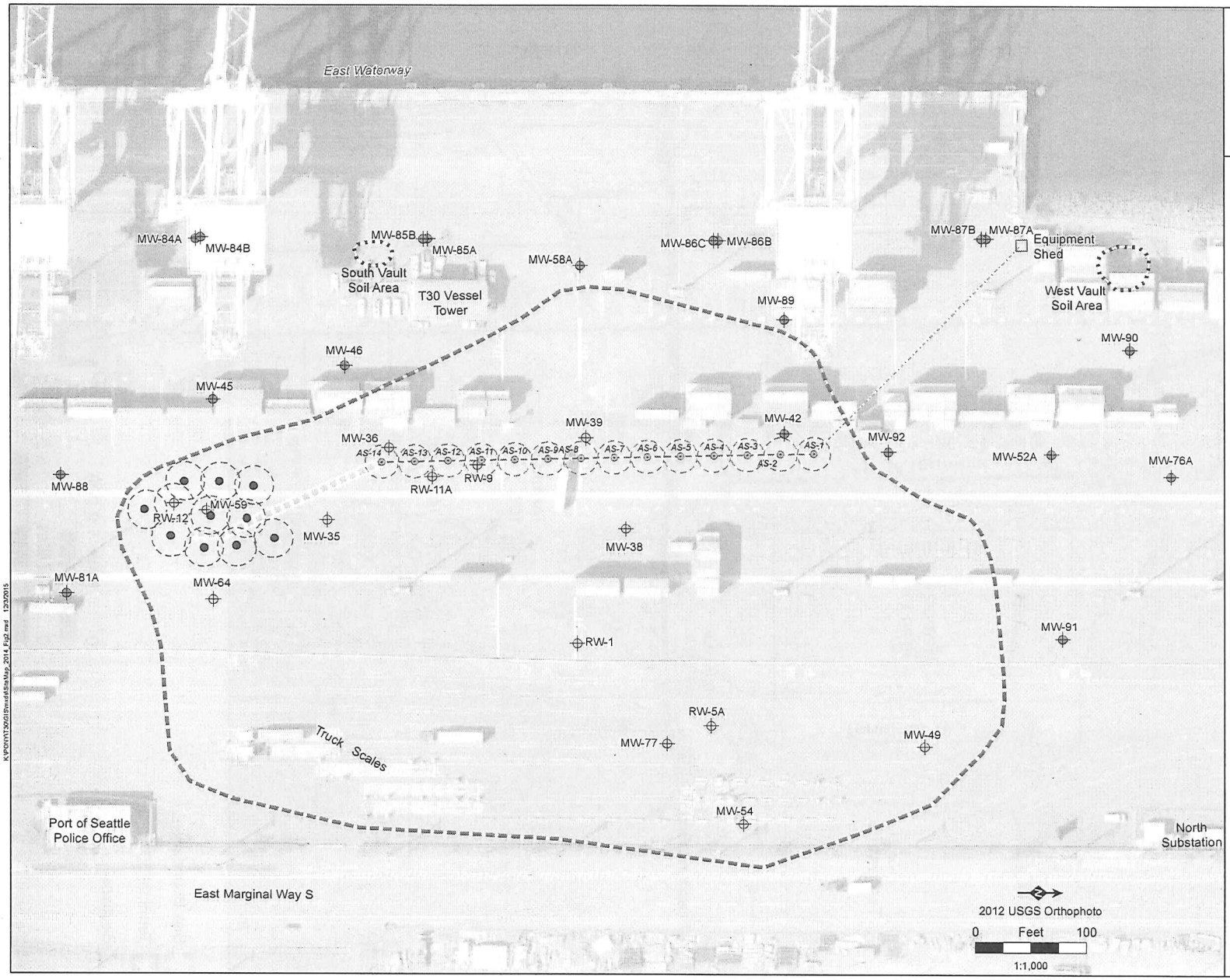

Figure 2

Site Map

Port of Seattle
Terminal 30

PgG

- Gaging/Recovery Well
- Water Quality Monitoring Well
- Site Extent of Contamination
- Soil Areas Not Associated with T-30 Site

Remediation Elements

- LNAPL Extraction Well with Radius of Influence
- Phase I Air Sparge Well with Radius of Influence
- Phase I SVE Pipe in Trench
- Future Phase II AS/SVE Expansion
- Utility Trench

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