# Tesoro Savage
# Vancouver Energy Distribution Terminal

## PART 1 GENERAL

# Section 1.1 – Description of Applicant

Washington Administrative Code (WAC) 463-60-015
General – Description of applicant.

*The applicant shall provide an appropriate description of the applicant's organization and affiliations for this proposal.*

*(Statutory Authority: Revised Code of Washington [RCW] 80.50.040 (1) and (12). 04-21-013, recodified as § 463-60-015, filed 10/11/04, effective 11/11/04. Statutory Authority: RCW 80.50.040(1) and Chapter 80.50 RCW. 81-21-006 (Order 81-5), § 463-42-015, filed 10/8/81. Formerly WAC 463-42-170.)*

# Section 1.1 Description of Applicant

## 1.1.1 Applicant

This Application for a Site Certification Agreement (Application) is made for the construction and operation of the Tesoro Savage Vancouver Energy Distribution Terminal (Facility). The Applicant is Tesoro Savage Petroleum Terminal LLC (Applicant).

This Application was professionally prepared by BergerABAM and subconsultants under the direction of Tesoro Savage Petroleum Terminal LLC. These parties believe that the Application is substantially complete and meets the requirements established in Chapter 80.50 of the Revised Code of Washington (RCW) and Washington Administrative Code (WAC) Title 463.

## 1.1.2 Tesoro Savage Petroleum Terminal LLC

Tesoro Savage Petroleum Terminal LLC is a Delaware limited liability company that is qualified to do business in the state of Washington. Its members are Savage Companies and Tesoro Refining & Marketing Company LLC.

## 1.1.3 Tesoro Corporation

Tesoro Corporation, a Fortune 150 company, is an independent refiner and marketer of petroleum products. Tesoro, through its subsidiaries, operates seven refineries in the western United States with a combined capacity of approximately 675,000 barrels per day. Tesoro's retail marketing system includes over 1,400 branded retail stations, of which 595 are company-operated under the Tesoro, Shell, and USA Gasoline brands.

Tesoro's seven refineries are located in Anacortes, Washington; Martinez, California; Wilmington, California; Mandan, North Dakota; Kenai, Alaska; Kapolei, Hawaii; and Salt Lake City, Utah.

Tesoro Refining and Marketing Company LLC is a subsidiary of Tesoro Corporation.

## 1.1.4 Savage Companies

Savage Companies is a privately held operator that provides supply chain management solutions tailored to meet the needs of customers across a variety of industries including electric power generation, coal production, oil refining, and the railroad, chemical, and other industries. The operations of Savage Companies include over 170 locations and more than 2,600 employees in North America and internationally, handling more than 100 million tons of materials annually.

## Section 1.2 – Designation of Agent

WAC 463-60-025
General – Designation of agent.

*The applicant shall designate an agent to receive communications on behalf of the applicant.*

*(Statutory Authority: RCW 80.50.040 (1) and (12). 04-21-013, recodified as § 463-60-025, filed 10/11/04, effective 11/11/04. Statutory Authority: RCW 80.50.040(1) and Chapter 80.50 RCW. 81-21-006 (Order 81-5), § 463-42-025, filed 10/8/81. Formerly WAC 463-42-090.)*

## Section 1.2 Designation of Agent

All official communication concerning this Application during the application review process should be directed to Kelly Flint, Sr., Vice President and Corporate Counsel for Savage Companies. This person is the designated agent for the project. Mr. Flint's contact information is as follows.

Kelly Flint
Savage Companies
Sr. Vice President and Corporate Counsel
6340 South 3000 East, Suite 600
Salt Lake City UT 84121
Office: 801-944-6600
Fax: 801-944-6519
Email: generalcounsel@savageservices.com

David Corpron and Tim McMahan will serve as secondary contacts. Their contact information is as follows.

David Corpron
Savage Companies
Senior Project Manager
Sr. Vice President and Corporate Council
6340 South 3000 East, Suite 600
Salt Lake City UT 84121
Office: 801-944-6577
Fax: 801-944-6519
Email: davidcorpron@savageservices.com

Tim McMahan
Stoel Rives, LLP
805 Broadway, Suite 725
Vancouver WA 98660-3213
Office: 503-294-9517
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## Section 1.3 – Assurances

WAC 463-60-075
General – Assurances.

*The application shall set forth insurance, bonding or other arrangements proposed in order to mitigate for damage or loss to the physical or human environment caused by project construction, operation, abandonment, termination, or when operations cease at the completion of a project's life. The application shall describe the applicant's commitment to the requirements of chapter 463-72 WAC, Site restoration and preservation.*

*(Statutory Authority: RCW 80.50.040 (1) and (12). 04-21-013, amended and recodified as § 463-60-075, filed 10/11/04, effective 11/11/04. Statutory Authority: RCW 80.50.040(1). 87-05-017 (Order 87-1), § 463-42-075, filed 2/11/87. Statutory Authority: RCW 80.50.040(1) and Chapter 80.50 RCW. WSR 81-21-006 (Order 81-5), § 463-42-075, filed 10/8/81.)*

# Section 1.3 Assurances

Tesoro Savage Petroleum Terminal LLC will establish and maintain, or cause to be established and maintained, several forms of insurance during the construction and operation of the Tesoro Savage Vancouver Energy Distribution Terminal. Insurance will be maintained as required by law and customary business practice and to satisfy third-party participants and lenders.

## 1.3.1 Commercial General Liability Insurance

The construction contractor and subcontractors will be required to carry commercial general liability insurance, including products and completed operations in amounts sufficient to respond to liability and property damage risks arising during the construction and startup phases of the Tesoro Savage Vancouver Energy Distribution Terminal.

Tesoro Savage Petroleum Terminal LLC will obtain and maintain in full force and effect, commercial general liability insurance against claims for liability and property damage arising out of the use and occupancy of the premises.

Tesoro Savage Petroleum Terminal LLC will purchase insurance policies to cover liabilities arising from environmental, casualty, and other major incidents. The insurance industry views facilities such as the Tesoro Savage Vancouver Energy Distribution Terminal as low to moderate risk. Therefore, high coverage limits are available at reasonable cost.

## 1.3.2 Automobile Insurance

The construction contractor and subcontractors will be required to carry automobile liability insurance covering all owned, leased, and non-owned and hired automobiles used during the construction and startup phases of the Tesoro Savage Vancouver Energy Distribution Terminal.

Tesoro Savage Petroleum Terminal LLC will obtain and maintain in full force and effect automobile liability insurance covering owned, non-owned, and hired automobiles.

## 1.3.3 Property Insurance

Tesoro Savage Petroleum Terminal LLC will obtain and maintain at all times during the term of construction and operation of the Facility, physical damage insurance on the buildings and improvements that are to be erected on the premises on an “all risk” basis, including coverage against damage or loss caused by earth movement and flood in an amount sufficient to cover any expected losses or damages.

Upon completion of project design, insurance underwriters will evaluate the design and estimate maximum potential damage due to failure. In some cases, design changes may be implemented to reduce the damages. Insurance will then be purchased to cover the maximum expected damages.

## 1.3.4 Worker’s Compensation and Washington Stop Gap Liability

Tesoro Savage Petroleum Terminal LLC will fully comply with the statutory requirements for worker’s compensation as required with respect to any employees performing work in the subject property and premises. Tesoro Savage Petroleum Terminal LLC also will insure its exposure with employer’s liability insurance (Washington Stop Gap Liability).

Tesoro Savage Petroleum Terminal LLC will require that any construction contractor and all subcontractors working on the project comply similarly with the statutory requirements for worker's compensation with respect to their employees performing work on the subject property and premises. Tesoro Savage Petroleum Terminal LLC also will require employer's liability insurance for exposure under Washington Stop Gap Liability.

### 1.3.5 Environmental Impairment

#### 1.3.5.1 Environmental Impairment Liability Insurance

Tesoro Savage Petroleum Terminal LLC and its operator(s) will be responsible, as required by law, for acts of environmental impairment related to the ownership and operation of the Tesoro Savage Vancouver Energy Distribution Terminal. Such losses may, in some circumstances, be covered by general liability insurance, which Tesoro Savage Petroleum Terminal LLC and the construction contractor will carry. In addition, Tesoro Savage Petroleum Terminal LLC and/or its contracted operator(s) will obtain environmental impairment liability insurance to the extent such coverage is available on a commercially viable basis. This insurance will cover the acts of Tesoro Savage Petroleum Terminal LLC and its operator(s) at the site, consistent with or in excess of then-prevailing industry standards for such insurance in the petroleum transportation industry. Commercial viability will be determined by reference to the norm of the industry.

#### 1.3.5.2 Financial Responsibility under Revised Code of Washington (RCW 88.40.025)

RCW 88.40 defines and prescribes financial responsibility requirements for facilities that store, handle, or transfer oil (including crude oil) in bulk near the navigable waters of the state. The Facility will be subject to these requirements because the structures, equipment, and devices comprising the Facility will be located near the navigable waters of the state and will transfer oil in bulk to vessels having an oil-carrying capacity of over 250 barrels which will transport the oil in bulk. In accordance with RCW 88.40.025, the Applicant will demonstrate financial responsibility in an amount determined by the Washington State Energy Facility Site Evaluation Council (EFSEC) as necessary to compensate the state and affected local governments for damages that might occur during a reasonable worst-case spill of oil from the Facility into the navigable waters of the state. The amount of financial responsibility will consider such matters as the amount of oil that could be spilled into the navigable waters from the Facility, the cost of cleaning up the spilled oil, the frequency of operations at the Facility, the damages that could result from the spill, and the commercial availability and affordability of financial responsibility. In accordance with RCW 88.40 030, the financial responsibility required may be established by any one of, or a combination of, the following methods acceptable to EFSEC: (1) evidence of insurance; (2) surety bonds; (3) qualification as a self-insurer; or (4) other evidence of financial responsibility.

### 1.3.6 Site Closure Bond (Ch. 463-72 WAC)

No set-aside from operating funds is anticipated for site abandonment, but Tesoro Savage Petroleum Terminal LLC will obtain a site closure bond in an amount to be determined by EFSEC upon approval of an initial site restoration plan. To the extent site facilities are not otherwise removed, recycled, or salvaged, Tesoro Savage Petroleum Terminal LLC will pursue a modification of the Site Certification Agreement to reflect equipment that is removed or maintained on the site for future use.

## Section 1.4 – Mitigation Measures

WAC 463-60-085
General – Mitigation measures.

*(1) Mitigation measures summary. The application shall summarize the impacts to each element of the natural or built environment and the means to be utilized to minimize or mitigate possible adverse impacts during construction, operation, and decommissioning of the proposal, all associated facilities, and any alternatives being brought forward.*

*(2) Fair treatment. The application shall describe how the proposal's design and mitigation measures ensure that no group of people, including any racial, ethnic, or socioeconomic group, bear a disproportionate share of the environmental or socioeconomic impacts resulting from the construction and operation of the proposed facility.*

*(Statutory Authority: RCW 80.50.040 (1) and (12). 04-21-013, amended and recodified as § 463-60-085, filed 10/11/04, effective 11/11/04. Statutory Authority: RCW 80.50.040(1) and Chapter 80.50 RCW. 81-21-006 (Order 81-5), § 463-42-085, filed 10/8/81.)*

# Section 1.4 Mitigation Measures

## 1.4.1 Mitigation Measures

This section summarizes impacts to the elements of the natural and built environment potentially resulting from the Facility and the measures identified in this application to avoid, minimize, and mitigate such impacts.

WAC 463-60-085 (1) requires the Applicant to identify impacts and mitigation resulting from decommissioning. As discussed in Section 2.3.9, Decommissioning, the lease entered into by the Applicant and the Port anticipates a variety of options for decommissioning of the project related improvements upon termination of the lease. See also page 2-83.61 of the ASC. At such time that the project is ripe for termination the Port and the Applicant will come to agreement on what improvements are to remain, or will be removed. In accordance with the requirements of WAC 463-72-050, the Applicant will then prepare a detailed plan that addresses the decommissioning activities, impacts that might result from the decommissioning activities, and appropriate mitigation measures. Determining which impacts could occur from decommissioning at this time is speculative. For example, the Port could chose to retain all of the improvements constructed by the Applicant for use by another tenant, and no decommissioning actions would occur. Or, the Port could request that some or all of the improvements be removed, and the site returned to its prior configuration. In this case the project would be dismantled, foundations demolished, features located underground could be left in place or removed, and the site regraded. The impacts resulting from decommissioning activities are expected to be similar in nature to the impacts of construction of the facility.

### 1.4.1.1 Section 2.6, Water Supply System

Mitigation measures for the water supply consist of the monetary contribution required by the City for water connections and new services. Service connection fees, system development charges, and industrial water use billing will be paid to the City. Connection fees and system development charges paid at the time of building permit application and application for water service is compensatory mitigation paid to the City for the long-term impacts to water rights, source development, system storage, and distribution piping.

The connection to the City water supply system will be made consistent with standard specifications adopted by the City. Backflow devices will be tested yearly per State requirements.

### 1.4.1.2 Section 2.18, Protection from Natural Hazards

***Earthquake Hazards***

All structures and pipelines constructed for the Facility will be designed and built in accordance with the applicable design provisions and seismic requirements of the 2012 International Building Code, the American Society of Civil Engineers 7-10 standard (Minimum Design Loads for Buildings and Other Structures), America Concrete Institute 318-11 standard (Building Code Requirements for Structural Concrete), American Institute of Steel Construction Manual section 360-10 (Specifications for Structural Steel Buildings) and Seismic Design Manual 2nd Ed., and

the American Forest & Paper Association 2008 Special Design Provisions for Wind and Seismic. Tables 2.18-1 and 2.18-2 list the seismic design criteria for the Facility.

**Table 2.18-1. 2012 IBC Seismic Design Criteria Storage (Area 300)**

| Parameter | Value | 2012 IBC/ASCE 7-10 Reference |
|---|---|---|
| 0.2 Second Spectral Acceleration, $S_s$ | 0.94 | ASCE 7-10 Figure 22-1 |
| 1.0 Second Spectral Acceleration, $S_1$ | 0.41 | ASCE 7-10 Figure 22-2 |
| $MCE_G$ Peak Ground Acceleration, PGA (Site Class B) | 0.41 | ASCE 7-10 Figure 22-7 |
| Soil Profile Site Class | N/A* | ASCE 7-10 Section 20.3.1 and 21.3* |
| 0.2 Second $MCE_R$ Spectral Acceleration, $S_{Ms}$ | 1.04 | Site Specific Ground Motion, ASCE 7-10 Ch. 21 * |
| 1.0 Second $MCE_R$ Spectral Acceleration, $S_{M1}$ | 0.8 | Site Specific Ground Motion, ASCE 7-10 Ch. 21 * |
| $MCE_G$ Peak Ground Acceleration, PGA | 0.37 | Site Specific Ground Motion, ASCE 7-10 Ch. 21 * |
| 0.2 Second Design Spectral Acceleration, $S_{Ds}$ | 0.69 | 2012 IBC Equation 16-39 |
| 1.0 Second Design Spectral Acceleration, $S_{D1}$ | 0.53 | 2012 IBC Equation 16-40 |
| Seismic Design Category | D | 2012 IBC Table 11.6-1 (& -2) |

*A liquefaction hazard was identified for the Storage area (Area 300). In accordance with ASCE 7-10 Section 11.4.7 and 20.3, a site-specific ground motion analysis was completed for seismic design at the Storage area to develop the criteria listed above.

**Table 2.18-2. 2012 IBC Seismic Design Criteria Unloading and Office (Areas 200 and 600)**

| Parameter | Value | 2012 IBC/ASCE 7-10 Reference |
|---|---|---|
| 0.2-Second Spectral Acceleration, $S_s$ | 0.94 | ASCE 7-10 Figure 22-1 |
| 1.0-Second Spectral Acceleration, $S_1$ | 0.41 | ASCE 7-10 Figure 22-2 |
| $MCE_G$ Peak Ground Acceleration, PGA (Site Class B) | 0.41 | ASCE 7-10 Figure 22-7 |
| Soil Profile Site Class | E* | ASCE 7-10 Section 20.3.1* |
| Site Coefficient, $F_a$ | 0.97 | 2012 IBC Table 1613.3.3(1) |
| Site Coefficient, $F_v$ | 2.40 | 2012 IBC Table 1613.3.3(2) |
| Site Coefficient, $F_{PGA}$ | 0.9 | ASCE 7-10 Table 11.8-1 |
| 0.2 Second $MCE_R$ Spectral Acceleration, $S_{Ms}$ | 0.91 | 2012 IBC Equation 11.4-1 |
| 1.0 Second $MCE_R$ Spectral Acceleration, $S_{M1}$ | 0.98 | 2012 IBC Equation 11.4-2 |
| $MCE_G$ Peak Ground Acceleration, PGA | 0.37 | 2012 IBC Equation 11.8-1 |
| 0.2 Second Design Spectral Acceleration, $S_{Ds}$ | 0.61 | 2012 IBC Equation 11.4-3 |
| 1.0 Second Design Spectral Acceleration, $S_{D1}$ | 0.66 | 2012 IBC Equation 11.4-4 |
| Seismic Design Category | D | 2012 IBC Table 11.6-1 (& -2) |

*A liquefaction hazard was identified for the Unloading and Office area (Areas 200 and 600). Based on ASCE 7-10 Section 20.3.1, Site Class E was used to develop seismic design criteria for the structures in Areas 200 and 600 assuming the fundamental period of the structures in Areas 200 and 600 is less than 0.5 second.

Ground improvement methods and foundations designs will be selected to meet the criteria identified above. Liquefaction mitigation solutions for the risk of liquefaction may include improving the condition of soils beneath the site to reduce the risk of liquefaction during an earthquake or the use of deep foundations to provide foundation support below the liquefiable soils. Ground improvement methods, such as stone columns, jet grouting, or deep soils mixing, could be designed to reduce the seismic lateral load on the dock foundations and improve seismic slope stability. Ground improvement methods and/or the use of deep foundations, such as driven piles or drilled shafts, could be designed to reduce the risk of seismic settlement impacting the proposed structures. Specific mitigation measures will be identified based on the results of the project-specific geotechnical investigation.

***Volcanic Eruptions***

Should an eruption occur and pose a risk to the Facility the operations will be shut down until conditions allow for safe operation.

***Flooding***

The Facility will be designed to comply with the City's Frequently Flooded Areas provisions of the Shoreline Management Program. These provisions require that buildings and structures located in the floodplain be elevated to at least one foot above the flood elevation or be floodproofed, be anchored to prevent floatation, collapse or lateral movement and incorporate other design elements to insure safety during a flood event.

Dock operations will comply with the USCG- and Ecology-approved Terminal Operating Limits as published in the Terminal Operations Manual

***Storms***

The Facility will be designed to comply with the International Building Code requirements to reduce the risk of damage to structures from storm events. For the City of Vancouver the basic wind speed design is 105 miles per hour for a 3-second gust. All buildings are required to be designed by a structural engineer. Compliance with the code provisions will be determined during the building permits administered by EFSEC.

During severe weather events, the Facility operator will monitor the conditions at the site and if conditions result in risks to employees or facilities, will cease operations until safe to resume.

### 1.4.1.3 Section 3.1, Earth

***Seismicity***

Mitigation measures for seismicity are identified under section 2.18.

***Soils***

A qualified geotechnical engineer will monitor the fill placement during construction and conduct appropriate field tests to verify the proper compaction of the fill soils. Appropriate types of ground improvements will be selected during final design based on the specified performance criteria for the elements of the Facility.

### *Erosion/Enlargement of Land Area (Accretion)*

The potential erosion impacts will be minimized through the use of erosion and sedimentation control measures outlined in the preliminary SWPPP (Appendix C). Construction activities will be sequenced and controlled to limit erosion. Clearing, excavation, and grading will be limited to the areas necessary to construct the Facility. Interim surface protection measures, including dust control, straw matting, and erosion control blankets, will be required to prevent erosion. Final surface restoration will be completed within 14 days of an area's final disturbance. All construction practices will emphasize erosion control over sediment control. Temporary cutoff swales and ditches will be installed to route stormwater to the appropriate sediment trap and discharge location.

#### 1.4.1.4 Section 3.2, Air

The Applicant has designed the project to meet all federal and state emissions standards including New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAPS). The Applicant is proposing measures to reduce emissions, including handling crude oil in equipment, which minimizes exposure of the oil to the ambient atmosphere to reduce VOC emissions, firing Facility boilers with pipeline quality natural gas, using ultra low sulfur diesel fuel for the emergency fire pumps, and installing a floating roof in each of the storage tanks. The Facility includes control equipment to limit emissions of hydrocarbons when the marine vessels are loaded using a collection system and a thermal combustor (Marine Vapor Combustor Unit, [MVCU]). The Applicant has conducted a comprehensive Best Available Control Technology (BACT) analysis, and has selected the most feasible, effective, and economically viable emission controls (see section 5.1, Attachment 1). The Applicant has conducted air emissions modeling in accordance with approved methods to demonstrate compliance with all applicable air quality standards.

The Applicant will implement the following measures during construction:

- To control dust during construction, water will be applied as necessary. Site access and travel roads will be graveled or paved.
- Vehicles used on site will meet federal emission standards.
- Emissions from vehicle use will be minimized by adherence to a set of best practices including limited idling time.

#### 1.4.1.5 Section 3.3, Water

### *Surface Water*

A permanent stormwater management system will be constructed to serve the Facility; this system will be constructed during site grading and construction of the Facility surface and subsurface elements. The system is designed in accordance with VMC 14.024, 14.025, and 14.026 and Ecology's administrative codes for stormwater and spill prevention, preparedness, and response and the Ecology stormwater manual.

Surface water quality will be protected through the use of the BMPs designed and constructed in accordance with Ecology's stormwater manual. BMPs, such as oil water separators, hydrodynamic separation, particulate filters, biofiltration swales, and permanent vegetation, will be used in the permanent Facility installation to protect surface water. Once all permanent

stormwater BMPs are in place, operations-related impacts to surface water will be minimized through the use of operational BMPs and operational procedures.

Containment rail drip pans, pumps, and containment sump tanks will be provided for the rail unloading area; the capacity of the containment systems will be sufficient to contain and store the entire volume of a single rail car staged within the unloading building. The tank farm will be surrounded by a containment berm 6 feet high with a full impervious liner capable of containing 110 percent of the largest tank and a 100-year 24-hour rainfall event. Spill, containment will be designed to meet or exceed API, EPA, NFPA, City and other applicable requirements. Tank monitoring, inspection, and testing will be in accordance with API 653, the industry standard for the inspection of aboveground petroleum storage tanks.

The transmission pipeline will be constructed of welded steel pipe, designed specifically for oil conveyance. Safety measures built into the design include thickened pipe walls, pipeline expansion for thermal and/or seismic movement, pressure and temperature sensors, and emergency shutoff valves. The pipeline will largely be constructed aboveground, on concrete foundations, with the exception of a few portions that will be constructed underground to accommodate existing rail and road crossings. The above-grade portion of the pipeline will be subject to visual inspection for leaks, and secondary containment with leak detection will be provided for pipe installed underground.

Spill containment measures along the pipeline alignment (Area 500) will comply with 40 CFR 112.7 by providing secondary containment, inspections, and contingency planning. All facility piping systems and storage tanks will be hydrostatically tested prior to being placed into operation.

### *Runoff/Absorption*

The designed BMPs are expected to minimize erosion and control sedimentation. Construction-phase erosion and sedimentation control BMPs, as described in sections 2.11 and 5.3 of this Application, will be implemented to mitigate the impacts of soil disturbance. Permanent operations-phase runoff control and water quality treatment will be implemented to mitigate any impacts from the project.

### *Floodplains*

Structures located within the 100-year floodplain will be elevated so that the floor is at least 1 foot above the base flood elevation. They will also be anchored to resistant movement and designed with utilities and other connections that are designed to withstand flood events consistent with the requirements of VMC 20.740.120 Frequently Flooded Areas. Where the pipeline route lies in the floodplain, the pipeline will be elevated aboveground.

In order to prevent the contamination of flood water, operating procedures will require that any crude oil spill, including minor leaks and drips, be contained and affected surfaces cleaned promptly limiting the amount of any residue that could comingle with flood waters inundating the rail drip pans, containment piping, and below-grade trenches. In the event of flood events exceeding the 100-year or 500-year flood stages, the Applicant will monitor the rate of flood water rise and suspend threatened Facility operations prior to the flooding occurring.

### *Groundwater Resources*

Some foundations and utility and pipeline excavations for the project may require dewatering of the excavations during the construction process. Groundwater that is pumped out of the excavations will be stored on site in mobile water tanks and analyzed and managed in accordance with local, state and federal regulations prior to reuse, infiltration or disposal. Disposal will be conducted in accordance with the stormwater permit issued for the project. If dewatering wells are necessary, well points used for construction dewatering will be completed in accordance with WAC 173-160 Minimum Standards for Construction and Maintenance of Wells. If groundwater extracted for construction dewatering is directed to the City's sanitary sewer it will be disposed in accordance with VMC 14.12 Discharge of Industrial Wastes to the Industrial Wastewater Pretreatment Facility.

### *Public Water Supplies*

The Facility will purchase its water supply from the City. The development of new water sources or wells is not required for this Facility. Relative to the existing system demands and total City water rights, the project is not anticipated to have an effect upon the private water supplies in the vicinity of the project site. Mitigation for the use of and impact on the public water system includes payment of system development charges, connection fees, and utility rates. These fees and rates are to support capital and operating expenses of the water system.

## 1.4.1.6 Section 3.4, Habitat, Vegetation, Fish, and Wildlife

### *Habitat and Vegetation*

The project will implement several impact minimization measures and BMPs to minimize the potential for impacts to terrestrial habitats and vegetation.

*Direct Habitat Modification*

The proposed project has been designed to avoid and/or minimize impacts to biological resources to the greatest extent possible. The upland facilities associated with the project have been located on developed portions of an existing industrial site, which in its current state provides very little habitat function and very little native vegetation. By siting the project in a developed location, impacts to native terrestrial habitats and native species of vegetation, including special status species, have been avoided.

Ground disturbance and vegetation removal will be limited to the amount necessary to construct the project, and construction fencing will be used to protect existing vegetation to be retained. The project will install urban landscaping, approximately 2.21 acres, including trees and shrubs in Areas 200 and 300, and will offset the removal of nine trees associated with construction. These landscaped areas will provide wildlife habitat typical in an urban environment.

*Temporary Construction Noise*

The proposed project has the potential to result in temporarily elevated terrestrial and underwater noise levels associated with the operation of construction equipment. Temporary construction noise may render habitats on site and within the project vicinity unsuitable to wildlife, including special status species, during construction activities.

Underwater noise may make aquatic habitats temporarily unsuitable to aquatic species during active construction. As such, aquatic species may tend to avoid the work area or move through

the area faster. Potential underwater noise impacts have been minimized in the project design by limiting construction techniques to vibratory methods, which generate less noise than impact hammers. Temporary support piles will be needed for construction of the dock modifications, so underwater noise is expected during vibratory pile installation and removal. All in-water work that generates temporary noise, including temporary pile installation and removal, will occur during the published work window from November 1 to February 28. Drilling for casing installation may also generate underwater noise.

In-water construction activities will also generate terrestrial noise, as will other upland construction equipment. Peak terrestrial noise generation would occur from impact pile driving, used to install shore-based mooring points and foundations for the rail unloading area (Areas 200 and 400). Other sources of terrestrial noise would include general construction activities, such as grading, paving, material transport, etc.; however, these activities are not expected to be distinguishable from adjacent industrial activity. Peak terrestrial noise is expected to attenuate to background levels within 5,000 feet of the project site, potentially making them unsuitable during construction. Wildlife occupying adjacent habitats within 5,000 feet may avoid these habitats or exhibit startle responses to periods of loud noise. The impacts have been minimized through construction sequencing that will complete work as efficiently as possible when loud noises are expected. Additionally, all noise sources occur outside of recommended management buffers for priority species; therefore, no work window is proposed for terrestrial pile driving.

Overall, underwater and terrestrial noise associated with construction has been minimized to the extent practicable. The dock modifications have been designed so as to require no impact pile driving, which will greatly reduce the extent of terrestrial and underwater noise generated during construction. This will reduce the potential for effects to wildlife, including special status species that may utilize habitats at the project site and within the project vicinity.

*Operational Water Quality Impacts*
Operations at the site will be governed by an SPCC plan (Appendix B.2), which will define specific BMPs to minimize the potential for leaks and spills and the extent of damage from any unavoidable leaks or spills. These include inspecting construction equipment daily to ensure that there are no leaks of hydraulic fluids, fuel, lubricants, or other petroleum products, and locating temporary material and equipment staging areas above the OHWM of the waterbody and outside environmentally sensitive areas.

### *Fish*

The dock configuration has been designed to require no new piling and overwater structure, and has reduced the quantity of direct permanent habitat impacts to the minimum amount practicable. The proposed removal of piles and existing overwater coverage has further minimized the extent of impacts.

*Temporary Water Quality Impacts*
The project has the potential to result in temporary water quality impacts during construction including increased potential for spills, and a potential for temporarily elevated levels of turbidity during construction. Construction at the site will be governed by an SPCC plan (Appendix B.2), which will define specific BMPs to minimize the potential for leaks and spills and the extent of damage from any unavoidable leaks or spills. These include inspecting construction equipment daily to ensure that there are no leaks of hydraulic fluids, fuel, lubricants, or other petroleum

products, and locating temporary material and equipment staging areas above the OHWM of the waterbody and outside environmentally sensitive areas.

All temporary pile installation and removal activities below the OHWM will be conducted within the published in-water work period for the project (November 1 to February 28). This work window has been established to minimize potential impacts to native fish species, particularly to ESA-listed salmonids and Pacific eulachon. While there is no time when ESA-listed fish are absent from the project vicinity, the window between November 1 and February 28 avoids the peak migratory periods for adult fish and out-migrating juveniles of most populations.

*Temporary Construction Noise*

The proposed project has the potential to result in elevated underwater noise during in-water vibratory pile installation and removal, and impact pile driving of shore-based mooring structures, which can temporarily affect fish and fish habitat quality. The dock modifications have been designed so as to require no impact pile driving, which will greatly reduce the extent of underwater noise generated during construction. Temporary support piles for dock modifications will be installed and removed with vibratory methods. This will reduce the intensity of underwater noise, and will limit the potential for adverse effects to fish.

In addition, all in-water work below the OHWM will be conducted within the published in-water work period for the project (November 1 to February 28). This work window has been established to minimize potential impacts to native fish species, particularly to ESA-listed salmonids and Pacific eulachon. While there is no time when ESA-listed fish are completely absent from the project vicinity, the window between November 1 and February 28 avoids the peak migratory periods for adult fish and out-migrating juveniles of most populations.

Adjacent upland pile driving for mooring structures is to be installed outside the November 1 to February 28 work window because of scheduling constraints. The close proximity of these piles to the OHWM is expected to generate underwater noise that could impact fish within approximately 446 feet of upland pile-driving activity.

*Operational Water Quality Impacts*

The proposed project has the potential to result in indirect effects to fish and fish habitat through operational water quality impacts including an increased potential for impacts associated with stormwater management at the site and spills or leaks associated with on-site equipment and machinery, and a potential for catastrophic accidents such as spills to surface waters. The Facility will discharge to existing Columbia River outfalls through existing manmade conveyance pipelines, and is categorically exempt from the flow control provisions of the Ecology stormwater manual. According to Appendix I-E of the manual, the Columbia River is listed as a flow control-exempt water body.

As described in section 2.11 of this application, operational stormwater will be collected, treated, and conveyed in permanent constructed conveyances from source to discharge. Stormwater from the storage area will be treated to enhanced water quality standards and discharged to the Terminal 4 stormwater system. Stormwater from Areas 200, 500, and 600 and the rail improvements will be treated to basic levels and discharged to the existing Terminal 5 stormwater system. Stormwater from Area 400 will be treated to an enhanced treatment level and conveyed to existing infiltration swales located immediately north of the site. Stormwater treatment facilities will be sized to accommodate the 6-month, 24-hour event as estimated using Ecology's hydrology model. The proposed stormwater treatment will provide treatment to a level

that is consistent with the discharge permits applicable to the Facility and will ensure that fish and fish habitat are not adversely affected by operational stormwater.

Operations at the site will be governed by an SPCC plan (Appendix B.2), which will define specific BMPs to minimize the potential for leaks and spills and the extent of damage from any unavoidable leaks or spills. These include inspecting construction equipment daily to ensure that there are no leaks of hydraulic fluids, fuel, lubricants, or other petroleum products, and locating temporary material and equipment staging areas above the OHWM of the waterbody and outside environmentally sensitive areas.

Transport ships are constructed with double hulls to minimize the potential for the release of cargo in the event of a spill. In addition, international convention requires that a SOPEP govern the operation of each ship. All ships also will be required to comply with state spill prevention and contingency plans. The likelihood of a catastrophic spill is very low, and the proposed BMPs and safety and security measures will minimize the risk of impacts to biological resources.

*Shipping*

The proposed project will result in approximately 140 ship transits per year in 2016 (first full year of operations) and up to 365 ship transits per year at full operating capacity. Increased marine traffic on the Columbia River has the potential to result in impacts to fish and fish habitat through increases in the potential for fish stranding, increased potential for shoreline erosion associated with propeller wash, and through the introduction of exotic species.

The risk of adverse effects to fish and fish habitat from increased bank erosion is low. Streambanks at the site are well armored, and not particularly sensitive to erosion, so these habitats likely will not be affected. Elsewhere in the project vicinity and shipping prism, there are unarmored banks, which could potentially be susceptible to increased erosion from prop wash. Effects associated with bank erosion would be temporary and localized, and would result in only minor negative impacts to fish and fish habitat.

Operators of commercial vessels have a significant economic interest in maintaining underwater body hull platings in a clean condition. Fouled bottom platings result in increased fuel costs and can reduce the vessel's maximum transit speed. To prevent fouling and higher costs, operators preserve and maintain the hulls of their ships aggressively (FERC 2008), greatly reducing the risk of the transport of exotic species. Additionally, the USCG has developed mandatory practices for all vessels with ballast tanks in all waters of the United States. Washington has developed similar guidelines. These practices include requirements for ballast water exchange, to rinse anchors and anchor chains during retrieval to remove organisms and sediments at their place of origin, to regularly remove fouling organisms from the hull, piping, and tanks, and to dispose of any removed substances in accordance with local, state, and federal regulations.

### *Wildlife*

*Special Status Species*

Direct impacts to special status species have been minimized by locating all project activities within an existing industrial site. According to WDFW Priority Habitats and Species (PHS) data, there are no occurrences of special status species within the project site. Within the project vicinity, there are several occurrences of PHS point, including bald eagle nests (approximately 1.2 miles to the west), bald eagle concentration areas (approximately 1.2 miles northwest), sandhill crane concentrations (approximately 3,000 feet west), and great blue heron breeding

(approximately 4,000 feet northeast). Waterfowl concentrations are also known to occur on Vancouver Lake, approximately 1 mile north of the project.

Temporary construction noise has been minimized to the extent practical to reduce impacts to special status species using habitats (e.g., foraging and resting) within the project vicinity. Peak construction noise would be generated by impact pile driving for the rail unloading facility upland mooring points. These areas are located outside of WDFW- and USFWS-recommended management buffers for bald eagle nests (660 feet and 0.5 mile, respectively) and great blue heron rookeries (656 feet). Foraging or resting species may be temporarily displaced from habitats within the project vicinity during periods of construction noise. These impacts have been minimized during construction sequencing to complete the noise generating aspects of construction as efficiently as possible.

*Direct Habitat Modification*

The upland facilities associated with the project have been located on developed portions of an existing industrial site, which in its current state provides very little habitat function and very little native vegetation. By siting the project in a developed location, impacts to native terrestrial habitats and native species of vegetation, including special status species, have been avoided. Ground disturbance and vegetation removal will be limited to the minimum amount necessary to construct the project, and construction fencing will be used to protect existing vegetation to be retained.

*Temporary Water Quality Impacts*

The project has the potential to result in temporary water quality impacts during construction including increased potential for spills, and a potential for temporarily elevated levels of turbidity during construction. Construction at the site will be governed by an SPCC plan (Appendix B.2), which will define specific BMPs to minimize the potential for leaks and spills and the extent of damage from any unavoidable leaks or spills. These include inspecting construction equipment daily to ensure that there are no leaks of hydraulic fluids, fuel, lubricants, or other petroleum products, and locating temporary material and equipment staging areas above the OHWM of the waterbody and outside environmentally sensitive areas.

High volume flow events can result in hydraulic forces that re-suspend benthic sediments, temporarily elevating turbidity locally. Any temporary increase in turbidity as a result of the proposed project is not anticipated to measurably exceed levels caused by these normal periodic increases. Additionally, the volume of flow will help minimize the intensity and duration of any temporary episodic increases in sediment suspension or turbidity.

In addition, all in-water temporary pile installation and removal below OHWM will be conducted within the published in-water work period for the project (November 1 to February 28). This work window has been established to minimize potential impacts to native fish species, but also avoids the peak migration timing for marine mammals in the Lower Columbia River.

*Temporary Construction Noise*

Terrestrial noise levels will be elevated within the vicinity of the project site during construction activities. Peak noise generation would be associated with impact pile driving for foundation supports at the rail unloading facility. These sound levels will be expected to attenuate to ambient conditions within approximately 5,000 feet of the immediate project site.

Terrestrial habitats within approximately 5,000 feet of the project are of limited quality and quantity, but likely provide some functions for wildlife foraging and resting. Species that utilize these industrialized habitats are generally well adjusted to nearly continuous human presence and activity because of the nearby port activity.

The proposed project has the potential to result in elevated underwater noise during temporary pile installation and removal, which can temporarily affect marine mammals and the quality of their habitat. The project has been designed to minimize the likelihood of any impacts resulting from underwater noise during pile installation activities by using vibratory methods. The proposed project has the potential to result in temporarily elevated terrestrial noise levels during pile installation, removal, and other construction activities. Terrestrial construction noise has been minimized to the extent practicable through the selection of equipment and timing. This will reduce the potential for effects to wildlife, including special status species that may utilize habitats at the project site and within the project vicinity.

In addition, all in-water work below the OHWM will be conducted within the published in-water work period for the project (November 1 to February 28). This work window has been established to minimize potential impacts to native fish species, but also avoids the peak migration timing for marine mammals in the Lower Columbia River. Marine mammals are not expected to occur within the action area during the in-water work period. Impact pile installation for shore-based mooring structures would be installed as construction scheduling allows as no in-water work is necessary. The close proximity to the OHWM is expected to generate underwater noise, which may affect marine mammals in the vicinity of the project. Temporary noise may result in avoidance behaviors, but it is not expected to harm mammals.

*Operational Water Quality Impacts*

The proposed project has the potential to result in indirect effects to wildlife through operational water quality impacts including an increased potential for impacts associated with stormwater management at the site and spills or leaks associated with on-site equipment and machinery, and a potential for catastrophic accidents such as spills to surface waters. However, the terrestrial habitats at the site provide very little functional habitat, and the impact minimization measures and BMPs that will be implemented will effectively reduce the potential for any adverse effects to the quantity or quality of terrestrial habitats as a result of operation.

As described in section 2.11, operational stormwater will be collected, treated, and conveyed in permanent constructed conveyances from source to discharge. The proposed stormwater treatment will provide treatment to a level that is consistent with existing treatment at the site, which will ensure that aquatic wildlife are not adversely affected by operational stormwater.

Operations at the site will be governed by an SPCC plan (Appendix B.2), which will define specific BMPs to minimize the potential for leaks and spills and the extent of damage from any unavoidable leaks or spills. These include inspecting construction equipment daily to ensure that there are no leaks of hydraulic fluids, fuel, lubricants, or other petroleum products, and locating temporary material and equipment staging areas above the OHWM of the waterbody and outside environmentally sensitive areas.

Transport ships are constructed with double hulls to minimize the potential for the release of crude oil should an accident occur. In addition, international convention requires that a SOPEP govern the operation of each ship. All ships also will be required to comply with state spill prevention and contingency plans. The likelihood of a catastrophic release of crude oil is very

low, and the proposed BMPs and safety and security measures will manage the risk of impacts to biological resources effectively.

### 1.4.1.7 Section 3.5, Wetlands

***Wetlands***

*Direct Habitat Effects*
The upland facilities associated with the project have been located on developed portions of an existing industrial site, and no wetlands are present at the site. By siting the project in a developed location, the project has completely avoided the need to directly impact wetlands.

*Temporary Water Quality Impacts*
The project has the potential to result in temporary water quality impacts during construction which could affect off-site wetlands within the project vicinity or shipping prism. Construction at the site will be governed by an SPCC plan (Appendix B.2), which will define specific BMPs to minimize the potential for leaks and spills and the extent of damage from any unavoidable leaks or spills. These include inspecting construction equipment daily to ensure that there are no leaks of hydraulic fluids, fuel, lubricants, or other petroleum products, and locating temporary material and equipment staging areas above the OHWM of the waterbody and outside environmentally sensitive areas.

*Operational Water Quality Impacts*
The proposed project has the potential to result in indirect effects to wetlands through operational water quality impacts including an increased potential for impacts associated with stormwater management at the site and spills or leaks associated with on-site equipment and machinery, and a potential for catastrophic accidents such as spills to surface waters.

As described in section 2.11, the project has the potential to increase stormwater runoff at the site, which could affect water quality and quantity. The proposed stormwater treatment will provide treatment to a level that is consistent with existing treatment at the site, which will ensure that off-site wetlands are not adversely affected by operational stormwater.

Operations at the site will be governed by an SPCC plan (Appendix B.2), which will define specific BMPs to minimize the potential for leaks and spills and the extent of damage from any unavoidable leaks or spills. These include inspecting construction equipment daily to ensure that there are no leaks of hydraulic fluids, fuel, lubricants, or other petroleum products, and locating temporary material and equipment staging areas above the OHWM of the waterbody and outside environmentally sensitive areas.

Transport ships are constructed with double hulls to minimize the potential for the release of cargo in the event of a spill. In addition, international convention requires that a SOPEP govern the operation of each ship. All ships also will be required to comply with state spill prevention and contingency plans. The likelihood of a catastrophic spill is very low, and the proposed BMPs and safety and security measures will manage the risk of impacts to wetlands effectively.

*Shipping*
The proposed project will result in approximately 140 ship transits per year in 2016 (first full year of operations) up to 365 ship transits at full capacity. Marine traffic on the Columbia River has the potential to result in impacts to wetlands through the introduction of exotic species.

Wetlands are unlikely to be affected by an increase in shipping traffic. Wetland resources within the project vicinity or downstream in the shipping prism could be impacted through the introduction of exotic species, but there is little risk of ships increasing the transport of exotic species.

### 1.4.1.8 Section 3.6, Energy and Natural Resources

***Energy and Natural Resources***

Regional Energy and Natural Resources are readily available to meet the needs of the construction and operation of the Facility, without adversely affecting the needs of other development in the Vancouver-Portland metropolitan area.

***Conservation and Renewable Resources***

During construction, conservation measures will include construction waste recycling when possible and the coordination of carpooling between construction workers to reduce vehicle emissions.

Operations BMPs will be developed that include conservation measures for nonrenewable resources such as water, fuel, and electricity. These BMPs may include the following conservation measures when cost effective:

- Installation of high efficiency electrical fixtures, appliances, and light bulbs in the support/administrative building;
- Installation of LED light bulbs throughout the Facility;
- Using low-water flush toilets in the support/administrative building;
- Coordinating carpooling among operations workers;
- Recycling waste office paper and aluminum; and
- Sending used oils, lubricants, and greases to facilities where they can be recycled when possible.
- Using vehicles that comply with current fuel consumption and emission standards.

### 1.4.1.9 Section 4.1, Environmental Health

***Noise***

Construction would occur only during daytime hours to reduce the potential for noise impacts from this activity. Construction noise is exempt from the Washington noise limits during daytime hours. The Applicant will, to the greatest extent feasible, schedule noisy construction activities to the hours identified in VMC 20.935.030(4), i.e., between 7 AM and 8 PM. If outdoor construction is required outside of these hours, the Applicant will consult with the City of Vancouver, will notify EFSEC in advance, and will not conduct the work until EFSEC has reviewed and approved the planned activities.

Modeled sound levels of the Facility would comply with the applicable Washington State noise limits. Therefore, no operational noise mitigation is proposed.

### *Risk of Fire or Explosion*

*Fire Prevention and Suppression*

The Facility will be designed and operated according to federal, state, and local standards for the prevention of fire and explosion hazards, including provisions for distances between tanks in the Facility and between the crude oil-handling facilities and adjacent buildings. Examples of other risk-based management approaches to be implemented include:

- Implementing safety procedures for unloading of crude oil from rail cars and loading to vessels, including using fail-safe control valves and emergency shutdown equipment.
- Protecting against potential ignition sources and lightning by (1) proper grounding to avoid static electricity buildup and formal procedures for the use and maintenance of grounding connections; (2) using intrinsically safe electrical installations and non-sparking tools; and (3) implementing permit systems and formal procedures for conducting any hot work during maintenance activities, including proper tank cleaning and venting.
- Reducing emissions of VOCs and evaporative losses by:
- Conducting all unloading, conveyance, storage and loading operations using a closed system, where product is not exposed to the atmosphere;
- Using a double seal internal floating roof in each of the crude oil storage tanks to eliminate vapor space;
- Installing pressure, flow and temperature sensors to ensure all storage and conveyance activities are conducted within appropriate parameters, and to quickly identify any abnormal situations that could potentially lead to a fire;
- Designing electrical equipment to WAC 296-24-95711 which addresses the requirements for electric equipment and wiring in locations that are classified depending on the properties of the flammable vapors, liquids or gases, or combustible dusts or fibers that may be present therein and the likelihood that a flammable or combustible concentration or quantity is present.
- Installing a dock safety unit at the loading berth and a marine vapor combustion unit (MVCU) to minimize the risk of explosive conditions being created during the marine vessel loading operations;
- Requiring all personnel to wear Lower Explosive Limit (LEL) detectors to detect hydrocarbon concentrations that could lead to ignition conditions; requiring all personnel to wear H2S detectors to detect H2S concentrations that could be unsafe.
- Monitoring for fugitive emissions from pipes, valves, seals, tanks and other components with vapor detection equipment and maintaining and/or replacing components as needed.

Fire suppression equipment will be installed to allow control of fires should they occur. Fire suppression equipment and systems will be designed to NFPA and API requirements, the more stringent Factory Mutual Global insurance requirements, and state and local regulations, and will include automatic and engineered controls. Buildings will be fireproofed and emergency egress will be provided in accordance with applicable fire and building codes. All fire suppression systems will be designed to activate automatically and will be equipped with manual trip stations.

*Explosion Prevention*

Two sources of explosions could potentially occur at the Facility – mechanical explosions due to overpressure conditions, and explosions due to the release of H2S. In addition to the fire

prevention and suppression elements listed above, Facility design and operating procedures will include, but not be limited to, the following explosion prevention elements:

- The storage tanks will be operated at atmospheric pressure, and will be equipped with internal pressure relief devices to vent gases should an overpressure situation arise;
- Internal pressure relieving systems will be incorporated throughout the Facility, including the transfer pipelines, marine terminal loading equipment, and rail cars;
- Installing pressure, flow and temperature sensors to ensure all storage and conveyance activities are conducted within appropriate parameters, and to quickly identify any abnormal situations that could potentially lead to an explosion;
- Including expansion loops in the design of the transfer pipelines to ensure the pipelines can expand and contract to accommodate changes in ambient temperature;
- Equipping personnel with $H_2S$ detectors which will trigger alarms at levels well below the explosive concentrations of $H_2S$ gases emitted.

***Releases or Potential Releases to the Environment Affecting Public Health***

Releases to the environment affecting public health are not anticipated during construction due to the limited types and relatively small quantities of hazardous materials that will be used during construction. Measures to prevent and contain any inadvertent release of hazardous materials will be provided as described in section 2.10 Spill Prevention and Control.

Construction of the Facility is not expected to result in the generation of any hazardous wastes in quantities regulated by state or federal law. Hazardous waste and solid construction debris such as scrap metal, cable, wire, wood pallets, plastic packaging materials, and cardboard will be removed by licensed disposal operators and disposed in accordance with applicable federal, state, and local regulations.

As noted in section 4.1.3.1, areas of the site and/or adjacent to the site are restricted for use because of the presence of subsurface soil and/or groundwater contamination from previous historic uses. Disturbance of those areas will be avoided to the extent practical. However, construction is necessary in each of the restricted areas. Construction will comply with the site-specific restrictive covenants, consent decrees, MTCA, RCRA, and Dangerous Waste Regulations.

***Safety Standards Compliance***

The implementation of a safety program for the Facility will be based on compliance with state and federal regulations, as well as the implementation of industry standards. The following discussion identifies the primary safety regulations applicable to the activities conducted at the Facility, and provides an overview of the numerous industry standards that the Applicant will implement in the design, construction and operation of the Facility.

*Facility Design*

The Facility will be designed in compliance with all applicable safety regulations and requirements, including applicable industry standards. Prior to beginning construction of the Facility, the Applicant will submit a complete set of construction plans to EFSEC for approval. These construction plans will identify the safety regulations and industry standards that apply to the Facility, and as appropriate will specify which standards apply to specific element designs.

*Facility Construction*
Through the construction management program described in section 2.16, the Applicant will ensure that the Facility has been constructed to the specifications of the construction drawings approved above. The Applicant will conduct pre-operational commissioning tests in accordance with industry standards and applicable regulations, including but not limited to the following:

- Hydrostatic testing of piping systems, transfer pipelines and storage tanks
- Testing and certification of the dock safety unit and MVCU in accordance with the provisions of 33 CFR 154 Subpart E
- Testing of fire and alarm systems in accordance with applicable fire and building safety codes

*Facility Operation*
The Applicant will ensure that all safety systems inherent in the project design will be operated according to applicable industry standards and state and local regulations and codes. The Applicant will develop operations manuals to address appropriate measures for operation of Facility safety systems and their ongoing maintenance. Facility systems will be tested according to industry standards and applicable state and federal regulations.

The Applicant will implement the usage of personal and facility sub area-wide Lower Explosive Limit (LEL) hydrocarbon detection systems and $H_2S$ detection systems. Personal detection systems will notify individual employees when concentrations of hydrocarbons or $H_2S$ exceed safe thresholds and they must evacuate their immediate work area. Similarly, sub-area-wide detectors will trigger evacuation alarms.

The Applicant commits to having every train attended upon taking control of the unit train from BNSF, and until the time control is released back to BNSF when the train leaves the Facility.

*Safety Program*
The Applicant will develop, implement and document a Facility safety program to ensure compliance with state and federal requirements. The program will incorporate applicable industry design standards. Appendix D includes the Applicant's preliminary Health Safety Security and Environmental (HSSE) Execution Plan. This plan lays out a process through which the Applicant will develop and implement its Facility safety program, and identifies the various safety processes and organizational and staff responsibilities, and the training that will occur as a result of the implementation of the program.

The program will include the preparation of construction and operations safety plans, which will be submitted to EFSEC prior to the beginning of Facility construction and operations respectively. The plans will address the requirements of WAC 296, as described above, and the requirements of 33 CFR 154 Part E, as well as any additional related requirements required under other applicable state and federal regulations and spill contingency planning processes described elsewhere in this Application.

### *Emergency Plans*

The emergency response plan will be developed based on industry standards and regulatory requirements, including but not limited to, WAC 296-24 (Employee Emergency Plans and Fire Prevention Plans), WAC 296-56 (Safety Standards - Longshore, Stevedore and Waterfront Related Operations), WAC 296-824 (Emergency Response), and 29 CFR 1910.38 (Emergency Action Plan). The emergency action plan will be in writing, and will cover the designated actions

employers and employees must take to ensure employee safety from fire and other emergencies. The emergency plan will address the following elements:

- Emergency escape procedures and emergency escape route assignments
- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate
- Procedures to account for all employees after emergency evacuation has been completed;
- Rescue and medical duties for those employees who are to perform them.
- The preferred means of reporting fires and other emergencies; and
- Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan.
- Alarm systems established in compliance with WAC 296-800-310.
- Types of evacuation to be used in emergency circumstances.
- Training and review:
  - Of a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees prior to implementation of the plan.
  - Review with each employee when the plan is initially developed, whenever the employee's responsibilities or designated actions under the plan change; and whenever the plan is changed, and
  - Review with each employee upon initial assignment those parts of the plan which the employee must know to protect himself/herself in the event of an emergency.

The Applicant will keep the plan at the workplace and make it available for employee review.

### 1.4.1.10 Section 4.2, Land and Shoreline Use

***Land Use***

No impacts to existing land uses are anticipated. Therefore, no mitigation measures are specifically identified.

***Light and Glare***

Most construction will occur during the day. At night, lights will be directed towards the site and will be the minimum wattage required for safety and operations. Development elements, except for storage tanks, will be painted with earth tones. The storage tanks will be painted with nonreflective paint to reduce surface glare from direct sunlight during the day and headlights at night. Lighting associated with the project could lead to direct and/or indirect impacts to wildlife species because it may affect the nocturnal behavior of animals within the project vicinity, including bird and bat species. Lighting will be directed towards the site and away from adjacent areas.

### *Aesthetics*

While visual impacts are not considered to be significant, to minimize impacts to all viewpoints, the project will implement the following mitigation measures. These are already required by the City and are standard development requirements. They include:

- Existing trees will be used as landscape buffers and will remain along SR 501 to reduce visual impacts.
- A landscape buffer with street trees, shrubs, groundcovers will be established along SR 501, entrance roads, and facilities along Old Lower River Road.
- Landscaping will be provided in parking lots per City requirements.
- Non-reflecting light colors will be used on structures.

### *Historic and Cultural Preservation*

While findings from previous studies indicate a low likelihood for encountering cultural material during construction, an inadvertent discovery plan will be prepared and implemented. The inadvertent discovery plan will include, but not be limited to, these elements:

- Because of the possibility of encountering intact soils beneath the fill in some areas of the study area, and because the study area has been included in previous surveys, if project construction reaches the depth of intact native soils, archaeological monitoring will be conducted if soils are excavated to the surface.
- Should any archaeological resources be found, ground-disturbing activities will be halted in the area of the find in accordance with RCW 27.53.060 (Archaeological Sites and Resources) and RCW 27.44.020 (Indian Graves and Records). Following the stop work, a professional archaeologist will be called to assess the significance of the find and DAHP will be notified to define a course of action.

## 1.4.1.11 Section 4.3, Transportation

Based on the results of the transportation impact analysis, the proposed Facility can be developed while maintaining acceptable levels of service and safety on the surrounding transportation system. The study concluded that specific mitigation was not necessary to address project impacts. However, the study developed the following recommendations to address existing safety or operational issues within the project vicinity:

- The Applicant will work with the Port and City to post a 25 MPH speed limit on Old Lower River Road south of SR 501, where no posted speed sign exists.
- The Applicant will work with the Port and WSDOT to post a YIELD sign to control the channelized northbound right-turn maneuver from Old Lower River Road onto SR 501.
- The Applicant should work with the Port and City to reconfigure traffic control devices at the Old Lower River Road/Old Alcoa Facility Access Road intersection.
- The Applicant will work with the Port to add texturing/coloring treatments to the striped crosswalk on the private access approach to Lower River Road (SR 501), between the Far West Steel property and the proposed Storage area. This treatment is intended to enhance the

safety of bicyclists and pedestrians using this crosswalk as part of the adjacent multi-use path.

#### 1.4.1.12 Section 4.4, Socioeconomic Impact

***Socioeconomic Impact***

No mitigation measures are proposed for socioeconomic impacts.

### 1.4.2 Fair Treatment

The demographics of communities in the study area and in individual counties were identified and analyzed to determine potential project impacts on minority or low-income populations; the results are discussed in section 4.4. As discussed in section 4.4.1.1 and shown in Table 4.4-4, although minority residents do exist within Clark County (County) near the project site, the County does not have a substantially higher minority population than larger reference populations. Table 4.4-5 includes the 2011 poverty statistics for the County and the overall study area, which show that, compared to the larger study area, a lower proportion of the population in the County lives below the poverty level.

The potential impacts from construction and/or operation of the proposed project will be from additional traffic (including rail traffic), noise, air quality, visual quality and aesthetics, and safety or security. As described in parts 2.0, 3.0, and 4.0 of this application, these potential impacts will be mitigated through design features and construction techniques to ensure that they are reduced to less than significant levels.

As discussed in section 4.4, the construction and operation of the proposed project are not anticipated to result in disproportionately high or adverse effects to minority or low-income populations. Therefore, no social or environmental justice impacts are anticipated to result from the construction and operation of the Facility and no mitigation is proposed.

While the project is not proposing specific mitigation measures for impacts, the demographics of the project study area (for this purpose defined as the area within an hour's commute of the proposed project) and Clark County have been identified and a public involvement effort undertaken to reach all of the surrounding residents, including minority and low-income populations. Ongoing public outreach is planned after the submittal of the application as described in section 1.6 below.

## Section 1.5 – Sources of Information

WAC 463-60-095
General – Sources of information.

*The applicant shall disclose sources of all information and data and shall identify all preapplication studies bearing on the site and other sources of information.*

*(Statutory Authority: RCW 80.50.040 (1) and (12). 04-21-013, recodified as § 463-60-095, filed 10/11/04, effective 11/11/04. Statutory Authority: RCW 80.50.040(1) and Chapter 80.50 RCW. 81-21-006 (Order 81-5), § 463-42-095, filed 10/8/81. Formerly WAC 463-42-120.)*

# Section 1.5 Sources of Information

A number of information sources are cited repeatedly in this Application. These sources include the regulations and codes that govern various aspects of the planning, construction, and operation of the Facility. The RCW, WAC, VMC, and the American Petroleum Institute (API) are examples. Although these sources are not cited in each section of this list, they govern the entirety of this application and are cited in the relevant sections of the text.

## 1.5.1 General

### 1.5.1.1 Description of Applicant

Savage Companies. 2013. Savage – About Us. Available at http://savageservices.com/about-us/company-history.html

Tesoro Corporation. 2013. Tesoro Annual Fact Sheet – Company Profile. Available at http://www.tsocorp.com/stellent/groups/corpcomm/documents/gt_contribution/001538.pdf

## 1.5.2 Proposal

Parsons Brinckerhoff. 2010. Ports 2010, A new Strategic Business Plan for Oregon's Statewide Port System, April 2010.

### 1.5.2.1 Site Description

Allen, J.E., S.F. Burns, and M. Burns. 2009. Cataclysms on the Columbia. Ooligan Press, Portland, Oregon.

Beeson, M.H., T.L. Tolan, and J.L. Anderson. 1989. The Columbia River Basalt Group in western Oregon; geologic structures and other factors that controlled flow emplacement patterns, in Reidel, S.P., and Hooper, P.R., eds., Volcanism and tectonism in the Columbia River flood-basalt province: Geologic Society of America Special Paper 239, p. 223–246.

City of Vancouver (City). 2013. Vancouver Municipal Code.

City of Vancouver (City). 2012. Shoreline Master Program.

Clark County (County) 2010. Clark County Shoreline Inventory and Characterization, Volume I.

Evarts, R.C., J.E. O'Connor, R.E. Wells, I.P. Madin. 2009. The Portland Basin: A (Big) River Runs Through It. GSA Today, v. 19 no. 9.

Peterson, C.D., R. Minor, G.L. Peterson, E.B. Gates. 2011. Pre-and post-Missoula Flood geomorphology of the Pre-Holocene ancestral Columbia River Valley in the Portland forearc basin, Oregon and Washington, USA. Geomorphology. 129 (2011) 276-293.

Port of Vancouver USA. 2013. Welcome to the Port of Vancouver USA. Accessed at http://www.portvanusa.com/assets/0085_QuickFacts_1725x85-1.pdf

Tolan, T.L. and M.H. Beeson. 1984. Intracanyon flows of the Columbia River Basalt group in the lower Columbia River Gorge and their relationship to the Troutdale Formation: Geological Society of America Bulletin, v. 95, pp. 463–477

Trimble, D.E. 1963. Geology of Portland, Oregon, and Adjacent Areas. U.S. Geological Survey. Bulletin 1119.

### 1.5.2.2 Construction on Site

American Petroleum Institute (API). 2013. STD 650, Welded Tanks for Oil Storage.

American Railway Engineering and Maintenance-of-Way Association (AREMA). 2010. AREMA Manual for Railway Engineering, Chapter 28, Clearances.

National Fire Protection Association (NFPA). 2013. Codes and Standards. Available at http://www.nfpa.org/codes-and-standards/document-information-pages.

### 1.5.2.3 Energy Transmission Systems

None.

### 1.5.2.4 Electrical Transmission Facilities

None.

### 1.5.2.5 Water Supply System

City of Vancouver (City). 2013. Letter regarding Tesoro Savage Petroleum Terminal water availability. August 20, 2013. See Appendix E of this Application.

### 1.5.2.6 System of Heat Dissipation

None.

### 1.5.2.7 Characteristics of Aquatic Discharge Systems

BergerABAM. 2010. Port of Vancouver – West Vancouver Freight Access Project Parcel 1A Drainage Study. June 10, 2010.

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## Section 1.6 – Consultation

WAC 463-60-101
General – Consultation.

*(1) Preapplication consultation. The application shall summarize all consultation that the applicant has conducted with local, state and federal agencies and governments, Indian tribes, nonprofit organizations and community citizen and interest groups prior to submittal of the application to the council.*

*(2) Meaningful involvement. The application shall describe all efforts made by the applicant to involve the public, regardless of race, ethnicity, or socioeconomic status, prior to submittal of the application to the council. The application shall also set forth information for contacting local interest and community groups to allow for meaningful involvement of all people, regardless of race, ethnicity or socioeconomic status. For example, such information may include contacts with local minority radio stations and news publications.*

*(04-23-003, recodified as § 463-60-101, filed 11/4/04, effective 11/11/04. Statutory Authority: RCW 80.50.040 (1) and (12). 04-21-013, § 463-42-101, filed 10/11/04, effective 11/11/04.)*

# Section 1.6 Consultation

The Applicant has conducted consultation with numerous local, state, and federal agencies, Indian Tribes, nonprofit organizations, and community citizens and interest groups before the submittal of this Application to EFSEC. Table 1.6-1 is a summary of the consultation activities that have been conducted, and identifies the efforts of the Applicant to involve the public, regardless of race, ethnicity, or socioeconomic status.

**Table 1.6-1. Project Consultation Summary**

| Organization | Meeting Date | Meeting Description |
|---|---|---|
| Port of Vancouver | April 23, 2013 | Applicant met with Todd Coleman, Chief Operating Officer (COO), to provide a project introduction. |
| | May 9, 2013 | Applicant met with Theresa Wagner, Communications Manager, to discuss project communications. |
| | May 17, 2013 | Dan Cameron and Bryan Meyer, Tesoro staff, provided a tour of the Anacortes rail unloading facility to Commissioner Brian Wolfe |
| | June 26, 2013 | Matt Gill, Dan Cameron and Bryan Meyer, Tesoro staff, provided a tour of the Anacortes rail unloading facility to Commissioner Jerry Oliver |
| | June 26, 2013 | Matt Gill, Dan Cameron and Bryan Meyer, Tesoro staff, provided a tour of the Anacortes rail unloading facility to Commissioner Nancy Baker, Commissioner Jerry Oliver and Todd Coleman, COO. |
| | June 27, 2013 | Savage and Tesoro representatives provided a presentation regarding the project to Port Commissioner's at a public workshop |
| City of Vancouver (City) | April 22, 2013 | Applicant met with Mayor Tim Leavitt to provide an introduction to the project. |
| | April 22, 2013 | Applicant met with Jeanne Harris, City Councilmember, to provide an introduction to the project. |
| | April 22, 2013 | Applicant met with Larry Smith, City Councilmember, to provide an introduction to the project. |
| | May 9, 2013 | Applicant met with Eric Holmes, City Manager, to provide an introduction to the project. |
| | June 27, 2013 | On June 6, the Applicant filed a pre-application package with the City's Planning Department. The City conducted review of the package and a public pre-application meeting, where members of the public were invited (see Note 1). |
| | July 12, 2013 | The Applicant met with Debi Davis, Water/Sewer Divisions to discuss water and sewer service related issues. |
| | July 29, 2013 | The Applicant met with Leo Kuzmen, Engineering Permit Representative to discuss water availability. |
| | August 12, 2013 | The Applicant met with Tyler Clary, City Water Division, to discuss water use authorization. |
| US Army Corps of Engineers (USACE) | June 17, 2013 | Applicant met with Steve Manlow, USACE Regulatory Project Manager to review the project and discuss federal permit requirements. |

| Organization | Meeting Date | Meeting Description |
|---|---|---|
| | August 15, 2013 | Applicant meet with Muffy Walker, USACE Seattle District, Regulatory Branch Manager and other USACE staff to discuss project details and federal permit requirements. Also present were Jeff Fisher and Steve Landino from NMFS. |
| National Marine Fisheries Service (NMFS) | July 19, 2013 | Applicant met with Jeff Fisher, SW Washington Branch Chief to introduce the project. |
| Governor Inslee's Office | April 22, 2013 | Applicant met with Aisling Kerins, Executive Director of External Relations to provide a project introduction. |
| | April 22, 2013 | Applicant met with Schuyler Hoss, Director of International Relations and Protocol Office of the Governor to provide an introduction to the project. |
| The Columbian | April 22, 2013 | Applicant met with Aaron Corvin, reporter, to provide an introduction to the project. |
| Ecology | April 22, 2013 | Applicant met with Maia Bellon, Director, to provide an introduction to the project. |
| | April 22, 2013 | Applicant met with Sally Toteff, Southwest Regional Office Director, to provide an introduction to the project. |
| | April 24, 2013 | Applicant met with Dale Jensen, Spill Prevention and Response, to provide an introduction to the project, and discuss spill concerns. |
| | August 7, 2013 | Applicant and BergerABAM staff met with Stephen Posner and Hedia Adelsman to present the project. |
| Department of Archaeology and Historic | July 30, 2013 | Applicant met with Rob Whitlam, State Archaeologist to introduce the project and discuss cultural and historic resources. |
| Department of Commerce | April 22, 2013 | Applicant met with Brian Bolender, to provide an introduction to the project. |
| EFSEC | April 22, 2013 | Applicant met with Stephen Posner, Acting EFSEC Manager, and James Luce, Chair, to discuss the EFSEC review process. |
| | June 14, 2013 | BergerABAM staff met with Stephen Posner to discuss application submittal coordination. |
| | July 18, 2013 | Applicant, Counsel Thomas Wood (Stoel Rives) and BergerABAM staff attended a special EFSEC Council meeting. |
| | August 7, 2013 | Staff From Stoel Rives and BergerABAM met with EFSEC staff and their independent consultant, Cardno Entrix, to discuss application submittal coordination. |
| Clark County | April 22, 2013 | Applicant met with Steve Stuart, Commissioner, to provide an introduction to the project. |
| | April 23, 2013 | Applicant met with David Madore, Commissioner, to provide an introduction to the project. |
| Vancouver's Downtown Association | July 17, 2013 | Applicant met with Lee Rafferty, Executive Director to provide an introduction to the project. |
| Vancouver Chamber of Commerce | April 23, 2013 | Applicant met with Kelly Parker, President & CEO to provide an introduction to the project. |
| | July 17, 2013 | Applicant met with Kelly Parker to provide further project information. |

| Organization | Meeting Date | Meeting Description |
|---|---|---|
| Hazel Dell/Salmon Creek Business Assoc. | July 17, 2013 | Applicant met with Ginger Schmidt, President to provide an introduction to the project. |
| East Vancouver Business Assoc. | July 18, 2013 | Applicant met with Kris Greene, Director of Governmental Affairs to provide an introduction to the project. |
| Identity Clark County | April 23, 2013 | Applicant met with Paul Montague to provide an introduction to the project. |
| Columbia River Economic Development Council | April 23, 2013 | Applicant met with Lisa Nisenfeld to provide an introduction to the project. |
| | July 18, 2013 | Applicant presented to the project to the Council |
| 49th Legislative District | April 24, 2013 | Applicant met with Representative Sharon Wylie to provide an introduction to the project. |
| | April 24, 2013 | Applicant met with Senator Annette Cleveland to provide an introduction to the project. |
| 17th Legislative District | April 24, 2013 | Applicant met with Representative Paul Harris to provide an introduction to the project. |
| | April 24, 2013 | Applicant met with Senator Don Benton to provide an introduction to the project. |
| | April 24, 2013 | Applicant met with Representative Monica Stonier to provide an introduction to the project. |
| 18th Legislative District | April 24, 2013 | Applicant met with Representative Brandon Vick to provide an introduction to the project. |
| | April 24, 2013 | Applicant met with Representative Liz Pike to provide an introduction to the project. |
| | April 24, 2013 | Applicant met with Senator Ann Rivers to provide an introduction to the project. |
| 42nd Legislative District | April 24, 2013 | Applicant met with Senator Doug Ericksen to provide an introduction to the project. |
| Washington State University, Vancouver | April 25, 2013 | Applicant met with Rona Sen Hoss to provide an introduction to the project. |
| Washington Council on International Trade | April 25, 2013 | Applicant met with Eric Schinfeld to provide an introduction to the project. |
| Office of Congresswoman Jaime Herrera Beutler | April 25, 2013 | Applicant met with Ryan Hart, District Director, to provide an introduction to the project. |
| Sierra Club – Cascade Chapter | April 25, 2013 | Applicant met with Linda Wolfe Executive Committee Vice Chair Loowit Chapter to provide an introduction to the project. |
| Fruit Valley Neighborhood Community Council | May 9, 2013 | Applicant met with Eric Labrant to provide an introduction to the project, and discuss community concerns |

Note 1: the following persons attended the City preapplication meeting on June 27, 2013:

- City: Jon Wagner, Mike Swanson, Richard Holland, John Gentry, Aaron A. Odegard, Greg Turner, Ryan Lopossa, Chris Drone, Tracy Tuntland, Chad Lawry
- Applicant: Kelly J. Flint (Savage), David Corpron (Savage), Mike Marchant (Savage), Matt Gill (Tesoro), Doug Price (Tesoro), Brian Carrico (BergerABAM), Helen Devery (BergerABAM), Irina Makarow (BergerABAM), Dan Shafar (BergerABAM), Sam Adams (BergerABAM), Ryan Bennett (Poole Fire Protection), Nic Nash (ICPE), Tim McMahan (Stoel Rives LLP), Rebecca Guiao (Stoel Rives LLP), Brian Dunn (Kittelson and Associates), Jeff Hale (R&M Engineering),
- Port of Vancouver: Patty Boyden, Lisa Willis, Mary Mattix, Greg Westrand

- EFSEC: Stephen Posner
- WDFW: Anne Friesz (Applicant is continuing to coordinate with WDFW to meet with additional resource specialists after Application for Site Certification is submitted.)
- Fruit Valley Neighborhood: Eric Labrant
- Columbia Riverkeepers: Lauren Goldberg, Candice McLaughlin

In addition to the June 27, 2013 presentation by the Applicant noted above, the Port commissioners conducted public workshops considering the project in tandem with their regular meetings; all of these workshops were taped by Clark Vancouver Television and were available for rebroadcast to the general public.

- May 14, 2013, overview of marine safety and oil spill response capabilities by Liz Wainwright, executive director of the Maritime Fire and Safety Association (MFSA); Holly Robinson, MFSA preparedness, response and compliance coordinator; and Ernie Quesada, general manager of Clean Rivers Cooperative, Inc.;
- June 11, 2013, overview of how hazardous materials, specifically crude oil, are transported along regional rail lines, presented by Colleen Weatherford, Director of Public and Private Partnerships for BNSF Railway; Patrick Brady, Assistant Director of Hazardous Materials for BNSF Railway; and William Ellings, Safety and Hazmat Specialist for the U.S. Department of Transportation, Federal Rail Administration (FRA);
- June 27, 2013, overview of the EFSEC review process, presented by EFSEC Chair James Luce.
- July 22, 2013, workshop focusing on presentation by Port staff regarding the project.
- The Port also conducted meetings with Linda Wolfe and Lehman Holder, Sierra Club on April 24, 2013, Gretchen Starke, Audubon Club on April 29, 2013 and Sydney Reisbick, Friends of Clark County on May 2, 2013 to discuss the project with the Applicant in attendance.

Finally, the Applicant is planning to conduct an open house in the Vancouver, Washington, area in mid-September 2013.