

Imperium Terminal Services (the applicant) is proposing to expand its existing biodiesel production and transport facility at the Port of Grays Harbor (Port) in Hoquiam, Washington.

The objective of the proposed action is to expand the existing facility to receive and load bulk liquids in addition to those already permitted. The proposed bulk liquids include crude oil, ethanol, naphtha, gasoline, vacuum gas oil, jet fuel, no. 2 fuel oil, no. 6 fuel oil, kerosene, renewable jet fuel, renewable diesel, used cooking oil, and animal fat, in addition to currently permitted liquids, including biodiesel, petroleum diesel, vegetable oil, and methanol. These liquids would be used in the existing biodiesel production facilities by the applicant or unloaded, stored in the existing or proposed facilities, and loaded for rail and vessel transport. It is anticipated that these bulk liquids would be transported to and from the project site primarily by rail and vessel. Most notably, crude oil would be delivered by train, stored, and loaded onto tank vessels at the Terminal 1 dock for shipping to refineries on the West Coast and potentially abroad.¹

This summary provides an overview of key elements of the Draft Environmental Impact Statement (Draft EIS).

Draft EIS Process

What is the purpose of the environmental review process?

The Washington State Environmental Policy Act (SEPA) requires state and local agencies in Washington to identify and consider the environmental impacts that could result from governmental decisions including issuing permits for private projects, such as the proposed action.

Under SEPA, an EIS process is necessary if a proposed project is likely to result in significant adverse environmental impacts. An EIS provides the public and agencies with information about the effects of a proposed project and informs local and state agency permitting decisions.

What are the roles of the City of Hoquiam and the Washington State Department of Ecology?

The City of Hoquiam and the Washington State Department of Ecology (Ecology) are serving as co-lead agencies in the development of the Draft EIS and Final EIS. The City of Hoquiam and Ecology issued a SEPA Determination of Significance on April 4, 2014, for the proposed action. This determination provided notice of the intent to develop a Draft EIS and Final EIS.

¹ U.S. law currently prohibits the export of domestic oil; however, it is possible those regulations could change. If the crude oil were to come from a Canadian source, this prohibition would not apply, and the oil could be shipped abroad.

How does the proposed action relate to the Westway Expansion Project?

The City of Hoquiam and Ecology are co-lead agencies for a SEPA review process for a similar proposal adjacent to the Imperium project site (Westway Expansion Project). Although these projects are unrelated, because the proposals are similar, the sites are located in the same community, and the applications were submitted at the same time, the co-lead agencies have agreed to conduct some parts of the EIS process jointly. Public comment periods and hearings are being conducted at the same time. Parallel and joint expanded public review allows for greater efficiency and aids in transparent community engagement.

How were the public, agencies, and tribes involved in the development of the Draft EIS?

The first step in the SEPA EIS process is called *scoping*. The co-lead agencies asked members of the public, agencies, and tribes to comment on what should be analyzed in the Draft EIS during the scoping period between April 10, 2014, and May 27, 2014. The co-lead agencies established the scope of the Draft EIS based on state and local SEPA guidance and comments received during the scoping period.

The co-leads coordinated with applicable state and local agencies with technical expertise or jurisdiction during the development of the Draft EIS. The co-leads also requested information from the Quinault Indian Nation and the Confederated Tribes of the Chehalis Reservation to identify important tribal resources and assess potential impacts of the proposed action on tribal resources.

How can the public, agencies, and tribal governments comment on the Draft EIS?

Comments on the Draft EIS will be accepted during an expanded 60-day comment period (August 31 through October 29, 2015).

By mail:

Westway and Imperium Expansion Projects EISs
c/o ICF International
710 Second Street, Suite 550
Seattle, WA 98104

Online:

<https://public.commentworks.com/cwx/westwayimperiumcommentform>

In person:

At a public meeting orally or in writing

- | October 1, 2015, 1:00 to 9:00 p.m., at the Satsop Business Park, Flextech Building, 150 Technology Way, Elma, WA 98541
- | October 8, 2015, 1:00 to 9:00 p.m., at the D&R Theatre, 205 South I Street, Aberdeen, WA 98520

Alternatives

What is the proposed action?

The applicant is proposing to expand its existing biodiesel production and transport facility at Terminal 1 at the Port in Hoquiam, Washington. The proposed facilities would handle (unload and load) and store the proposed bulk liquids—crude oil, ethanol, naphtha, gasoline, vacuum gas oil, jet fuel, no. 2 fuel oil, no. 6 fuel oil, kerosene, renewable jet fuel, renewable diesel, used cooking oil, and animal fat—in addition to currently permitted liquids—biodiesel, petroleum diesel, vegetable oil, and methanol. The liquids would either be used for biodiesel production or handled and stored for rail and vessel transport in the existing or proposed facilities.

The biodiesel production facility and its operations are not part of the proposed action and are not part of the environmental review; however, because the existing tanks could be used for any of the products, these storage tanks are considered in the environmental review. The existing operations are considered as part of the no-action alternative. The maximum amount of liquids that could be stored on the site would increase by 30.2 million gallons (720,000 barrels) for a total of up to 48.2 million gallons (1.3 million barrels). The maximum annual throughput of bulk liquids would be 1.26 billion gallons (30 million barrels).

The proposed action involves constructing facilities on the applicant's existing industrial property at Port Terminal 1. The facilities would include up to nine bulk liquid storage tanks, each with a capacity of 3.36 million gallons (80,000 barrels), new and modified rail spurs, and pumps and pipelines connecting the storage tanks to loading and unloading areas.

The additional bulk liquids would be transported to and from the project site primarily by rail and tank vessel. Crude oil is expected to come by rail in the form of Bakken crude oil from the Intermountain Region and central United States. From Centralia, all trains would use the Puget Sound & Pacific Railroad (PS&P) rail line to reach the project site. At maximum throughput, operation of the proposed action would result in approximately two unit train trips² per day along the PS&P rail line (a maximum of 730 per year).

Crude oil would be transported from the project site by tank vessel (tanker or tank barge), most likely to refineries in the Puget Sound area and northern California (Richmond area). At maximum throughput, operation of the proposed action would result in an average of approximately one tank vessel trip³ per day (a maximum of 400 per year).

Construction would occur in two phases. Phase 1, construction of all facilities except for four of the nine storage tanks, is tentatively scheduled to start in 2016 and is anticipated to last up to 18 months. If the applicant decides to construct Phase 2, the construction of four additional storage tanks is anticipated to last up to 4 months. The proposed action would become operational upon completion of construction, which is anticipated to be in 2017.

² A trip represents one-way travel; in other words, an inbound trip and an outbound trip are counted as two trips.

³ A vessel trip also represents one-way travel.

What is the no-action alternative?

In addition to the proposed action, SEPA requires that the no-action alternative be evaluated to provide a comparison for the proposed action. Under the no-action alternative, none of the proposed facilities would be constructed and the applicant would continue to operate its existing facility.

Significant Areas of Concern

More than 22,200 comments expressing concerns about the proposed action were received during the scoping period. These concerns centered mostly on public safety and environmental impacts related to transportation. Rail transport concerns include increases in air pollutants, vehicle delay at and near PS&P rail line grade crossings (including emergency vehicle access and delay), and the hazards and costs related to potential oil spills, fires, or explosions. Vessel transport concerns have also focused on hazards and costs related to potential oil spills, fires, or explosions. Because oil spill response requires specialized equipment, there is also concern that local emergency responders may not be adequately trained, staffed, or equipped should an incident occur. Concerns were also raised about the potential for the proposed action to affect human health, recreational resources, natural resources, tribal resources, cultural resources, and greenhouse gas emissions. Further concerns were described about the potential for increased safety risks related to a tsunami at the project site. Additionally, commenters emphasized that the environmental review consider the cumulative impacts of implementing all three of the proposals to operate bulk liquid terminals at the Port that are currently before the co-lead agencies: the proposed action, Westway Expansion Project, and Grays Harbor Rail Terminal Expansion Project.

Environmental Impacts and Applicant Mitigation Measures

This section summarizes the environmental impacts that would likely result from construction and operation of the proposed action, measures that have been identified to mitigate those impacts, and unavoidable and significant adverse impacts that would remain after mitigation. This section also summarizes the environmental health and safety impacts related to oil spills, fires, and explosions; the impacts that could occur outside the detailed study area; and the contribution of the proposed action to cumulative impacts. Additionally, economic, social policy, and cost-benefit considerations are included as required by the Hoquiam Municipal Code.

What is the study area and what activities were analyzed?

The study area is specific to each element of the environment but in most cases includes the following components.

- I Resources on and near the project site that could be affected by construction and onsite operations.
- I Resources along the PS&P rail line—from Centralia, Washington, to the project site—that could be affected by rail transport.
- I Resources in and around Grays Harbor that could be affected by vessel transport.

The project site is within the study area and is limited to the property leased by the applicant on which the existing and proposed facilities are and would be located. Activities at the project site would include construction (e.g., clearing the site and erecting storage tanks) and operations (e.g., rail unloading and vessel loading) that would be directly under the control of the applicant. These activities would be subject to the permit conditions that would be required by the City of Hoquiam, Ecology, and other state and local agencies.

Transport of crude oil and other bulk liquids to and from the project site by rail and vessel would occur under the responsibility of the rail and vessel operators, respectively. Although the applicant does not have control over rail and vessel transport, implementation of the proposed action would generate rail and vessel trips that could result in environmental impacts along the transportation corridors. For example, increased rail and vessel trips could lead to congestion and related traffic delays, increased noise, increased air emissions, and spills to the terrestrial or aquatic environments. The transportation corridors that would be affected by rail and vessel transport would vary depending on the commodity being transported, the source of the commodity, and the final destination for delivery. However, all rail trips generated by the proposed action would occur along the PS&P rail line between Centralia and the project site because this is the only rail line connecting the national mainline railroad system to the Port. Similarly, all vessel trips generated by the proposed action would travel through Grays Harbor along the Grays Harbor Navigation Channel between Terminal 1 and the Pacific Ocean. Therefore, these known corridors are the focus of the impact analysis related to rail and vessel transport.

What are the environmental impacts and mitigation related to construction and routine operations?

The following sections summarize the potential impacts associated with construction and routine operations on site (at the terminal) and during rail and vessel transport within the detailed study area for each element of the environment.

- Earth
- Air
- Water
- Plants
- Animals
- Energy and Natural Resources
- Noise and Vibration
- Land and Shoreline Use
- Aesthetics, Light, and Glare
- Recreation
- Historic and Cultural Preservation
- Tribal Resources
- Public Services and Utilities
- Hazardous Materials
- Rail Traffic
- Vehicle Traffic and Safety
- Vessel Traffic

Earth

Construction

Construction of the proposed action could increase erosion and soil instability from work to prepare the project site. Construction activities would expose bare soil and could result in the need to stockpile soil temporarily. The potential for increased erosion on the project site is low because the

site is relatively flat and because sandy, gravely soils have a low erosion potential. Implementation of erosion control and best management practices would further reduce the potential for erosion.

Onsite Operations

The project site is located in an area that has the potential for moderate to severe earthquakes. The extent of earthquake damage would depend on the magnitude of the event. Although the likelihood of earthquake is unchanged with or without the proposed action, the new facilities would expose additional structures and workers to potential harm. The risk of damage to the new facilities from an earthquake could increase potential impacts. Depending on the magnitude of the event, the new storage tanks could also become rupture and result in a leak of bulk liquids into the environment. The proposed action would be designed to meet local building codes and standards. Pilings would be used to stabilize the storage tank area in case of ground movement or liquefaction.

The project site is also located in an area that has the potential to be inundated by tsunami waves. The extent of damage would vary with the magnitude of the seismic event, the tidal level at the time of the earthquake, the current state of sea-level rise, and the amount of debris. Although the likelihood of tsunami is unchanged with or without the proposed action, the new facilities would expose additional structures and workers to potential harm. Implementation of a tsunami evacuation plan (Table S-1, provided at the end of this summary) would reduce these risks. Depending on the magnitude of the event, the new storage tanks could also become damaged and contribute to the tsunami debris or rupture and result in a leak of bulk liquids into the environment. The applicant would be required to study the possibility of designing the proposed facilities to reduce the impacts of a large-scale tsunami event. Mitigation would be required if it was deemed reasonable and feasible.

Rail and Vessel Transport

Although the proposed action would not result in any modifications to the PS&P rail line that would directly affect soils or geological resources, geological events could affect increased rail traffic and safety under the proposed action. Potential events that could affect the PS&P rail line include landslides, earthquakes, and other seismic events, such as liquefaction, coseismic subsidence, and tsunamis.

Although the proposed action would not result in modifications to the harbor that would directly affect soils or geological resources, vessel operations could result in the slight increased potential for shoreline erosion associated with vessel wake. Additionally, geological events, specifically earthquake-related hazards of coseismic subsidence and tsunamis, could affect increased vessel traffic and safety under the proposed action.

The potential impacts related to routine rail and vessel operations would not differ substantially from existing conditions, because there would be no ground disturbance related to rail and vessel transport and the likelihood of seismic events affecting these corridors would not change. The increased potential for incidents to result in spills, fires, or explosions during rail and vessel transport is addressed in the environmental health and safety risks section.

Air

Construction

Construction equipment and activities would emit criteria air pollutants but at amounts well below the standards established by the U.S. Environmental Protection Agency and Washington State. These activities would also emit toxic air pollutants, particularly diesel particulate matter, but not at levels that would be of concern.

Onsite Operations

The proposed action would emit criteria and toxic air pollutants from stationary sources (such as emissions from cleaning storage tanks and operating vessels) and mobile sources (such as emissions from trains and vessels idling at the project site). These emissions are projected to be below state and federal standards; however, emission of nitrogen oxides would come close to exceeding the established standard. Implementation of mitigation (Table S-1) would reduce these impacts to acceptable levels.

Rail and Vessel Transport

At maximum throughput, operation of the proposed action would increase rail traffic along the PS&P rail line by an average of two train trips per day. Increased rail traffic would approximately double the emissions of criteria pollutants currently associated with rail transport in Grays Harbor County. However, these emissions would be spread out along the 59-mile PS&P rail line, making it unlikely that state or federal standards would be exceeded at any single location.

Increased rail traffic would also increase toxic air pollutants, primarily diesel particulate matter. Exposure to high levels of diesel particulate matter has been shown to increase the risk of cancer. The most diesel particulate matter would be emitted between the Poynor Yard in Hoquiam and the project site. There are no residences, schools, hospitals, daycare centers, convalescent facilities, senior centers, parks, or recreational facilities in the potentially affected area. Elsewhere along the PS&P rail line, emissions would be spread out and would not be concentrated in any one area. Also, risk of exposure would be reduced in the future when new rail locomotives that emit less diesel particulate matter are put into service. Implementation of mitigation (Table S-1) would ensure levels of diesel particulate matter remain at acceptable levels. Cumulative impacts are discussed in the potential cumulative impacts section.

Vessels related to the proposed action would travel along the Grays Harbor Navigation Channel, which is located away from the shoreline. Emissions of criteria and toxic air pollutants (primarily diesel particulate matter) would be spread out over the length of the navigation channel. Emissions would not likely exceed state and federal standards.

Greenhouse Gases

Construction and operation of the proposed action and associated rail and vessel transport would result in the emission of greenhouse gases. These gases are described as carbon dioxide equivalents (greenhouse gas emissions are calculated in terms of the equivalent warming potential of carbon dioxide, a primary greenhouse gas). Construction activities would emit approximately 2,955 metric tons of carbon dioxide equivalent per year. Operations (including rail and vessel transport) would emit approximately 43,759 metric tons of carbon dioxide equivalent. This represents less than

0.001% of the national 2025 target and less than 0.1% of the state 2050 target to reduce greenhouse gas emissions. Total annual operational emissions including rail and vessel transport in Washington State are equivalent to that of approximately 9,200 vehicles.

The combustion of crude oil (or any of the bulk liquids) would also emit greenhouse gases. These greenhouse gas emissions are disclosed in the Draft EIS.

Water

Construction

Construction would occur within 200 feet of the shoreline of Grays Harbor and Fry Creek. No dredge or fill operations or other in-water construction work is needed for the proposed action in these waters or any other surface waters, wetlands, or floodplains. Construction is not expected to result in any permanent impacts on water resources. Temporary impacts could occur from construction activities that involve soil disturbance, equipment and material use, and storage tank hydrostatic testing. Implementation of best management practices consistent with the required permits would ensure that water quality standards are met. Construction would not affect wetlands because wetlands are not present on or within 300 feet of the project site.

Onsite Operations

Routine operation at the project site could affect Grays Harbor as the result of leaks or spills of various chemicals used for facility operations and maintenance. Additionally, operation of the bulk liquid transfer operations could result in leaks or spills of bulk liquids (e.g., crude oil) as the result of equipment failure or human error during unloading or loading activities. Other potential stormwater contaminants include vehicle residues that accumulate in parking lots and material handling areas; airborne particulates from vehicle and vessel exhaust and facility emissions that are deposited on pavement and other impervious surfaces of the facility; and residues of herbicides from areas where vegetation management (e.g., weed control in tank containment area) occurs. These chemicals could enter adjacent surface waters by transport in stormwater runoff and could degrade water quality and adversely affect both aquatic vegetation and aquatic life near the facility. These substances could also be transported to other portions of Grays Harbor. Implementation of best management practices consistent with the required permits would ensure that water quality standards are met.

Rail and Vessel Transport

Increased rail traffic could affect the quality of surface waters and groundwater along the PS&P rail line as the result of leaks and spills. Sensitive areas that could be affected by such releases include the Chehalis River Surge Plain Natural Area Preserve and the designated Critical Aquifer Recharge Area in the Black River and Scatter Creek subwatersheds in Thurston County. Most of these releases would likely be limited to minor drips and leaks. The potential for such leaks can be reduced by regularly inspecting and maintaining locomotives and rail cars and by implementing best management practices. The impacts of larger spills, fires, or explosions during rail and vessel transport are discussed separately below.

Increased vessel traffic and associated routine operation could result in water quality impacts related to ballast water discharge, propeller wash, and vessel wake.

Plants

Construction

Ground disturbance for construction would result in the loss of approximately 10.9 acres of vegetation. The areas where construction would occur do not support native plant communities and do not provide valuable habitat to animals. Construction activities could temporarily affect shoreline and aquatic vegetation near the project site. Disturbances could temporarily increase total suspended solids near the project site and result in the release of construction vehicle fluids or construction materials. Implementation of best management practices per the required water quality permits would ensure these impacts would not exceed acceptable levels.

Onsite Operations

Operation of the proposed action would not affect plants or animal habitat because the project site would be completely developed and no plants would be expected to colonize the developed site. However, the proposed action could affect plants and habitat in and around the harbor as the result of impacts on water quality associated with routine operations. Implementation of best management practices consistent with the required permits would ensure that water quality standards were met and potential impact on plants would be low.

Rail and Vessel Transport

An increase in leaks and spills of chemicals used in routine rail and vessel operations could occur due to the increased traffic and associated maintenance. Diesel fuel, oils, grease, and other petrochemicals required for operation and maintenance could either leak directly into vegetated areas along the rail bed, be carried short distances by precipitation or surface waters to more sensitive areas, or spilled into the harbor. Most of these releases would be limited to minor drips and leaks whose potential can be reduced by regularly inspecting and maintaining locomotives and rail cars and by implementing best management practices. The impacts of larger oil spills, fires, or explosions during rail and vessel transport are discussed separately below.

Increased vessel traffic could also result in a slight increase of erosion along Grays Harbor. Along the navigation channel, increased traffic could cause slight erosion of sediments and low-lying intertidal vegetation, and could uproot aquatic vegetation in shallow areas along the outer boundaries. Docked tank vessels could increase shading in the aquatic environment beneath and adjacent to existing berthing structures. Shading can change primary productivity of aquatic plants, although these impacts would be low. Vessels calling at the Terminal 1 berth could bring invasive species to Grays Harbor via ballast water. Although the vessels would be required to exchange ballast water at sea to reduce potential transport of invasive species during the loading process, risks would remain. Implementation of mitigation (Table S-1) would reduce the risk of spreading invasive species.

Animals

Construction

Construction activities could temporarily increase total suspended solids in water near the project site and result in the release of construction vehicle fluids or construction materials. Implementation of best management practices per the required water quality permits would ensure these impacts would not exceed acceptable levels that could adversely affect animals.

Noise would increase above ambient levels during construction. However, no special-status species have been recently documented in the study area. There is suitable habitat for the bald eagle, blue heron, and peregrine falcon, but it is unlikely that these species would be found near the project site. Aquatic species, including bull trout, green sturgeon, eulachon, and chum and Chinook salmon could be affected by noise from pile driving. Although occurrence of these species is limited to certain times of the year and in some cases may be rare, if any aquatic animals are present near the site during pile driving they could be affected. Noise from pile driving is not predicted to exceed the peak threshold but the accumulated noise threshold is predicted to be exceeded at Fry Creek and the Chehalis River. Implementation of mitigation (Table S-1) would reduce the potential for this impact to acceptable levels.

Onsite Operations

Operation of the proposed action would not affect animal habitat on the project site, because the project site would be completely developed and no suitable habitat for animals would be present. The proposed action could affect animals in and around the harbor because of impacts on water quality associated with small spills or leaks from routine operations or from large spills at the project site. Implementation of best management practices consistent with the required permits would ensure that water quality standards are met and the potential impact on animals would be low. The impacts of larger oil spills, fires, or explosions at the project site are discussed separately below. Additionally, the applicant would voluntarily cease vessel-loading operations of crude oil for 2 weeks each year (Table S-1) to reduce the potential for impacts on natural resources during the Grays Harbor Shorebird Festival.

Noise from onsite operations would be similar to existing conditions and would not result in substantial increases in noise that would be noticeable to animals likely to be found around the project site.

Rail and Vessel Transport

An increase in leaks and spills of petrochemicals used in routine rail and vessel operations could occur due to the increased traffic and associated maintenance. Diesel fuel, oils, grease, and other petrochemicals required for operation and maintenance could either leak directly into vegetated areas along the rail bed, be carried short distances by precipitation or surface waters to more sensitive areas, or spilled into the harbor. Most of these releases would be limited to minor drips and leaks. The potential for such leaks can be reduced by regularly inspecting and maintaining locomotives and rail cars and by implementing best management practices. The impacts of larger spills, fires, or explosions during rail and vessel transport are discussed separately below.

Wakes generated by vessels related to the proposed action could reach the shoreline and affect nearshore aquatic species, especially juvenile fish, by washing them ashore and stranding them on the shoreline. However, vessels are expected to transit during high tides, which would reduce potential impacts. Shading from docked large vessels could affect fish migration, prey capture, or predation. Increased vessel traffic related to the proposed action would generate increased underwater noise that could affect aquatic animals, especially marine mammals because they rely on sound as a means of communication for finding food and mates, and for detecting predators. The potential for these impacts would increase somewhat under the proposed action because of increased vessel trips but would generally remain low.

Increased vessel traffic would also increase the chance of vessels striking marine mammals in the navigation channel; however, the greatest potential for vessel strikes would be in the shipping lanes, which are located outside of state waters. This is because large mammals, such as whales, typically migrate and forage in deeper waters and are not likely to enter the harbor.

Vessels calling at the Terminal 1 could bring invasive species to the Grays Harbor in their ballast water that could affect aquatic life. Although the vessels would be required to exchange ballast water at sea to reduce potential transport of invasive species during the loading process, the risks would remain. Implementation of mitigation (Table S-1) would reduce the risk of invasive species spreading.

Energy and Natural Resources

Construction

The proposed action would be constructed of materials that require energy and natural resources to manufacture. Energy would also be consumed in the transport of these materials to the project site. The increase in energy consumption is anticipated to be met by existing local energy and fuel supply and natural resources. Implementation of mitigation (Table S-1) would reduce energy consumption.

Onsite Operations

Energy would be used to operate equipment at the terminal. The proposed action's energy consumption during operation would be primarily in the forms of electricity, natural gas, and fuel. The increase in energy consumption is anticipated to be met by existing local fuel supply. To reduce energy consumption, the applicant would implement energy-saving measures in project design and operation (Table S-1).

Rail and Vessel Transport

Rail traffic associated with the proposed action would consume diesel fuel. The demand for diesel under the proposed action is anticipated to be met by regional supply. Vessels would likely use marine distillate fuel. The demand for marine distillate fuel under the proposed action is anticipated to be met by regional supply.

Noise and Vibration

Construction

Construction of the proposed action would result in a temporary increase in noise and vibration near the project site. Construction noise would consist primarily of operating construction equipment, such as pile-driving equipment, backhoes, cement mixers, and excavators. The greatest noise increases would result from pile driving, which is anticipated to last approximately 2 to 3 months. However, noise and vibration levels would be low at the nearest residential areas (approximately 1,500 feet) and are not anticipated to disrupt residents or other sensitive groups surrounding the project site. Implementation of mitigation (Table S-1) to keep construction and maintenance equipment in good working order would reduce noise and vibration impacts. Additionally, because construction would only occur during daytime hours, any noise or vibration from these activities would be limited to daytime hours.

Onsite Operations

Onsite operations would generate noise and vibration from equipment use and rail and vessel loading and unloading activities. Noise and vibration levels associated with these activities would be similar to levels generated by existing operations at the project site and in the Port area. The increases in noise and vibration are not anticipated to be disruptive to residents or other sensitive groups near the project site.

Rail and Vessel Transport

At maximum throughput, operation of the proposed action would increase rail traffic along the PS&P rail line by an average of two unit train trips per day. Noise-sensitive receptors (such as residences) would be exposed more frequently to two types of train noise.

- | Wayside noise: The combined effect of locomotive noise and car/wheel noise.
- | Horn noise: The sound of locomotive warning horns, which are sounded in advance of grade crossings per federal safety requirements.

Trains associated with the proposed action would travel at the same speeds as existing trains, and locomotives would sound horns consistent with existing practices. Therefore, the wayside and horn noise levels associated with any individual train trip would not change substantially compared to existing conditions.

However, because the proposed action would result in more rail traffic, average noise levels along the PS&P rail line would increase. Noise monitoring determined the baseline conditions at various sites along the rail line. Generally, in areas where existing noise levels are low (particularly at night), there is a greater likelihood that increased train traffic would result in more noticeable noise. The noise increase would be most noticeable for residences located close to the PS&P rail line, particularly near grade crossings where trains are required to sound horns. The greatest noise impacts on residences would occur between Satsop and Elma, and at some residences close to the rail line in Central Park, Malone-Porter, and Centralia. Implementation of mitigation (Table S-1) to assist with the development of quiet zones in coordination with PS&P and the Federal Railroad Administration could reduce noise from train horns; however, if these measures were not implemented, noise increases from the additional train traffic would remain. Cumulative impacts are discussed in the potential cumulative impacts section.

Increased vessel traffic in Grays Harbor would not significantly increase noise levels. The nearest noise-sensitive receptors are along the shoreline (approximately 1,800 feet from the navigation channel), and impacts from vessel noise would be negligible.

Because vibration levels are primarily a function of train speed, and train traffic associated with the proposed action would not increase train speeds along the PS&P rail line, vibration impacts from rail traffic would be negligible. Vibration-sensitive receptors would experience no vibration on land from increased vessel traffic, because vessels would be traveling approximately 1,800 feet from the shoreline.

Land and Shoreline Use

Construction

Construction would occur in both the City of Hoquiam's and City of Aberdeen's Industrial Districts, where construction activities are compatible with the land and shoreline use designations of both cities' comprehensive plans and shoreline master programs. The applicant would be required to obtain all appropriate permits and/or approvals prior to construction. Therefore, impacts on land and shoreline use from construction of the proposed action are not anticipated.

Onsite Operations

Implementation of the proposed action would require land use permits from the City of Hoquiam and the City of Aberdeen, which require demonstration of consistency with the applicable policies and zoning. Operation of the proposed action at the project site would be consistent with the applicable policies, including consistency with comprehensive plans, zoning ordinances, critical areas ordinances, and shoreline master programs. The applicant would be required to obtain appropriate permits and approvals to ensure compliance with these requirements and consistency with the applicable land use and shoreline management programs and ordinances. Impacts on land and shoreline use from operation of the proposed action are not anticipated to occur.

Rail and Vessel Transport

Increased rail and vessel traffic associated with the proposed action would occur in existing transportation corridors. Rail and vessel transport in these areas is currently ongoing and the proposed increases in traffic would be consistent with applicable land use plans, policies, zoning, and regulations.

Aesthetics, Light, and Glare

Construction

The presence of construction equipment and the related increase in activities would create short-term visual changes at the project site. However, the project site is an existing industrial area and cranes and industrial operations are a common part of the visual environment. Construction would not require the use of high-intensity nighttime lighting and would not negatively affect day or nighttime public views. Glare would not be increased on the project site during construction.

Onsite Operations

Operation of the proposed action is not anticipated to result in substantial changes in views of the Port or harbor that would negatively affect any viewer groups. The most prominent features to be built on the project site would be the storage tanks. Implementation of mitigation (Table S-1) would ensure that the proposed facilities would be consistent with the existing industrial character of the Port and immediately surrounding area and would not materially change the visual character or quality of views. The changes in lighting toward the interior of the Port and away from residential areas are not anticipated to affect views from scenic routes. Although nighttime lighting would increase compared to the no-action alternative, new sources of nighttime lighting are not expected to affect any viewer groups negatively.

Rail and Vessel Transport

Although most lighting would not disturb surrounding land uses, the proposed action could increase nighttime rail and vessel transport lighting compared with the no-action alternative.

Recreation

Construction

Construction vehicles would not likely block or reduce vehicle access to the 28th Street boat launch, fishing pier, viewing tower, or nearby parks. No in-water construction or access to the project site by water is proposed; therefore, the activities would not conflict with in-water recreation near the project site. Construction activities, primarily pile driving, would result in increased noise levels that could disturb surrounding recreational uses.

Onsite Operations

Vessel loading would restrict recreational boating and fishing access to the area directly adjacent to the Terminal 1 dock. Impacts on recreational boaters would be low because boaters could access other boating and fishing areas throughout the harbor. Implementation of mitigation (Table S-1) would reduce impacts on recreational boaters. Operational noise levels would be similar to existing noise levels at the project site and would be consistent with current uses surrounding the project site. Potential impacts on animals, including fish, are described above.

Rail and Vessel Transport

Increased noise along the PS&P rail line as a result of increased rail traffic could affect recreational uses; however, the maximum level of noise associated with a single train passing by that is likely to be experienced in recreational areas would not change because all trains would continue to travel at the same speeds as existing trains and would sound horns similarly. Increased train noise could temporarily disturb surrounding recreational uses during the passage of a train. Because recreational uses already experience noise levels associated with rail operations and because noise is temporary, noise impacts from the additional rail traffic under the proposed action are considered low. Potential impacts on animals from rail and vessel transport are described above.

For the majority of the rail line, the increase in rail traffic would not result in a substantial increase in vehicle delays or blocked vehicular access that could restrict access to recreational areas. However, vehicle access to Morrison Riverfront Park, which can only be accessed through entrances to the Olympic Gateway Plaza, would be blocked more frequently and for longer durations because of train operations in Aberdeen. Implementation of mitigation (Table S-1) to address vehicle delays at this location would reduce this impact.

Because vessel traffic under the proposed action would be limited to the navigation channel, impacts on recreational uses in the harbor outside the channel are not expected. The 28th Street boat launch area is near the navigation channel and project site; however, it is expected that recreational boaters would have sufficient room to navigate safely away from the launch into the harbor and would not be substantially affected by vessels passing through the navigation channel. All other major access points for recreational boaters would be distant and not affected by vessel traffic. Recreational fishing does occur in the navigation channel, primarily in the fall. While this area would not be accessible while a vessel was making the trip to and from the project site (approximately 2 hours

one-way), recreational fishing and boating is highly seasonal, and even at the height of the season, the boat density is considered low, meaning potential conflicts are not anticipated to be frequent or to last for a substantial amount of time. Additionally, alternative fishing areas that would not be affected by vessel traffic are available. Implementation of mitigation (Table S-1) to provide advance notice of vessel transit would reduce impacts on recreational fishing.

Historic and Cultural Preservation

Construction

No significant or protected cultural resources have been found at the project site. Although unlikely, archaeological resources may be found below the ground surface during construction. Construction of the proposed facility mainly involves surface grading and driving piles, which would not require significant excavation or deep ground disturbance. Implementation of mitigation (Table S-1) to develop and implement an unanticipated discovery plan would address this impact.

Onsite Operations

Operation of the proposed action would not affect cultural resources because no cultural resources have been identified at or immediately surrounding the project site.

Rail and Vessel Transport

Increased rail traffic would not affect cultural resources because it would not involve ground-disturbing activities, increase vibration along the PS&P rail line, or alter views of historically important features of any historical resources.

Although unlikely, increased vessel traffic could slightly increase shoreline erosion, potentially affecting onshore cultural resources.

Tribal Resources

Construction

Construction of the proposed action would likely have no impact on tribal resources because no in-water work is required. No access to the project site by water is proposed; therefore, the activities would not conflict with tribal fishing resources near the project site. Construction activities, primarily pile driving, would result in increased noise levels that could disturb aquatic species, including fish, and tribal fishers near the project site.

Onsite Operations

At maximum throughput, operation of the proposed action would result in vessels loading at the Terminal 1 dock up to 200 days per year, which added to baseline vessel forecasts over the planning period would result in vessels at the Terminal 1 berth 244 days per year. This increase in vessels at Terminal 1 could reduce access to tribal fishing areas. Potential impacts on animals, including fish, are described above.

Drift gillnet fishing in Grays Harbor occurs in the area directly in front of the Terminal 1 dock that would be occupied by vessels. While a vessel is at berth, fishers cannot extend fishing nets as far and cannot access the areas nearest to the dock structure. Lighting impacts on fish behavior from

nighttime transfer operations could also affect the efficiency of drift netting. Implementation of mitigation (Table S-1) to coordinate docking schedules with fishing schedules, provide advance notice of vessel calls and movements, and work with the Quinault Indian Nation to identify other measures as appropriate could reduce these impacts. However, vessel operations of the proposed action could exclude tribal fishers from fishing areas. If mitigation measures are not feasible, the proposed action could result in unavoidable and significant adverse impacts on tribal resources as described further below.

Rail and Vessel Transport

Rail traffic along the PS&P rail line would increase by an average of two train trips per day. This increase would not significantly reduce access to Quinault Indian Nation tribal resources because there are few grade crossings between the Quinault Indian Nation reservation and Quinault fishing and access sites and substantial delays are not expected at these grade crossings. The Chehalis Tribe's access to fishing sites would not be affected because access roads to fishing sites on their reservation do not cross the PS&P rail line. Potential impacts on animals and plants from the proposed action are described above. Cumulative impacts are discussed in the potential cumulative impacts section.

Vessel traffic would increase by one vessel trip per day. Vessel traffic would not likely affect Quinault Indian Nation tribal resources outside of the navigation channel (including crab fishing in the harbor). However, vessel operations could exclude tribal fishers from a portion of their typical fishing area within the navigation channel (from approximately the Crossover Channel Reach of the navigation channel to the turning basin upstream of Terminal 2). Conflicts would be greatest during the fall salmon fishery when tribal fishers use gillnets. Vessel traffic could also reduce access to marine fisheries (including crab) in the ocean because tribal fishers may not be able to cross the bar when tank vessels are moving into or out of the navigation channel. Implementation of mitigation (Table S-1) to coordinate docking schedules with fishing schedules, provide advance notice of vessel calls and movements, and work with the Quinault Indian Nation tribal officials to identify other measures as appropriate could reduce these impacts. Vessel transport related to the proposed action could exclude tribal fishers from fishing areas. If mitigation measures are not feasible, the proposed action could result in unavoidable and significant adverse impacts on tribal resources as described below.

Public Services and Utilities

Construction

Construction of the proposed action would temporarily increase the demand for water at the project site. Construction activities would also result in a temporary increase in solid waste and hazardous waste. These services would not exceed public service or utility service provider capability.

Onsite Operations

During operations, new buildings and additional employees would modestly increase the demand for potable water on site. Routine operation of the proposed action would increase the amount of solid waste generated at the project site and could generate hazardous waste as a result of minor releases. These hazardous materials would require safe disposal and would be hauled separately from regular solid waste.

Rail and Vessel Transport

No utility or public service impacts would result from rail and vessel transport.

Hazardous Materials

Construction

Construction activities would be required to comply with applicable regulations. The project site has undergone cleanup and during follow-up sampling, pollutants were identified on the site.

Construction could result in the slight risk of exposure of contaminated soils; therefore, a soil management plan would be prepared prior to construction activities. Implementation of mitigation (Table S-1) would reduce these impacts.

Onsite Operations

Although the unloading, storage, and loading of bulk liquids would be similar to existing operations, there is increased risk of exposure of people (primarily workers) and the environment due to the increase in throughput and increased consequences to human health and the environment due to harmful substances. Similar to existing conditions, exposure to hazardous materials associated with routine operations would be most likely to occur during unloading and loading activities. These routine operations could result in minor releases that would be easily contained and cleaned up by trained terminal personnel. The proposed facility would be designed and operated to meet the appropriate safety standards as a designated oil facility under federal and state law. Specifically, the facilities would be designed to meet primary and secondary containment standards in the event of a spill. Additionally, the applicant would be required to update the integrated contingency plan to reduce the potential for accidental releases of crude oil or other hazardous materials. The integrated contingency plan identifies emergency notification and response protocols during site operations and vessel transfers. Similar to existing conditions, the applicant would continue to ensure that personnel training and handling and storage activities would also comply with the appropriate safety standards intended to reduce the risks of accidents and to address potential spills during operation. Potential impacts from spills are described in the environmental health and safety risks section.

Rail and Vessel Transport

Potential impacts related to rail and vessel transport of hazardous materials are addressed in the environmental health and safety risks section.

Rail Traffic

Implementation of the proposed action would result in an increase of two unit train trips per day (a maximum of 730 trips per year) along the PS&P rail line. Based on the rail traffic modeling and analysis, the PS&P rail line has the capacity to accommodate up to 12 trips per day. Existing rail traffic is approximately three trips per day, so the rail line would have sufficient capacity to accommodate existing trains and trains related to the proposed action. However, rail traffic and

operations, particularly switching operations,⁴ would result in increased blockages along the rail line but most substantially at intersections between East Aberdeen and the project site. The potential impacts on vehicle delay and safety are addressed in the next section.

Vehicle Traffic and Safety

Construction

Construction of the proposed action would result in more vehicles traveling to and from the project site to transport construction workers, equipment, and materials. However, these trips would represent a small increase in daily traffic in the area and would not likely affect vehicle delays and safety.

Onsite Operations

Operation of the proposed action would add vehicle trips to and from the project site, mainly from additional employees. These trips would also represent a small increase in daily traffic and would not likely affect vehicle delays and safety.

Rail and Vessel Transport

At maximum throughput, operation of the proposed action would increase rail traffic along the PS&P rail line by an average of two train trips per day. These trains would block rail crossings more frequently, which would cause increased vehicle delays and safety concerns.

Several intersections in Centralia and Aberdeen currently have long vehicle delays. These delays would continue under the no-action alternative. The increase in rail traffic to and from the proposed facilities related to the proposed action would block PS&P rail line crossings more frequently and longer than currently occurs. These delays would be greatest during rush hour traffic although in general, vehicle delay along most of the PS&P rail line would not substantially increase. This is because the existing and future vehicle traffic is relatively low along this corridor and the chance of encountering a project train at a crossing would continue to be low. However, closer to the project site, eastbound trains occupying Olympic Gateway Plaza crossings and trains being separated and moved from Poynor Yard would cause substantial increases in vehicle delay at grade crossings between East Aberdeen and the project site. For example, trains currently occupy all grade crossings in the Olympic Gateway Plaza area for up to 35 minutes about 4 times per week. Under the proposed action, this time would increase to up to 45 minutes and could happen approximately 7 more times per week. Trains currently occupy the Industrial Road crossing adjacent to the project site for up to 13 minutes. Under the proposed action, this time would increase to up to 77 minutes.

The vehicle delays would affect emergency vehicles unless alternative routes were available. Implementation of mitigation (Table S-1) could decrease vehicle delays and emergency access issues. Potential infrastructure changes in the future could also reduce impacts. If mitigation is not feasible or infrastructure changes do not occur, the proposed action would have unavoidable and

⁴ Switching operations are generally related to disassembling unit trains by setting rail cars on multiple tracks, rearranging rail cars on tracks to facilitate loading or unloading, sorting rail cars by destination, delivering rail cars to an industry, picking up rail cars from an industry, or assembling unit trains from rail cars on multiple tracks.

significant adverse impacts on vehicle delays from trains blocking crossings in the Olympic Gateway Plaza and Port areas.

Vessel Traffic

Construction

Construction of the proposed action would involve no in-water work and no vessel transport, and therefore would not affect existing vessel traffic.

Onsite Operations

At maximum throughput, operation of the proposed action would result in vessels at berth at Terminal 1 up to 200 days per year, which added to baseline vessel forecasts over the planning period would result in vessels at the Terminal 1 berth 244 days per year. Factoring annual downtime, a berth is available up to 90% of the time or 328 days per year. The proposed action would not exceed berth availability. Cumulative impacts are discussed in the potential cumulative impacts section.

Increased occupancy of the Terminal 1 berth under the proposed action would reduce access to fishing areas located next to the Terminal 1 dock, which is in a prime commercial fishing area. Depending on the specific circumstances of each interaction (e.g., chance of a vessel calling during an open fishing window, distribution of the fish within the channel, number of fishers on any given day), it is difficult to predict whether increased occupancy at Terminal 1 would significantly affect any single fisher's daily catch. However, if a vessel is at berth during the fall fishery, fishers would have the option to fish longer (complete more drifts) or may choose to fish other preferred locations in Grays Harbor (such as other portions of the navigation channel, farther away from the shoreline or farther upstream) although opportunities to relocate during intense fishing periods may be limited if the other areas are occupied by fishers. Implementation of mitigation (Table S-1) to coordinate docking schedules with fishing schedules, provide advance notice of vessel calls and movements, and work with the Quinault Indian Nation to identify other measures as appropriate could reduce impacts on commercial fishers.

Rail and Vessel Transport

At maximum throughput, operation of the proposed action would result in 400 tank vessel trips per year. Adding these trips to baseline forecasts of large commercial vessel trips over the analysis period, would result in 822 vessel trips per year. Considering the opportunities available for these vessels to travel through the harbor at various channel depths, the proposed action would not result in exceeding the capacity of the navigation channel. The increase in vessel traffic would increase the demand for escort tugs and pilots in Grays Harbor, but this demand could be managed with existing resources. It is not anticipated that availability of escort tugs or pilots would limit vessel operations at the Port. Cumulative impacts are discussed in the potential cumulative impacts section.

Increased vessel traffic could affect commercial fishing activities by disrupting fishing in the navigation channel, particularly from the Crossover Channel Reach of the navigation channel to the turning basin. Vessel traffic would not affect fishing outside the navigation channel (including crab fishing in the harbor). Conflicts would be greatest during the fall salmon fishery when the most fishing boats are present. Commercial fishing could be affected, but alternative fishing areas are available. Implementation of mitigation (Table S-1) would reduce these impacts further.

What are the environmental health and safety risks of oil spills, fires, and explosions?

Because it is not possible to predict the timing or magnitude of an oil spill, the Draft EIS focuses on spill scenarios. The spill scenarios include those required by law for contingency planning plus others that were relevant to the proposed action. Each spill scenario is defined by the type of activities, spill location, and the amount spilled.

A large oil spill, fire, or explosion would likely cause unavoidable and significant adverse environmental impacts. The likelihood of a large spill or related fire or explosion is relatively low; however, the potential for significant consequences to the environment and human health if such an incident were to occur is high. The specific impacts would vary based on the location, amount spilled, type of liquid, and weather conditions. No mitigation measures would completely eliminate the possibility of an incident, nor would they completely eliminate the adverse consequences of an incident.

The main spill scenarios are summarized by activity (Table S-2).

Table S-2. Spill Scenarios

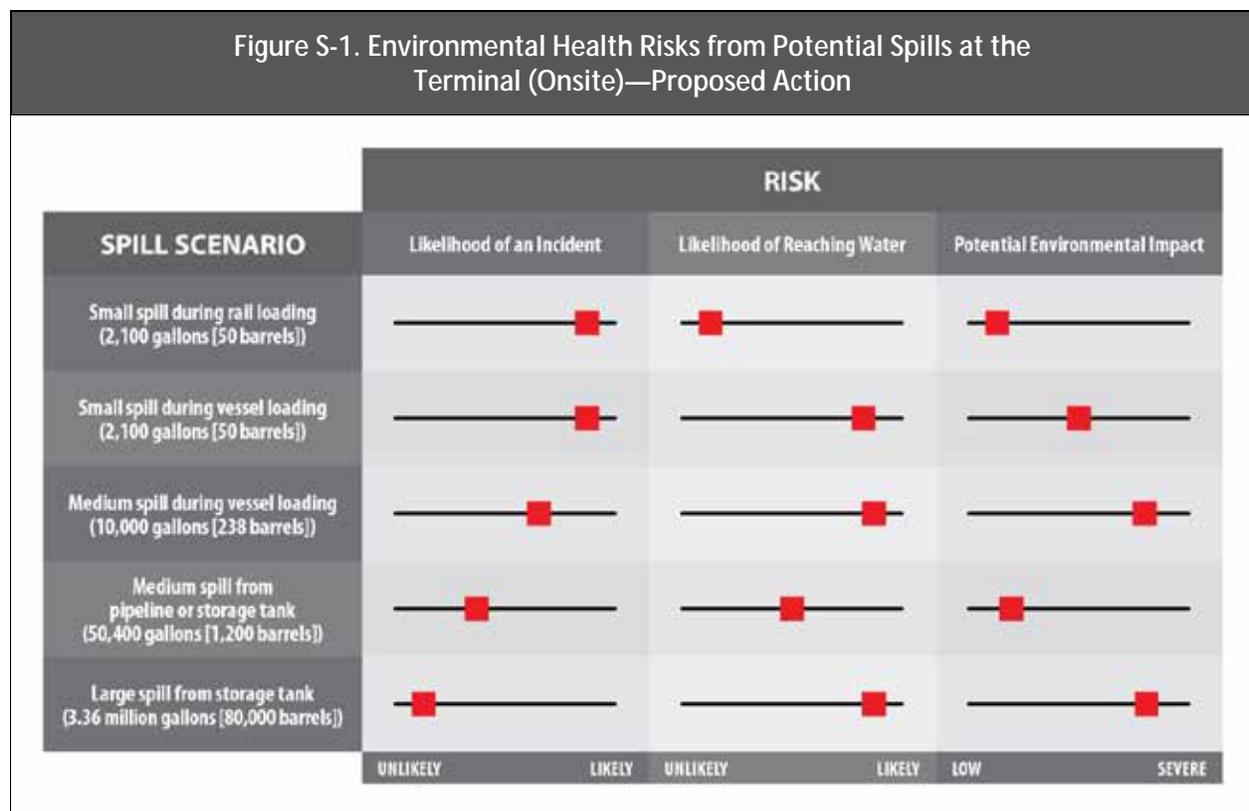
Source	Spill Scenario
Small	
Project site	2,100 gallons (50 barrels) spilled when transferring oil from rail cars or to vessels at the project site
Rail transport	1,000 gallons (24 barrels) spilled during a derailment along the PS&P rail line
Medium	
Project site	10,000 gallons (238 barrels) spilled when transferring oil to a vessel at the project site 50,400 gallons (1,200 barrels) spilled from pipeline or storage tank at the project site
Rail transport	30,000 gallons (714 barrels or the contents of one full tank car) spilled during a derailment along the PS&P rail line
Large	
Project site	3.36 million gallons (80,000 barrels or the entire contents of one full storage tank) spilled on site
Rail transport	90,000 gallons (2,140 barrels or the contents of three full tank cars) spilled during a derailment along the PS&P rail line 150,000 gallons (3,570 barrels or the contents of five full tank cars) spilled during a derailment along the PS&P rail line 900,000 gallons (21,400 barrels or the contents of 30 full tank cars) spilled during a derailment along the PS&P rail line
Vessel transport	105,000 gallons (2,500 barrels) spilled into Grays Harbor from a vessel collision Up to 1.2 million gallons (29,000 barrels) from a vessel grounding in Grays Harbor 15.1 million gallons (360,000 barrels or the entire contents of one full tanker, including fuel) spilled into Grays Harbor from a vessel collision at harbor entrance

Risk of Oil Spills

Terminal (Onsite) Operations

For each of the spill scenarios related to onsite operations of the proposed action, Figure S-1 depicts the likelihood of the spill occurring, the likelihood of such a spill resulting in exposure to the environment, and the resulting extent of environmental damage that could occur.

Spill prevention, preparedness, and response requirements are intended to reduce the likelihood of a spill at the project site and the resulting environmental damage. Implementation of mitigation (Table S-1) would further reduce the risks associated with spills at the project site. Although the overall risks would be low, if a spill occurred, the potential environmental damage would be significant. These risks would remain even with implementation of mitigation.



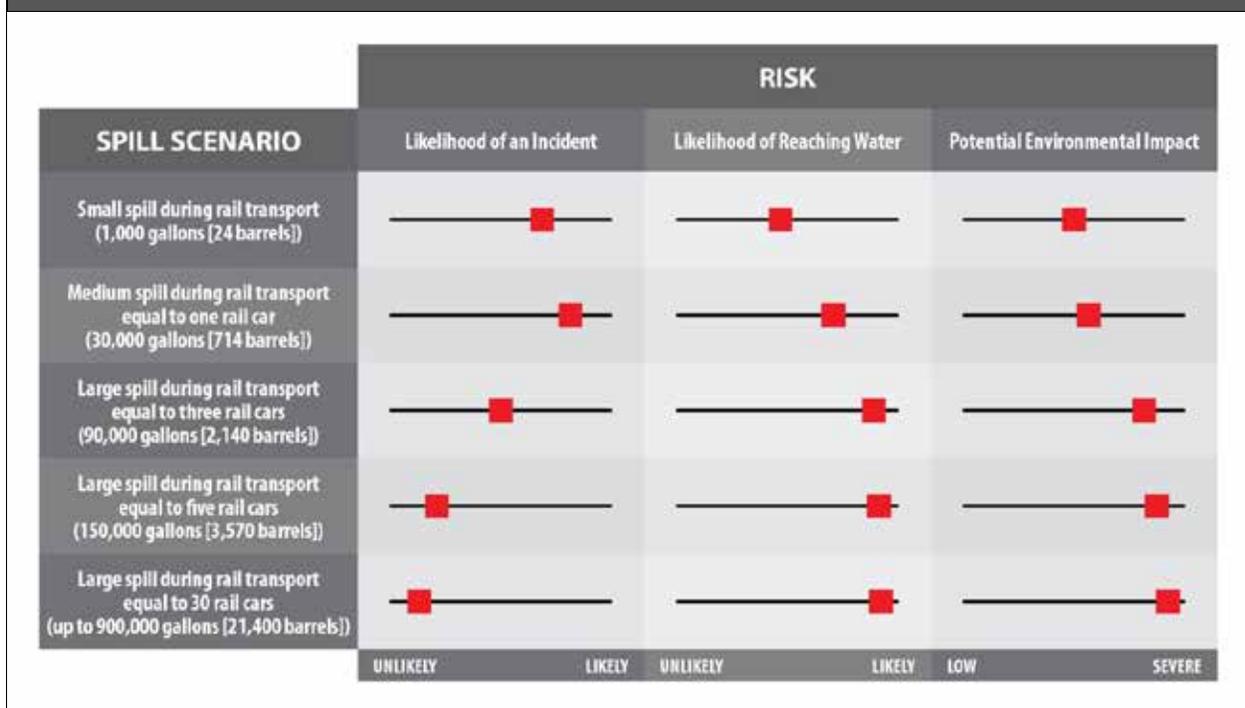
Rail Transport

For each of the spill scenarios related to rail transport along the PS&P rail line, Figure S-2 depicts the likelihood of the spill occurring, the likelihood of such a spill resulting in exposure to the environment, and the resulting extent of environmental damage that could occur.

Spill prevention, preparedness, and response requirements are intended to reduce the likelihood of a spill during rail transport and the resulting environmental damage. Implementation of mitigation (Table S-1) would further reduce the risks. Although the overall risks would be low, if a spill

occurred, the potential environmental damage would be significant. These risks would remain even with implementation of mitigation.

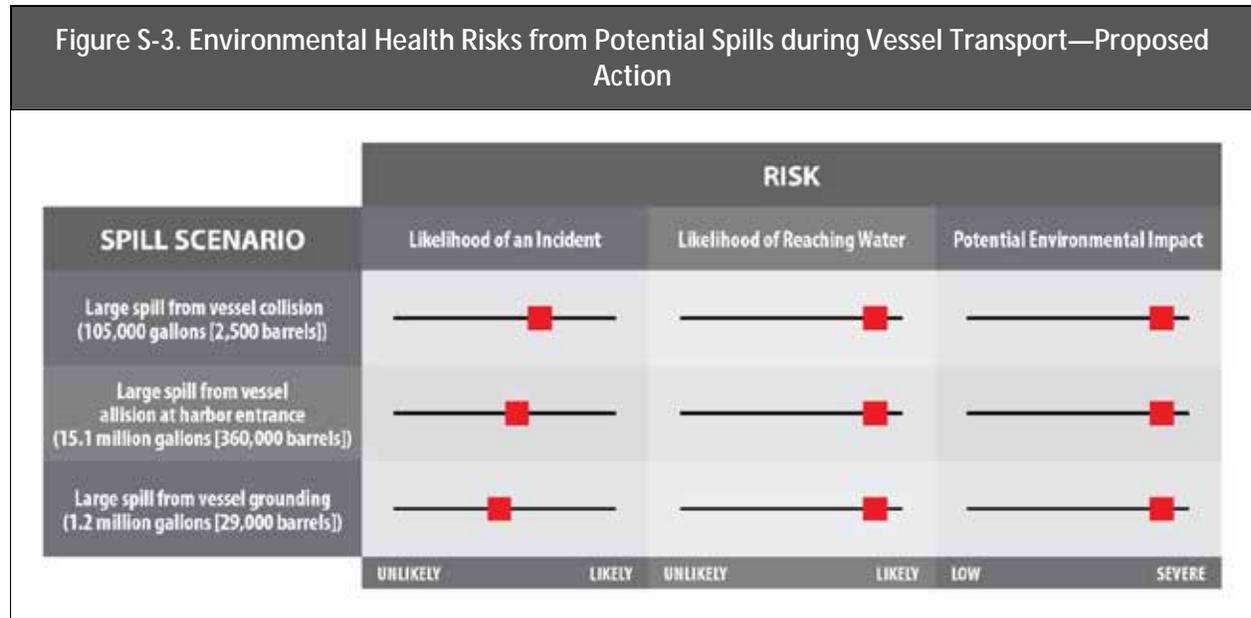
Figure S-2. Environmental Health Risks from Potential Spills during Rail Transport—Proposed Action



Vessel Transport

For each of the spill scenarios related to vessel transport in Grays Harbor, Figure S-3 depicts the likelihood of the spill occurring, the likelihood of such a spill resulting in exposure to the environment, and the resulting extent of environmental damage that could occur.

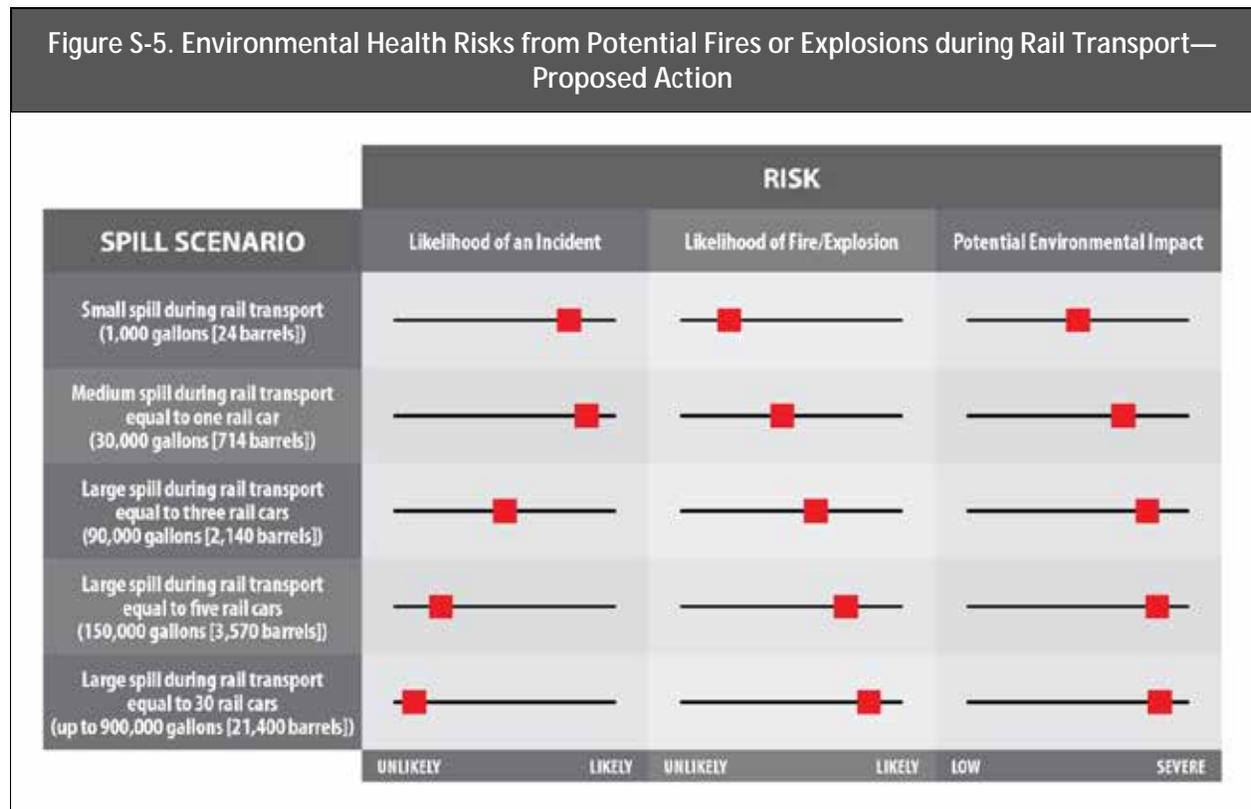
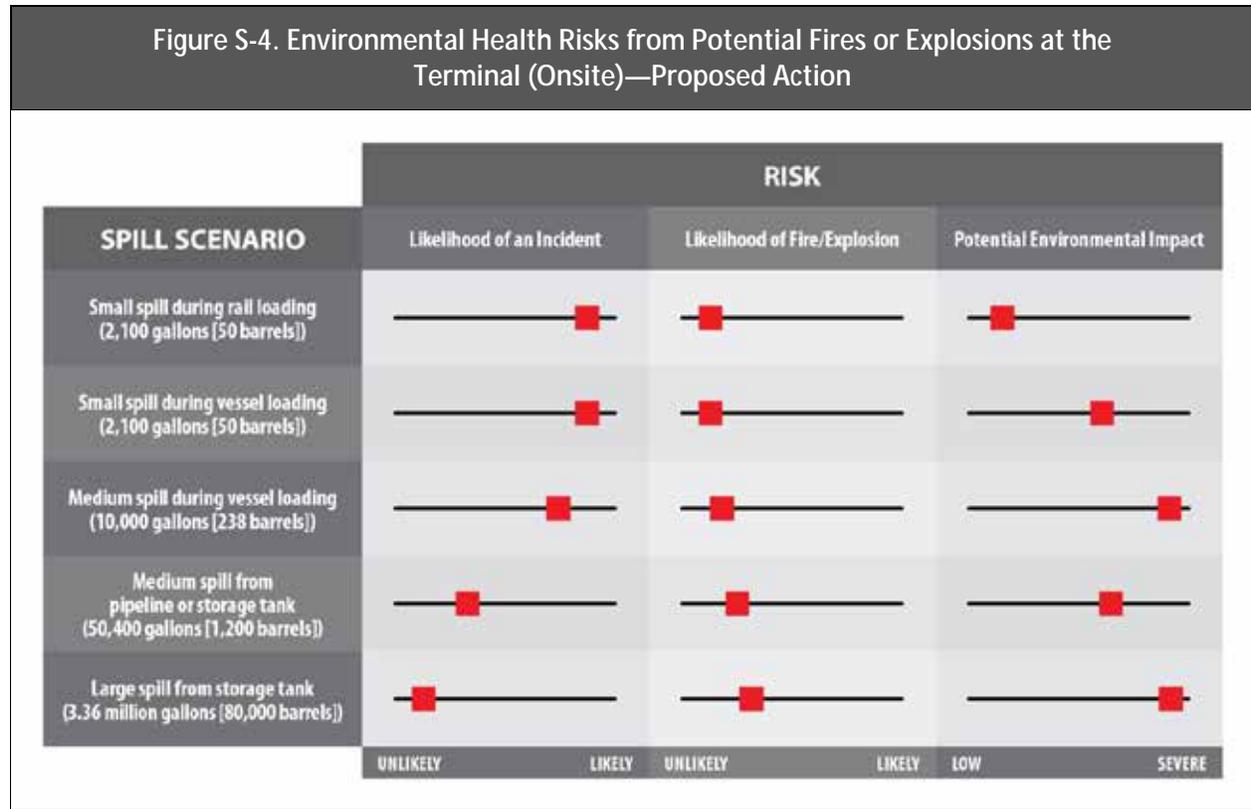
Spill prevention, preparedness, and response requirements are intended to reduce the likelihood of a spill during vessel transport and the resulting environmental damage. Implementation of mitigation (Table S-1) would further reduce the risks. Although the overall risks would be low, if a spill occurred, the potential environmental damage would be significant. These risks would remain even with implementation of mitigation.



Risk of Fire or Explosion

In general, fires or explosions would be less likely than oil spills. Most of the materials that would be handled at the project site are in a liquid form and do not generate many vapors, which reduces the risk of such incidents. For each of the spill scenarios, Figure S-4 (onsite), Figure S-5 (rail transport), and Figure S-6 (vessel transport) depict the likelihood of the spill occurring, the likelihood of such a spill resulting in exposure to the environment, and the resulting extent of environmental damage that could occur.

Spill prevention, preparedness, and response requirements are intended to reduce the likelihood of a fire or explosion and the resulting environmental damage. Implementation of mitigation (Table S-1) would further reduce the risks. Although the overall risks would be low, if a spill occurred, the potential environmental damage would be significant. These risks would remain even with implementation of mitigation.





Environmental Damage

Depending on the circumstances of each incident, the extent of damage would vary. Factors that influence the spread of oil or hazardous materials include the amount spilled, type of material, location, weather, and actions taken to contain or respond to the incident.

Spills of crude oil are considered hazardous. These materials can damage plants, animals, and humans if prolonged exposure occurs. Additionally, Grays Harbor and the Chehalis River provide habitat for numerous sensitive and unique plant and animal species. The area also provides important commercial and recreational opportunities, including fishing and shellfish growing, and cultural, historical, and tribal resources. Potential impacts from oil spills, fires, or explosions are summarized by resource in Table S-3.

Table S-3. Environmental Damage from Oil Spills, Fires, or Explosions

Environmental Resource	Potential Impacts from Crude Oil Spill	Potential Impacts from Fire or Explosion
Water	Contaminated surface water and groundwater	Altered water chemistry
Plants	Stunted growth, impaired reproduction, and death; possible changes to overall community structure	Injury, death, impaired reproduction
Animals	Stunted growth, impaired reproduction, behavior changes, and death; possible changes to overall community structure	Injury, mortality, immigration, or emigration
Aesthetic Recreation	Degraded views from oil buildup Degraded or closed recreational areas	Degraded views from burns Degraded or closed recreational areas
Cultural Resources	Contaminated historic resources, archeological sites, and culturally important areas, possible damage during cleanup activities	Damaged historic resources and culturally sensitive properties
Tribal Resources	Degraded water quality, fisheries, important plants, ceremonial qualities; possible damage and disturbance during cleanup activities	Degraded water quality, fisheries, important plants, ceremonial qualities
Human Health	Respiratory problems, dizziness, nausea, eye and throat irritation; however, levels of harmful chemicals typically below toxic levels within the first few minutes of a spill	Respiratory problems, dizziness, nausea, eye and throat irritation

What are the potential impacts of extended rail and vessel transport?

The proposed action would have potential rail transportation and vessel transportation impacts in the extended study area as a result of routine operation. The extended study area is rail transport along mainline routes beyond Centralia and vessel transport along commercial vessel routes off the Washington Coast, including Puget Sound.

Rail traffic related to the proposed action would account for a small percentage of BNSF rail traffic in Washington State: approximately 2% of the expected 2035 capacity estimated by the Washington State Department of Transportation for the main line along the Interstate 5 corridor and approximately 3% along the Columbia River Gorge. The following impacts in the extended study area could result from increased rail traffic.

- | Increased emissions from more diesel trains.
- | Increased noise at grade crossings and along the route.
- | Increased vehicle delay at grade crossings, including disruption to emergency vehicle response times.
- | Increased risk of a derailment, spill, or fire/explosion involving rail cars.

Vessel traffic in the extended study area from the proposed action would account for a small proportion of overall vessel traffic. The following impacts in the extended study area could result from increased vessel traffic.

- | Increased emissions from vessel traffic.

- | Increased noise from vessel traffic.
- | Increased impacts on marine mammals from vessel traffic.
- | Potential impacts on tribal resources from increased vessel traffic.
- | Increased risk of a spill, fire, or explosion involving vessels.

What are the potential cumulative impacts?

The analysis considered other reasonably foreseeable projects, past and present actions, and future conditions for cumulative impacts in the study area. These cumulative projects are the proposed action, Westway Expansion Project, the Grays Harbor Rail Terminal Project, and dredging for the Grays Harbor Navigation Improvement Project.

Air

Air emissions associated with the cumulative projects are not anticipated to exceed applicable state and federal air quality standards; however, under worst-case conditions, the 1-hour standard for nitrogen oxides could be exceeded if all cumulative projects are conducting loading or unloading activities at the same time. Operation of the cumulative projects could also increase the risk that emissions of diesel particulate matter could affect residents around the project sites and Poynor Yard. Implementation of mitigation (Table S-1) such as reducing idling time and monitoring air emissions would likely reduce these impacts to acceptable levels.

Greenhouse gas emissions would increase with the cumulative projects. Cumulative greenhouse gas emissions for operations and transportation would be approximately 103,753 million metric tons per year. Cumulative emissions would represent approximately 0.1% of Washington State emissions, 0.002% of national emission reduction targets for 2025, and 0.00003% of global emission reduction targets.

Greenhouse gas emissions from the cumulative projects contribute to climate change at the global level. Climate change would affect Washington State and the region by increasing the risk of wildfires, floods and drought, changes in precipitation, increased temperatures, and ocean acidification. Climate change could contribute to sea level rise; however, no flooding from sea level rise is predicted at the project site.

Noise and Vibration

The cumulative projects would add 4.25 train trips per day to the 3 train trips per day under existing conditions. The increase in noise along the PS&P rail line could disturb residents and other sensitive groups. Using methods established by the Federal Rail Administration and Federal Transit Authority, assuming that the cumulative projects are operating at maximum throughput, 756 residents would be exposed to moderate noise increases from train horns, and 253 residents would be exposed to severe noise increases from train horns. Severe noise increases would be most likely near grade crossing in Elma, Satsop, Montesano, East Aberdeen, Malone, Porter, and Rochester.

The cumulative projects would also result in increases in wayside noise from the passing of a train. The greatest increases would occur between Elma and Satsop where 10 residences could be exposed to severe noise increases. Implementation of mitigation (Table S-1) such as quiet zones could reduce impacts associated with train horns if federal safety standards are otherwise met;

however, some residents would likely still experience unavoidable and significant adverse increases in noise.

Tribal Resources

At maximum throughput, operation of the cumulative projects would add 758 vessel trips to baseline forecasts of large commercial vessel trips along the navigation channel over the analysis period, for a total of 1,180 vessel trips or an average of three per day. This increased traffic and the increased occupancy of the Terminal 1 dock could disrupt tribal fishing in the navigation channel (approximately the Crossover Channel Reach of the navigation channel to the turning basin upstream of Terminal 2) and adjacent to Terminal 1, respectively.

Vessel traffic would not likely affect Quinault Indian Nation tribal resources outside of the navigation channel (including crab fishing in the harbor). However, vessel operations could exclude tribal fishers from a portion of their typical fishing area within the navigation channel (from approximately the Crossover Channel Reach of the navigation channel to the turning basin upstream of Terminal 2). Conflicts would be greatest during the fall salmon fishery when tribal fishers use gillnets. Vessel traffic could also reduce access to marine fisheries (including crab) in the ocean because tribal fishers may not be able to cross the bar when tank vessels are moving into or out of the navigation channel. Implementation of mitigation (Table S-1) to coordinate docking schedules with fishing schedules, provide advance notice of vessel calls and movements, and work with Quinault Indian Nation tribal officials to identify other measures as appropriate could reduce these impacts. Vessel transport related to the proposed action could exclude tribal fishers from fishing areas. If mitigation measures are not feasible, the proposed action could result in unavoidable and significant adverse impacts on tribal resources as described below.

Rail Traffic

The cumulative projects would add approximately 4.25 trips per day on average to the PS&P rail line to the approximately 3 trips per day under existing conditions. Based on modeling, the PS&P rail line has the capacity to handle up to 12 trips per day. Although the total number of minutes each day that grade crossings would be blocked along the PS&P rail line would increase, trains associated with the cumulative projects could be accommodated on the PS&P rail line with existing infrastructure and there would be no cumulative impacts on rail traffic.

Vehicle Traffic and Safety

Increased rail traffic associated with the cumulative projects, described above, would increase vehicle delays at grade crossings along the PS&P rail line. These delays would not be substantial for most of the rail line between Centralia and Aberdeen, because the chance of encountering a blocked grade crossing would remain relatively low.

Vehicle delay would be most substantial in Centralia and Aberdeen. Vehicle delay would be greatest if a train traveled to or from the project site during rush hour. In Aberdeen, rail operations on the PS&P rail line are heavily influenced by train movements related to Poynor Yard. Substantial vehicle delays would occur with the cumulative projects in Aberdeen from the eastern end of the Olympic Gateway Plaza (Fleet Street) to the Port area and in Centralia at Tower Street, Pearl Street, and H Street grade crossings.

Vehicles at grade crossings in Aberdeen would be affected by switching operations between Poynor Yard and the project sites and would experience longer delays.⁵ Currently, vehicles have to wait when trains block grade crossings in the Olympic Gateway Plaza for up to 44 minutes per train about four times per week. For the cumulative projects, this delay would increase to up to 52 minutes 19 more times per week.

Vehicle delay would also substantially increase in the Port area near the project sites. Trains currently occupy grade crossings in this area for up to 13 minutes four times per week. This time would increase up to 22 minutes for the Westway project and up to 77 minutes for the Imperium project. The number of times per week vehicles would have to wait would increase from four times per week to 15 times per week with both Westway and Imperium projects.

Vehicle delays at grade crossings could cause congestion and delays at upstream intersections (east of the project sites). All such delays would affect emergency vehicles unless alternative routes were available. Implementation of mitigation (Table S-1), including the applicant working with local jurisdictions to implement accepted measures to address these delays, could reduce these impacts. In addition, the applicant would ensure that sufficient emergency service equipment is available to local emergency service providers for the Olympic Gateway Plaza are that might otherwise be temporarily inaccessible by vehicle due to blocked grade crossings. If the Westway Expansion Project is also approved, similar measures would apply to that applicant.

Increased rail traffic related to the cumulative projects could increase the frequency of accidents along the PS&P rail line. The grade crossings that would have the shortest predicted intervals between accidents would be in Aberdeen near the Olympic Gateway Plaza and in the Port area because of switching operations involving Poynor Yard. Both vehicle delays and accident frequencies would generally improve by 2037 for some grade crossings because improvements such as grade-crossing protections are assumed to be implemented by then. Additionally, improvements considered for the East Aberdeen Mobility Project would likely improve both delay and safety at grade crossings in the Olympic Gateway Plaza area.

Implementation of mitigation (Table S-1) could help to decrease vehicle delays and emergency access issues under cumulative conditions. Potential infrastructure changes in the future may also reduce impacts. If mitigation is not feasible or infrastructure changes do not occur, the proposed action would have unavoidable and significant adverse impacts on vehicle delays from trains blocking crossings in the Olympic Gateway Plaza and Port areas of Aberdeen.

Vessel Traffic

At maximum throughput, the cumulative projects would add 758 tank vessel trips per year to large commercial vessel trips forecast over the analysis period, for a total of 1,180 vessel trips. Considering the opportunities available for these vessels to travel through the harbor at various channel depths, the cumulative projects would not exceed the capacity of the navigation channel. The increase in vessel traffic would increase the demand for escort tugs and pilots in Grays Harbor but this demand could be managed with existing services.

⁵ Relates only to the proposed action and Westway Expansion Project.

Adding the maximum number of days that tank vessels related to the cumulative projects⁶ (up to 319 days) would be docked at Terminal 1 to the number of days forecast for baseline vessels, the Terminal 1 berth would be occupied 363 days per year. Although this exceeds the number of days that the Terminal 1 berth would be available per year (90% of 365 days = 328 days), it is based on the very conservative assumptions.⁷ Moreover, if tankers were used instead of tank barges, berth occupancy could be as low as 284 days per year and there would be sufficient capacity.

The increased vessel traffic could affect commercial and recreational fishers by disrupting fishing in the navigation channel, particularly from the Crossover Channel Reach of the navigation channel to the turning basin and at Terminal 1. Vessel traffic would not affect commercial or recreational fishing outside the navigation channel (including crab fishing in the harbor). Conflicts would be greatest during the fall salmon fishery when the most commercial fishing boats are present. Other fishing areas are available and the overall fishing area potentially affected by increased vessel traffic is not expected to affect commercial or recreational fishing significantly. Implementation of mitigation (Table S-1) could also reduce potential impacts.

Environmental Health and Safety

As described above, potential impacts of a spill, fire, or explosion vary based on the incident. A large oil spill, fire, or explosion would likely cause unavoidable and significant adverse environmental impacts. The likelihood of a large spill or related fire or explosion is relatively low; however, the potential for significant consequences to the environment and human health if such an incident were to occur is high. The specific impacts would vary based on the location, amount spilled, type of liquid, and weather conditions. No mitigation measures would completely eliminate the possibility of an incident, nor would they completely eliminate the adverse consequences of an incident.

The spill scenarios used in the risk assessment for the proposed action were also used to assess risks of the cumulative projects. These scenarios looked at terminal operations, rail transportation, and vessel transportation. The orders of magnitude of risk were very similar to the risk under the proposed action for the likelihood of a spill, the likelihood of reaching water, the likelihood of a fire or explosion resulting from a spill, and the potential for environmental impacts.

In general, for operations at any of the project sites, the cumulative projects would result in the potential for more frequent spills of bulk liquids relative to the proposed action alone. The increased number of rail trips and vessel trips related to the cumulative projects pose a greater potential for more frequent spills of bulk liquids relative to the proposed action alone.

In general, fires or explosions occur as the result of some but not all oil spills. An incident is most likely to occur during transport when higher speeds provide enough energy to generate a spark. Because allowable train speeds along the PS&P rail line and vessel speeds in the harbor are low, the likelihood of a fire or explosion during transport is reduced, although the potential for environmental harm if a fire occurred with or without an explosion could be quite severe.

⁶ Only includes vessels related to the Westway and Imperium Expansion Projects, because vessels associated with the Grays Harbor Rail Terminal project would call at Terminal 3.

⁷ Maximum number of vessels (tank barges) and a full 24 hours to load each tank barge.

What are the potential economic impacts on the City of Hoquiam?

Economic impacts were analyzed in accordance with the Hoquiam Municipal Code. No additional economic analysis was conducted as part of the environmental review.

Construction

Construction would temporarily stimulate the economy through purchases of materials, supplies, equipment, and services; payroll to construction workers; and related indirect and induced effects. Construction would result in various tax revenues accruing to state and local governments.

Operations

Operation would likely result in increased employment and income associated with direct spending for labor salaries and material purchases. Additionally, these activities could result in indirect and induced employment and income impacts. The annual economic output of the proposed action in Grays Harbor County is estimated at \$77.8 million. At full buildout, the proposed action would generate an estimated 103 direct jobs in Grays Harbor County.

What are the potential social policy impacts of the proposed action?

Construction

Construction would not result in elements that would bisect, disrupt, or isolate any established communities or change the existing community character, nor would it require relocating any residences or businesses. Construction would not have a significant impact on community welfare because it would not substantially degrade air quality, increase noise, reduce access to recreational facilities, or reduce property values. Construction would not result in the permanent relocation of workers from outside the study area, displacement of local residents, or the requirement for additional housing, and would not disproportionately affect minority and low-income populations.

Operations

Onsite operations of the proposed action would not require acquisition of new properties that would require relocating any residences or businesses, nor would it change the existing community character. Although the PS&P rail line is an existing facility, the increased traffic associated with the proposed action would have an impact on community cohesion in Aberdeen from increased vehicle delay. Vessel traffic and docked vessels associated with the proposed action would have an impact on community cohesion by disrupting commercial and tribal fishing that occurs in the navigation channel and at Terminal 1, respectively. The increase in vessels would limit the timing, duration, and physical area that could be fished.

Community welfare impacts off site would be related to air, noise, recreation, vehicle traffic, and environmental health and safety impacts as described in the respective sections above. Operation of the proposed action would have a limited potential to affect population demographics.

Routine onsite operations are not anticipated to result in significant environmental impacts and would, therefore, not be expected to disproportionately affect minority and low-income populations

around the project site. For rail and vessel transport, minority and low-income populations closest to the rail line and around Grays Harbor could be disproportionately affected. Potential disproportionate impacts from rail transport would include increased noise, air emissions, and vehicle delay. Potential disproportionate would also include increased exposure to risks of incidents resulting in spills, fires, or explosions.

What are the costs and benefits of the proposed action to the City of Hoquiam?

Cost-benefit impacts were analyzed in accordance with the Hoquiam Municipal Code. No additional cost benefit analysis was conducted as part of the environmental review. Implementation of the proposed action would result in some economic and financial benefits to the City of Hoquiam as well as some costs. Table S-4 summarizes the main benefits and costs from the proposed action. When enough information was available, monetary estimates are provided in 2013 dollars.

If additional projects, such as the Westway Expansion Project and Grays Harbor Rail Terminal Expansion project are implemented, the potential for more significant impacts on rail congestion, vehicle congestion, and the related safety concerns would also increase.

Table S-4. Main Benefits and Cost of the Proposed Action to the City of Hoquiam (2013 Dollars)

Benefits	Quantification
Direct labor income during construction	Estimate: \$3.1 million to \$3.6 million
Annual direct labor income during each year of operations	Estimate: \$260,000 to \$325,000 per year
Additional labor income associated with indirect and induced jobs in during construction and operations	Not estimated
Property tax collections during construction	Estimate: \$120,428
Property tax collections during each year of operations	Estimate: \$1.0 million per year
Additional tax collections during construction and operations from local sales and use tax, business and occupation tax and utility taxes	Not estimated
Costs	
Increased traffic delays	Previous studies estimate: \$9.66 and \$16.18 per person delayed in traffic, per hour, for local traffic \$16.51 and \$24.76 per person delayed in traffic, per hour, for intercity traffic
Increased exposure to traffic accidents risks	Previous studies estimate: \$3,037 per person to \$1.5 million per person involved in a traffic accident, depending on severity of incident
Cost of training for the City of Hoquiam Fire Department on flammable liquid fires risks and to review and practice material release emergency response	Not estimated
Potential decrease in property values	Previous studies estimate: \$3,500 to \$5,800 on average 3 to 5% for increases of 9 trips per day 5 to 20% for increases of 18 trips per day

What permits and plans apply to the proposed action?

The following permits and/or approvals would be required for the proposed action.

City

- | City of Hoquiam Critical Areas Review for fish and wildlife habitat and geologically hazardous areas
- | City of Hoquiam Shoreline Substantial Development Permit
- | City of Hoquiam Conditional Land Use Permit
- | City of Hoquiam Building Permit
- | City of Hoquiam Grade and Fill Permit
- | City of Hoquiam Fire Department Permit
- | City of Aberdeen Utility Services Agreement
- | City of Aberdeen Critical Areas Review for fish and wildlife habitat and geologically hazardous areas
- | City of Aberdeen Shoreline Substantial Development Permit
- | City of Aberdeen Building Permit
- | City of Aberdeen Grade and Fill Permit
- | City of Aberdeen Fire Department Permit

State

- | Washington State Department of Ecology National Pollutant Discharge Elimination System Construction Stormwater General Permit
- | Washington State Department of Ecology Resource Conservation and Recovery Act Notice of Registration Update
- | Washington State Olympic Region Clean Air Agency Approval Order
- | Washington State Department of Ecology National Pollutant Discharge Elimination System Industrial Stormwater Permit
- | Washington State Department of Ecology Spill Prevention Plan
- | Washington State Department of Ecology Spill Contingency Plan
- | Washington State Department of Ecology Facility Operations Manual
- | Washington State Department of Ecology Oil Handling Facility Training and Certification Report
- | Washington State Department of Ecology Oil Handling Facility Safe and Effective Threshold Report
- | Washington State Department of Labor and Industries – Certificate of Industrial Insurance Coverage
- | Washington Department of Licensing – Fuel Tax License

Federal

- i Integrated Contingency Plan (One Plan)⁸ that addresses the following required plans:
 - i U.S. Environmental Protection Agency Facility Response Plan
 - i U.S. Environmental Protection Agency Spill Prevention Control and Countermeasure Plan
 - i U.S. Coast Guard Facility Response Plan
 - i U.S. Coast Guard Letter of Intent
 - i U.S. Coast Guard Oil Spill Response Plan
 - i U.S. Coast Guard Facility Security Plan and Facility Security Assessment
 - i U.S. Coast Guard Operations Manual Update

What are the unavoidable and significant adverse impacts?

Implementation of mitigation (Table S-1) would reduce but not completely eliminate significant adverse impacts on noise, tribal resources, vehicle traffic, and environmental health and safety. The following sections describe the unavoidable and significant adverse impacts of the proposed action.

Noise

The proposed action would result in increased rail traffic on the PS&P rail line that could cause substantial increases in noise in certain areas between Centralia and the project sites. The most adverse noise impacts would be from locomotive horns sounded for public safety near certain grade crossings. Railroad noise is exempt from Washington State and local noise limits; however, it is possible for communities to work with the Federal Railroad Administration to apply for a quiet zone to limit train horn sounding. The applicant will work with PS&P and interested communities, if requested, to develop quiet zones. However, as long as locomotive horns continue to sound for safety, the potential for unavoidable and significant noise impacts in areas along the PS&P rail line would remain.

Tribal Resources

Implementation of mitigation (Table S-1) would reduce but would not completely eliminate impacts on tribal resources. Vessels related to the proposed action would travel through usual and accustomed fishing areas in Grays Harbor. Under current and future conditions, increased vessel traffic could restrict access to tribal fishing areas in the navigation channel and adjacent to Terminal 1. This conflict is most likely to occur for fishing related to harvest of salmon, steelhead, and sturgeon. Because other factors besides vessel operations affect fishing opportunities, such as the number of fishers, fish distribution, timing, and duration of fish windows, the extent to which vessel operations related to the proposed action would affect tribal fishing is difficult to quantify. No mitigation measures would completely eliminate the possibility of impacts on fishing resources because of vessel operations related to the proposed action.

⁸ The Integrated Contingency Plan process allows a facility to comply with multiple federal planning requirements, including those required by the U.S. Environmental Protection Agency, U.S. Coast Guard, Occupational Safety and Health Administration, Office of Pipeline Safety of the Department of Transportation, and Minerals Management Services in the Department of the Interior, by consolidating them into one functional emergency response plan.

Vehicle Traffic and Safety

Implementation of mitigation, plans, and infrastructure improvements (Table S-1) would reduce impacts on vehicle traffic but would not completely eliminate them. The proposed action would have unavoidable and significant adverse impacts on vehicle delay from trains blocking grade crossings in the Olympic Gateway Plaza and Port areas of Aberdeen.

Environmental Health and Safety

A large oil spill or related incident involving a fire or explosion would likely result in unavoidable and significant adverse environmental impacts. The likelihood of a large spill or related explosion is low; however, the potential for significant consequences to the environment and human health in the case of a large spill, fire, or explosion is high. The specific impacts would vary based on the location, amount spilled, type of liquid, and weather conditions. While regulatory requirements for the prevention of, preparedness for, and response to a large spill or explosion and mitigation measures exist, no mitigation measures would completely eliminate the possibility of a large spill or related fire or explosion, nor would they completely eliminate the adverse consequences of such incidents.

Cumulative Impacts

Because the cumulative projects, including the proposed action, would have unavoidable and significant adverse environmental impacts on noise, tribal resource, vehicle traffic, and environmental health and safety, the proposed action would contribute to unavoidable and significant adverse environmental cumulative impacts on these resources.

Next Steps

Comments received on the Draft EIS during the 60-day comment period (August 31 through October 29, 2015) will be compiled and reviewed, and the Final EIS will be prepared. The co-lead agencies anticipate that the Final EIS will be published in spring 2016, but that is subject to change. All comments and responses to comments received on the Draft EIS will be included in the Final EIS. The Final EIS will be used by the local and state agencies in making permit decisions for the proposed action. Seven days following publication of the Final EIS, permits for construction and operation of the project may be issued. Construction of the proposed action could begin in 2016.

Table S-1. Summary of Impacts Requiring Mitigation

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.1 Earth	The addition of buildings, storage tanks, and related infrastructure carrying and storing the proposed bulk liquids could expose people to harm if damaged during a seismic event, such as an earthquake. Under the no-action alternative, the risk remains the same as current conditions.	<ul style="list-style-type: none"> To minimize the potential for impacts at the project site related to unstable soils, the applicant will review and update the construction mitigation measures identified in GeoEngineers (2006) and discussed in GeoEngineers (2014). These measures for site preparation and construction will be implemented during construction. <ul style="list-style-type: none"> Over-excavate the existing soil and compact the exposed soil to a uniformly firm and unyielding condition prior to placement of fill. Based on existing site grades and proposed development, standard erosion control measures are considered adequate; however, if construction and grading are staged, slopes may be created that require additional erosion control measures. For railroad spurs on site, support, over-excavate, and recompact materials so that there is a minimum of 2 feet of compacted fill. To minimize the potential for damage to the storage tanks related to geologic risks and unstable soils, the applicant will install pile-supported foundations that extend up to 75 feet deep for storage tanks to avoid excessive settlement from potentially liquefiable materials. To minimize the potential for damage to the storage tanks related to geologic risks and unstable soils, the applicant will develop final design specifications for proposed structures based on evaluation of the following more current standards/information (some of which were identified in GeoEngineers 2014). <ul style="list-style-type: none"> U.S. Geological Survey ground-shaking report and maps released in July 2014 (Petersen et al. 2014) 	No

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.1 Earth	The proposed facilities could expose workers at the project site to increased risks of harm from a tsunami. Although the likelihood of a tsunami would remain unchanged compared to existing conditions, the new facilities would result in new infrastructure and additional workers that would be exposed to these risks. Under the no-action alternative, the risk remains the same as current conditions.	<ul style="list-style-type: none"> i American Petroleum Institute Standard 650 (2012) i International Building Code 2012 <p>i The applicant will ensure that a tsunami evacuation and emergency management plan is prepared prior to beginning project operations. This plan will consider evacuation planning, identification of safe havens, and identification of evacuation routes to natural high ground and will be developed in coordination with emergency management officials.</p>	Yes
3.1 Earth	The new storage tanks and related infrastructure carrying and storing the proposed bulk liquids could rupture in the event of a tsunami and expose people and the environment to increased harm. Under the no-action alternative, the risk remains the same as current conditions.	<p>i To reduce the potential for environmental damage related to a tsunami event, the applicant will conduct a study to assess the technical feasibility and cost of implementing measures to construct the proposed facilities to withstand a Cascadia Subduction Zone (CSZ) L1 tsunami wave based on the Scenario 2 inputs listed in Table 4 of the Tsunami Impact Modeling and Analysis (Appendix C of this Draft EIS). Agreed upon measures will be implemented prior to project design and construction in coordination with the co-lead agencies.</p>	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.2 Air	Construction and operation of the proposed action could result in increased air emissions, including nitrogen oxides and diesel particulate matter, which could exceed acceptable thresholds compared to the no-action alternative.	<ul style="list-style-type: none"> <li data-bbox="808 397 1575 787">i The applicant will ensure that all engine-powered equipment and vehicles used in construction, operation, and maintenance at the facility are subject to a regular inspection and maintenance schedule in order to minimize air pollutant emissions, greenhouse gas emissions, and fuel consumption. Preventive maintenance activities will include but not be limited to the following actions. <ul style="list-style-type: none"> <li data-bbox="861 617 1438 673">i Replacing oil and oil filters as recommended by manufacturer instructions. <li data-bbox="861 682 1501 706">i Maintaining proper tire pressure in on-road vehicles. <li data-bbox="861 714 1333 738">i Replacing of worn or end-of-life parts. <li data-bbox="861 747 1417 771">i Scheduling routine equipment service checks <li data-bbox="808 795 1575 1153">i The applicant will develop and implement an anti-idling policy for both construction and operation and ensure that equipment operators receive training on best practices for reducing fuel consumption in order to reduce project-related greenhouse gas emissions. The anti-idling policy will include required warmup periods for equipment and prohibit idling beyond these periods. The policy will define any exemptions where idling is permitted for safety or operational reasons, such as when ambient temperatures are below levels required for reliable operation. In addition, the use of technologies such as idle management systems or automatic shutdown features will be considered part of the policy. <li data-bbox="808 1169 1575 1409">i To monitor diesel particulate matter (DPM) emissions associated with rail operations at and near the project site, the applicant will ensure a DPM monitoring station is installed prior to beginning operations. The applicant will ensure the DPM emission report is submitted to the City of Hoquiam annually. The City of Hoquiam will coordinate with the City of Aberdeen, Ecology, and Olympic Region Clean Air Agency as applicable, to review the emission report. If DPM emissions are 	No

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>observed to approach levels of concern for sensitive receptors, then the City of Hoquiam will require the applicant to modify operations to reduce DPM emissions. These actions could include:</p> <ul style="list-style-type: none"> i Modifying or reducing switching operations between Poynor Yard and the project site to reduce DPM emissions during switching operations i Installing a commercial idle control retrofit device on switching locomotives to reduce DPM emissions from idling i Using Tier 3 or Tier 4 compliant⁹ switching engines at Poynor Yard i To reduce greenhouse gas emissions, DPM, and other air pollutants from the locomotives, idling will be minimized to the maximum extent practicable. Shutting down locomotive engines as soon as practicable when not in use and delaying restart until necessary for car switching or departure from the facility would reduce these pollutants. i To minimize idling from trains and vessels and resulting emissions, the applicant will coordinate with the Port of Grays Harbor and PS&P to manage waiting times for rail and vessel arrivals or departures. 	
3.4 Plants/ 3.5 Animals	Increased vessel traffic related to the proposed action could increase the risk of spread of invasive species compared to the no-action alternative.	<ul style="list-style-type: none"> i To reduce the potential for impacts on sensitive aquatic plants/animals from the increase in ballast water discharges during operations, the applicant will prepare an invasive species monitoring plan in consultation with Washington Department of Fish and Wildlife and implement the plan prior to start of the proposed operations. 	No

⁹ These refer to standards for implementing the Environmental Protection Agency’s program to improve locomotive efficiency to reduce emission of particulate matter and nitrous oxides.

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.5 Animals	Pile driving noise during construction of the proposed action could adversely affect sensitive aquatic species.	<ul style="list-style-type: none"> To reduce the risk of harm to sensitive aquatic species from pile driving, the applicant will investigate alternative pile driving methods such as vibratory pile driving and hydraulic press-in methods to eliminate the need for impact pile driving. If these methods are determined to be infeasible, the applicant will retain a qualified acoustical consultant to monitor underwater sound levels during pile driving at the closest in-water location 1 meter deep. Piles will be driven first at locations that are closest to the water bodies of concern. The maximum number of piles that can be driven in a day will be driven to capture the worst-case accumulated sound exposure level. If measured underwater sound levels at the closest location do not exceed the applicable accumulated sound exposure level threshold during the first two days of driving no additional monitoring will be required and pile driving will continue. If the accumulated sound exposure level is exceeded at the closest distance, monitoring will be moved to a distance of 210 feet from the pile driving. If on any given day the accumulated sound exposure level threshold is exceeded at that distance, pile driving for that day will be stopped and continued the next day. 	No
3.5 Animals	The risks of larger spills of crude oil from vessel loading could adversely affect sensitive plant and animal species.	<ul style="list-style-type: none"> Voluntary measure: To reduce the risk of spills affecting high numbers of migratory birds during peak spring migration (typically 2 weeks), the applicant will coordinate with the City of Hoquiam to receive advance notice of the date for the annual Grays Harbor Shorebird Festival. The applicant will halt crude oil vessel loading operations for a period of 2 weeks each year overlapping with the event. 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.6 Energy	Construction and operation of the proposed action could result in increased energy consumption compared to the no-action alternative, although this would not be a significant impact.	<ul style="list-style-type: none"> Voluntary measure: To minimize energy use, the applicant will <ul style="list-style-type: none"> Employ the most energy-efficient systems for all pumps, motors, electrical equipment, and process technology equipment as practicable. Apply U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Silver Standards to the design of new buildings. 	No
3.7 Noise and Vibration	Construction of the proposed action could result in short term, temporary increased in low levels of noise at the project site.	<ul style="list-style-type: none"> To reduce construction noise at nearby sensitive receptors, the applicant will maintain construction and maintenance equipment in good working order with properly functioning mufflers to control noise. 	No
3.7 Noise and Vibration	Increased rail traffic related to the proposed action could increase noise levels for residents and other sensitive groups along the PS&P rail line.	<ul style="list-style-type: none"> To address increased noise from rail traffic, the applicant will coordinate with PS&P and interested communities along the PS&P rail line on the creation of quiet zones, if requested. Elimination of locomotive horn sounding at the affected grade crossings would eliminate impacts from increased horn noise. Quiet zones can only be established by public agencies using a procedure established in Federal Railroad Administration (FRA) regulations. The quiet zone allows the installation of enhanced safety measures at grade crossings such that train horns would not be required to be used. Implementation of a quiet zone is subject to FRA approval. Quiet zones include measures to maintain the level of safety while reducing noise. 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.9 Aesthetics, Light and Glare	The proposed action could result in new facilities that would be visible from surrounding areas although the overall impact would not be significant.	<ul style="list-style-type: none"> To reduce potential glare, the applicant will ensure the proposed storage tanks are of a tone that blends into the surrounding landscape and/or match the existing facility tank paint or insulation, appropriate to the existing design and without affecting air emissions for the surrounding facilities. To ensure that lighting at the project site does not conflict with other land uses, the applicant will coordinate with the Port of Grays Harbor to develop the proposal for project lighting. 	No
3.10 Recreation	Increased rail and vessel traffic related to the proposed action could result temporarily disrupt access to recreational areas along the PS&P rail line and in Grays Harbor although the overall impact would not be significant.	<ul style="list-style-type: none"> To mitigate vehicle traffic impacts associated with rail operations related to the proposed action, the applicant will work with the City of Hoquiam, the City of Aberdeen, the Port of Grays Harbor, the Grays Harbor Council of Governments, and PS&P to address vehicle delays and/or inform motorists of potential blockages at PS&P rail line crossings into and out of Olympic Gateway Plaza. The Washington State Department of Transportation (WSDOT), City of Hoquiam, City of Aberdeen, and Port of Grays Harbor will approve proposed measures for the areas where they are responsible for vehicle delay. The applicant will ensure acceptable measures are in place prior to beginning project operations. The proposed changes should include an evaluation of impacts on potentially affected low-income and minority populations. While fishing boats are required to follow the U.S. Coast Guard navigation rules, to improve awareness of vessel traffic in the navigation channel, the applicant will work with the Grays Harbor Safety Committee, including the U.S. Coast Guard and Port of Grays Harbor, to establish procedures to announce project related vessel traffic arrivals and departures over a designated VHF marine radio channel. 	No

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.11 Cultural Resources	There is a low but increased possibility that construction activities involving ground disturbance could result in impacts on otherwise unknown archaeological resources compared to the no-action alternative.	<ul style="list-style-type: none"> To reduce the risk of disturbing undocumented cultural resources, the applicant will prepare an unanticipated discovery plan to address previously unidentified archaeological resources should any be discovered during the construction of the proposed action. The applicant will submit the plan to the Washington State Department of Archaeology and Historic Preservation before construction. The plan will contain provisions requiring that if archaeological resources are uncovered during excavations, construction activities will cease immediately and the applicant will notify the City of Hoquiam, the Department of Archaeology and Historic Preservation, the Quinault Indian Nation, and the Confederated Tribes of the Chehalis Reservation. In such cases, the applicant will provide for a site inspection and evaluation by a professional archaeologist to ensure that all possible valuable archaeological data are properly salvaged or mapped. 	No
3.12 Tribal Resources	Increased vessel traffic related to the proposed action in Grays Harbor could increase the potential for conflict with fishing areas and access to fishing areas for the Quinault Indian Nation compared to the no-action alternative.	<ul style="list-style-type: none"> To mitigate potential impacts on tribal fishing, the applicant will coordinate with the Quinault Indian Nation and Washington Department of Fish and Wildlife, as requested, to support review and possible adjustments of docking schedules to minimize conflict with fishing schedules negotiated pre-season by the state and tribe. Consultation will account for operations, including anticipated vessel movements related to the proposed action. While tribal fishing boats are required to follow the U.S. Coast Guard navigation rules, to improve awareness of vessel traffic in the navigation channel, the applicant will work with the Grays Harbor Safety Committee, including the U.S. Coast Guard and Port of Grays Harbor, to establish procedures to announce project related vessel traffic arrivals and departures over a designated VHF marine radio channel. 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.14 Hazardous Materials	Construction could increase the risk of exposing existing hazardous materials that are already present at the project site compared to the no-action alternative.	<ul style="list-style-type: none"> <li data-bbox="808 389 1564 609">i To mitigate impacts on access to tribal treaty fishing areas, the applicant will initiate a process between stakeholders and Quinault Indian Nation tribal officials to discuss and identify additional mitigation measures such as, adjusting the timing of vessel calls during peak fishing seasons. Initiation of the process between the parties will occur before the proposed vessel operations begin. <li data-bbox="808 617 1564 771">i If groundwater or odiferous, stained, or discolored soil is encountered during construction activities, or if groundwater encountered is suspected to be contaminated during construction activities, the following mitigation measures will be implemented. <ul style="list-style-type: none"> <li data-bbox="861 779 1564 901">i The applicant will seek the professional recommendation of a consultant specializing in the handling and identification of hazardous materials and contaminated media. <li data-bbox="861 909 1564 998">i If deemed necessary, based on the above consultation, the applicant will conduct soil and/or groundwater testing for identification of possible hazardous materials. <li data-bbox="861 1006 1564 1063">i Construction personnel will isolate and cover suspect soil until analytical results are reviewed by qualified personnel. <li data-bbox="861 1071 1564 1347">i The consultant will compare analytical results to the applicable U.S. Environmental Protection Agency’s regional screening levels, which address common environmental pollutants. If hazardous materials are discovered in the soils and/or groundwater at levels above the regional screening levels, the consultant will provide recommendations on the steps required for proper treatment and/or removal and disposal of the contaminated media. <li data-bbox="808 1356 1564 1404">i Due to existing previously identified contamination on the project site, during excavation and grading activities, the 	No

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>applicant and the earthworks contractor will implement the following mitigation.</p> <ul style="list-style-type: none"> i The applicant will require that the earthworks contractor comply with training requirements for handling of contaminated material. This recommendation is consistent with Washington Administrative Code 296-843-100, Hazardous Waste Operations, which indicates that onsite employees are required to have current health and safety training in accordance with Hazardous Waste Operations and Emergency Response requirements in Occupational Safety and Health Administration, 29 Code of Federal Regulations 1910.120. i Onsite workers working within a contaminated zone will be required to comply with Occupational Safety and Health Administration, 29 Code of Federal Regulations 1910.120, if contaminants are detected in soil at concentrations greater than the Model Toxics Control Act, Method A Unrestricted Land Use cleanup levels (Washington Administrative Code 173-340). i The applicant will prepare a soil management plan to provide appropriate procedures for handling, sampling, transporting, placing, and disposing of the media generated during construction of the proposed action. i The construction contractor will handle soil excavated from the project site in accordance with all local, state, and federal regulations. 	
3.16 Vehicle Traffic and Safety	Increased rail traffic related to the proposed action could result in substantial increases in vehicle delay at the Olympic Gateway Plaza and between Poynor Yard and the project site	<ul style="list-style-type: none"> i To mitigate vehicle traffic impacts associated with rail operations of the proposed action, the applicant will work with the City of Hoquiam, City of Aberdeen, Port of Grays Harbor, Grays Harbor Council of Governments, and PS&P to address vehicle delay and/or inform motorists of potential blockages at PS&P crossings between the project site and Poynor Yard. 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
	<p>compared to the no-action alternative.</p>	<p>WSDOT, the City of Hoquiam, City of Aberdeen, and Port of Grays Harbor will approve proposed measures for the areas where they are responsible for vehicle delay. The applicant will ensure measures are in place prior to beginning the proposed operations. The proposed changes should include an evaluation of impacts on potentially affected low-income and minority populations.</p> <ul style="list-style-type: none"> To mitigate vehicle traffic impacts associated with rail operations related to the proposed action, the applicant will work with the City of Hoquiam, City of Aberdeen, Port of Grays Harbor, Grays Harbor Council of Governments, and PS&P to address vehicle delays and/or inform motorists of potential blockages at PS&P grade crossings into and out of the Olympic Gateway Plaza. WSDOT, the City of Hoquiam, City of Aberdeen, and Port of Grays Harbor will approve proposed measures for the areas where they are responsible for vehicle safety. The applicant will ensure acceptable measures are in place prior to beginning the proposed project operations. The proposed changes should include an evaluation of impacts on potentially affected low-income and minority populations. 	
<p>3.16 Vehicle Traffic and Safety</p>	<p>Increased rail traffic related to the proposed action could block vehicular access, including emergency service access, to the Olympic Gateway Plaza and between Poynor Yard and the project site for a substantial period compared to the no-action alternative.</p>	<ul style="list-style-type: none"> To reduce the potential for increased delay of emergency vehicles at PS&P grade crossings during project operations, the applicant will work with local emergency service providers to provide advance notification of incoming trains. To ensure that local emergency service providers have access to areas south of the PS&P rail line in Aberdeen, the applicant will ensure that an emergency response vehicle with an 8-foot clearance is available and staged at the City of Aberdeen Fire Department. The applicant will also ensure a new combination pumper truck is available and staged at the City of Hoquiam's Eastside Fire Station to respond to incidents at the nearby 	<p>Yes</p>

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.16 Vehicle Traffic and Safety	Increased rail traffic related to the proposed action could increase the potential for vehicle accidents along the PS&P rail line compared to the no-action alternative. Under the no-action alternative, the number of trains is expected to increase slightly due primarily to increases in vehicle traffic.	<p>project sites. These measures will be in place prior to beginning crude oil operations.</p> <ul style="list-style-type: none"> To address the potential for emergency access conflicts to areas along the PS&P rail line during unplanned unit train stoppages, the applicant will work with PS&P and local emergency service providers along the PS&P rail line to develop and implement a notification protocol to inform local emergency service providers and other interested parties of the duration and magnitude of the unplanned stoppages. The notification protocol will be in place prior to the beginning of operations involving transport of crude oil. <hr/> <ul style="list-style-type: none"> To address potential vehicle safety impacts, each of the public at-grade crossings on the rail line, the applicant will work with PS&P to provide permanent signs that prominently display both a toll-free telephone number and a unique grade-crossing identification number in compliance with Federal Highway Administration regulations (23 Code of Federal Regulations 655). The toll-free number would enable drivers to report promptly any accidents, malfunctioning warning devices, stalled vehicles, or other dangerous conditions. The signs will be in place prior to the beginning of operations involving transport of crude oil. To address potential vehicle safety impacts, the applicant will coordinate with PS&P to make Operation Lifesaver educational programs available to communities, schools, and other organizations located along the rail line. Operation Lifesaver is a nationwide, nonprofit organization that provides public education programs to help prevent collisions, injuries, and fatalities at highway/rail grade crossings. 	No

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
3.17 Vessel Traffic	Increased vessel traffic related to the proposed action could result in the potential for increased incidents compared to the no-action alternative, although the overall risk would remain relatively low.	<ul style="list-style-type: none"> <li data-bbox="808 397 1575 795">i Due to sensitivity of the local environment, tribal resources, and the potential presence of special-status species, to reduce potential risk of incident due to loss of propulsion, loss of steering, grounding, or severe weather, the applicant will not receive or load crude oil to tankers or tank barges unless the vessels have tug escorts through Grays Harbor as described below. This requirement will remain in place until rules are implemented pursuant to Engrossed Substitute House Bill 1449, Section 12, at which time the rules will apply to the project. At least one escort tug must accompany a laden tanker or tank barge carrying oil between the Hoquiam River and Grays Harbor entrance, and two tugs (one escort tug and one assist tug) must assist the vessel during mooring procedures. <ul style="list-style-type: none"> <li data-bbox="861 803 1575 860">i For laden tankers, the escort tug must be appropriately tethered while transiting Grays Harbor. <li data-bbox="861 868 1575 958">i Escort tugs must have an aggregate shaft horsepower equivalent to at least 5% of the deadweight tons of the escorted oil tanker or tank barge. <li data-bbox="861 966 1575 1023">i Escort tugs must have sufficient mechanical capabilities to provide for safe escort. <li data-bbox="808 1031 1575 1185">i To ensure adequate safety for tug operations and thereby reduce the risk of an incident, the applicant will not receive or load crude oil to tankers or tank barges unless the vessels supply Grays Harbor pilots and tug companies with bollard pull capacities of the vessels prior to entering Grays Harbor. <li data-bbox="808 1193 1575 1404">i To reduce potential risk of incident of vessel collision or allision in Grays Harbor, the applicant will work with U.S. Coast Guard, Ecology, Port of Grays Harbor, and Grays Harbor Safety Committee to propose, develop, and implement a formal vessel management system. The vessel management system will include the ability to schedule, track, and monitor vessel movements in the harbor and off the entrance to the harbor. 	No

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>The vessel management system will be active prior to the applicant beginning the proposed operations.</p> <ul style="list-style-type: none"> To reduce potential risk of incident of vessel collision while in Grays Harbor, the vessel management system will take the following actions. <ul style="list-style-type: none"> Ensure vessel traffic is limited while a laden tank vessel is in the navigation channel. Prohibit the transit of any other deep-draft vessels within the south channel (just off Westport) to Terminal 1 in both directions whenever a laden tank vessel is transiting within the same channel. Include real-time automatic identification system tracking and monitoring. To reduce the risk of an incident, the applicant will coordinate with the Port of Grays Harbor and as a member of the Grays Harbor Safety Committee, work to develop and implement specific procedures for escorting, tethering, and emergency maneuvering to control laden tank vessels. The procedures must be drafted prior to the proposed operations beginning. These procedures should be included in the Grays Harbor Safety Plan. At a minimum, these must include the following elements. <ul style="list-style-type: none"> Escort configurations and maneuvering characteristics of escorted tankers and tank barges. Specific emergency connection and tethering procedures for connection of tugs to tankers and tank barges. Specific maneuvers necessary for the tug to maintain control of the tanker while transiting Grays Harbor waters specifically during incidents of loss of propulsion or steering or in bad weather. Appropriate safe speed of transit in Grays Harbor when tugs are tethered. 	

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
4.4, Environmental Health Risks-Terminal (Onsite)	The proposed action could result in increased potential for an incident involving a spill, fire, or explosion of bulk liquids, including crude oil, during onsite operations compared to the no-action alternative although the overall risks of large spills would remain relatively low.	<ul style="list-style-type: none"> i Guidelines for tanker or tank barge bridge team to rapidly recognize and respond to a loss of power or steering. By improving recognition and reaction time, the tug can more effectively steer the vessel through the navigation channel upon incident. i Requirement for a pretransit conference. i Requirements for refueling of the vessel. i While commercial fishing boats are required to follow the U.S. Coast Guard navigation rules, to improve awareness of vessel traffic in the navigation channel, the applicant will work with the Grays Harbor Safety Committee, including the U.S. Coast Guard and Port of Grays Harbor, to establish procedures to announce project related vessel traffic arrivals and departures over a designated VHF marine radio channel. i To reduce the impacts from an oil spill, the applicant will establish and implement a procedure for blocking all drains on the dock prior to oil transfers and observing the area for discharges before removal. i To improve oil recovery in the case of a spill during vessel loading at the dock, the applicant will retain a licensed engineer to perform an independent engineering analysis and feasibility study to determine the number of days it is safe and effective to preboom oil transfers and to identify site-specific improvements to maximize successful prebooming. The applicant will ensure the study is submitted to Ecology for review. If approved, Ecology will amend the applicant’s oil spill contingency to require prebooming and improvements consistent with the study. <p>If improvements to allow for pre-booming are determined to be unfeasible by Ecology and until changes are in place, the applicant will implement alternative measures, including but not limited to the following (in addition to those already</p>	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>required by regulation) to mitigate the absence of preventative boom in the water during transfers: stage dedicated response vessels, additional containment and clean-up equipment, and trained personnel at the terminal dock and/or at a nearby staging area during oil transfers. At a minimum, this alternative must include the following elements.</p> <ul style="list-style-type: none"> i One oil spill response vessel with crew, skimmer, and at least 1,000 feet of boom at the dock. i On-water tank barge storage devices (not including bladders) prestaged at the dock with the skimmer to ensure a minimum of 450 barrels of recovery ready to be deployed. i To reduce the risk of a spill, the applicant will require the facility person-in-charge (certified facility operator for oil transfers) to verify all connections are properly functioning for each oil transfer prior to the commencement of a transfer. i To prepare for spills, the applicant will fully comply with Washington State contingency planning standards in place of any alternative measures previously approved in the oil spill contingency plan. i To reduce the risks and impacts from an oil spill, prior to beginning the proposed operations, the applicant will conduct a study to identify an appropriate level of financial responsibility for the potential costs for response and cleanup of oil spills, natural resource damages, and costs to state and affected counties and cities for their response actions. The study should address the factors in Revised Code of Washington 88.40.025, Evidence of Financial Responsibility for Onshore or Offshore Facilities, including a reasonable worst-case spill volume, the cost of cleaning up the spilled oil, the frequency of operations at the facility, prevention measures employed by the facility that could reduce impacts through spill containment, 	

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>immediate discovery, and shutoff times, and the damages that could result from the spill (including restoration). The study should identify any constraints related to the commercial availability and affordability of financial responsibility. Based on the study, Ecology shall determine the appropriate level of financial responsibility and require the applicant to demonstrate their financial responsibility to the satisfaction of Ecology. Proof of financial responsibility will be included as documentation in the applicant's contingency plan.</p> <ul style="list-style-type: none"> i To improve preparedness for incidents, including oils spills, explosions, and fires, the applicant will ensure an emergency preparedness workshop is conducted prior to beginning project operations. The applicant will coordinate the workshop with Ecology. The workshop will be no more than 1 day in length and be held prior to beginning operations and annually thereafter. The initial workshop will focus on familiarizing local emergency responders, tribes, and communities with the contents of the Northwest Area Contingency Plan, the Grays Harbor and Chehalis Geographic Response Plans, other local response plans, the facility response plan, and the measures that are in place for a rapid and effective spill response. i To improve response times and communication in the event of an incident that could affect tribal resources, the applicant will include tribal contacts (names and/or phone numbers) in notification protocols in the oil spill contingency plan. 	
4.5, Environmental Health Risks - Rail Transport	Increased rail transport related to the proposed action would increase the likelihood of an incident involving a spill, fire, or explosion of bulk liquids, including crude oil, along the PS&P rail line compared to the	<ul style="list-style-type: none"> i Voluntary measure: To reduce potential risk from tank car punctures and spills identified with use of DOT-111 tank cars for transport of Bakken crude oil, the applicant will not accept crude oil by rail unless the following actions occur. <ul style="list-style-type: none"> i The rail cars meet or exceed the new U.S. Department of Transportation specification 117 design or performance criteria. 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
	no-action alternative although the overall risks of large spills would remain relatively low.	<ul style="list-style-type: none"> i Existing tank cars are retrofitted in accordance with the U.S. Department of Transportation-prescribed retrofit design or performance standard (80 <i>Federal Register</i> 26643). i To improve the safe transport of crude oils with different volatilities and sinking tendencies, the applicant will not accept crude oil by rail unless the following actions have occurred. <ul style="list-style-type: none"> i The applicant has received verification that a sample of the oil has been tested and properly classified and characterized. i Where classification and characteristics of the oil are available in advance, the applicant has fully described this information and the implications for emergency response in its oil spill contingency plan. i To reduce risks of a spill due to a rail incident, the applicant will not accept crude oil unit trains by rail unless the train has in place a functioning two-way end-of-train device or distributed power for operations on the PS&P rail line to the local yard. 	
4.5, Environmental Health Risks - Rail Transport	Increased rail traffic related to the proposed action would result in increased potential for environmental damage from an incident involving the spill of crude oil compared to the no-action alternative although the overall risks of large spills would remain relatively low.	<ul style="list-style-type: none"> i Due to sensitivity of the local environment, tribal resource concerns, and the potential presence of special-status species, to improve coordination and response capabilities in the event of a rail accident, the applicant will not accept crude oil by rail unless PS&P prepares, submits to Ecology for approval, and implements a contingency plan meeting the requirements identified below. This requirement will remain in place until state contingency plan requirements for railroads are implemented by Ecology pursuant to ESHB 1449, Section 5, and/or amendments to the federal oil spill response plan rule (49 Code of Federal Regulations 130) is adopted. <ul style="list-style-type: none"> i Disclose full details of the method of response to spills to various sizes. 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<ul style="list-style-type: none"> i Define a worst-case spill planning volume. i Identify response notification and coordination procedures. i Identify personnel assigned to implement the plan. i Reference applicable Washington State geographic response plans. i Describe a training and exercise program for personnel and equipment. i Identify prepositioned spill containment and cleanup equipment and trained personnel. i Identify arrangement for enlisting qualified and trained cleanup personnel to implement the plan. i Describe how plan relates to other relevant contingency plans, such as facility plans, other rail plans, including federal oil spill response plans, and regional plans. i To improve first response effectiveness and safety, the applicant will consult with the Olympic Region Clean Air Agency and U.S. Environmental Protection Agency to identify air monitoring equipment needs for public health and safety in the case of a spill or explosion. The applicant will ensure equipment identified that is necessary for determining air quality conditions but not available through local agencies or fire departments will be made available to local fire departments. 	

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
4.5, Environmental Health Risks - Rail Transport	The proposed action would result in increased potential for environmental damage from an incident involving the spill of crude oil compared to the no-action alternative that would exceed the capacity of local emergency service response services.	<ul style="list-style-type: none"> To increase the timeliness of responses to spills and incidents involving trains and to maximize coordination of responses along the PS&P rail line, the applicant will not accept crude oil by rail unless the following measures are completed. <ul style="list-style-type: none"> PS&P participates with the local fire districts in a public safety drill at least once every 2 years. PS&P tests one geographic response plan strategy annually and invites Ecology to participate. PS&P participates in testing the applicant’s oil spill contingency plan with a rail scenario at least once every 3 years, including participating in at least one drill every 3 years. This drill will be designed with Ecology and scheduled on the regional drill calendar. To improve response capability for spills that may occur on the Chehalis River, the applicant will coordinate with Ecology to advertise and extend registration of Vessels of Opportunity to the Chehalis River and to tribal boat owners prior to beginning operations. Applicants for the Vessel of Opportunity Program should be directed to www.oilspills101.wa.gov for information and registration. To improve response capability for trains transporting product to the project site, the applicant will not accept crude oil until a foam truck has been provided to the Elma Fire Department to provide fire-fighting capability along the PS&P rail line. The foam truck must be available and operational prior to beginning operations. The applicant will consult with Ecology and the local fire department to determine the capacity of the foam truck. To improve response times to reduce the initial impacts of an oil spill, the applicant will ensure that two trailers containing the spill response equipment listed below are available prior to beginning crude oil operations for use by initial local and 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>emergency responders along the PS&P rail line. This equipment will be offered to fire departments along the PS&P rail line and the Chehalis Indian Tribe. The trailer and equipment will be maintained by the applicant and inspected annually. The equipment will only be provided to fire departments and Chehalis Tribe if they agree to store the equipment in a secure location and ensure the equipment used by appropriately trained personnel. The applicant will work with Ecology and local emergency officials to update the Western Region Response List website (www.wrrl.us), any applicable spills response plans to address the emergency equipment caches, and to document notification protocols, necessary training, use of Personal Protective Equipment, and equipment deployment procedures.</p> <ul style="list-style-type: none"> i Mobile trailers of a specific size to hold the below equipment: <ul style="list-style-type: none"> i 3000 feet of river boom in 4-500 ft. sections and 5-200 ft. sections i 5000 feet of sausage sorbent boom i 30 kits - anchoring systems (anchors, lines, floats) i 20 kits - shoreside anchoring systems i 1 towing bridle i 4 heaving lines i 1 machete (or other vegetation cutting tool) i 1 pair of bolt cutters i 50 sandbags i 1 roll plastic sheeting i 4 each plywood sheets (4 ft. x 8 ft.) i 500 feet 3/8" poly line i PPE: coveralls or Tyvek ® disposable suits, gloves, outer (chemical-resistant and disposable) boots, safety glasses or chemical splash goggles, hard hats - sufficient for 5 people 	

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<ul style="list-style-type: none"> To reduce risks related to an oil spill, the applicant will not accept crude oil by rail until PS&P meets with local emergency management officials to identify training needs for local responders who will respond to an emergency on the PS&P rail line. This effort will include development and execution of a training program to these responders to increase level of awareness and understanding of the hazards associated with an oil train incident. The training will include identification of notification protocols, use of Personal Protective Equipment, and equipment deployment procedures. This training will be completed before the applicant begins receiving oil trains and will be offered at least annually. To improve response capability on the Confederated Tribes of the Chehalis Reservation lands in the case of an oil spill, the applicant will ensure that an annual 1-day hazard awareness oil spill training for identified Chehalis tribal members is provided, including conducting and inviting tribal members to participate in drills. To improve response capability in the Grays Harbor area in the case of an oil spill, the applicant will ensure an annual one-day hazard awareness oil spill training is provided for identified Quinault Indian Nation tribal members, including conducting and inviting tribal members to participate in drills. To increase the timeliness and maximize the coordination of responses to spills and incidents involving crude oil trains along the PS&P rail line, the applicant will ensure the Grays Harbor Local Emergency Planning Committee’s emergency response plan is updated to address the applicant’s operations. This information must be included prior to beginning operations. 	

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
4.6, Environmental Health Risks-Vessel Transport	Increased vessel transport related to the proposed action would increase the likelihood of an incident involving the spill of crude oil within Grays Harbor compared to the no-action alternative although the overall risks of large spills would remain relatively low	<ul style="list-style-type: none"> <li data-bbox="808 397 1585 673">i Due to sensitivity of the local environment, tribal resource concerns, and the potential presence of sensitive species, to reduce potential risk of incident due to loss of propulsion, loss of steering, grounding, or severe weather, the applicant will not receive or load crude oil to tankers or tank barges, unless the vessels have tug escorts through Grays Harbor as described below. This requirement will remain in place until rules are implemented pursuant to ESHB 1449, Section 12, at which time the rules will apply to the project. <li data-bbox="861 682 1585 828">i At least one escort tug must accompany a laden tanker or tank barge carrying oil between the Hoquiam River and Grays Harbor entrance, and two tugs (one escort tug and one assist tug) must assist the vessel during mooring procedures. <li data-bbox="861 836 1585 893">i For laden tankers, the escort tug must be appropriately tethered while transiting Grays Harbor. <li data-bbox="861 901 1585 990">i Escort tugs must have an aggregate shaft horsepower equivalent to at least 5% of the deadweight tons of the escorted oil tanker or tank barge. <li data-bbox="861 998 1585 1055">i Escort tugs will have sufficient mechanical capabilities to provide for safe escort. <li data-bbox="808 1063 1585 1218">i To ensure adequate safety for tug operations and thereby reduce the risk of an incident, the applicant will not receive or load crude oil to tankers or tank barges unless the vessels supply Grays Harbor Pilots and tug companies with bollard pull capacities of the vessels prior to entering Grays Harbor. <li data-bbox="808 1226 1585 1404">i To reduce potential risk of incident of vessel collision or allision in Grays Harbor, the applicant will work with the U.S. Coast Guard, Ecology, Port of Grays Harbor, and Grays Harbor Safety Committee to propose, develop, and implement a formal vessel management system. The vessel management system will include the ability to schedule, track, and monitor vessel 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>movements in the harbor and off the entrance to the harbor. The vessel management system will be active prior to the applicant beginning the proposed operations. To reduce potential risk of incident of vessel collision while in Grays Harbor, the vessel management system should act as follows.</p> <ul style="list-style-type: none"> i Ensure vessel traffic is limited while a laden tank vessel is in the navigation channel. i Prohibit the transit of any other deep-draft vessels within the South Reach of the navigation channel (just off Westport) to Terminal 1 in both directions whenever a laden tank vessel is transiting within the same channel. i Include real-time Automatic Identification System tracking and monitoring. i To reduce the risk of a fire or explosion from tank barges, the applicant will not receive or supply Bakken crude oil to tank barges unless the tank barges are able to inert their tanks when carrying Bakken crude oil. i To reduce the risk of an incident, the applicant will coordinate with the Port of Grays Harbor and as a member of the Grays Harbor Safety Committee, work to develop and implement specific procedures for escorting, tethering, and emergency maneuvering to control laden tank vessels. The procedures must be drafted prior to the proposed operations beginning. These procedures should be included in the Grays Harbor Safety Plan. At a minimum, these must include the following elements. <ul style="list-style-type: none"> i Escort configurations and maneuvering characteristics of escorted tankers and tank barges. i Specific emergency connection and tethering procedures for connection of tugs to tankers and tank barges. 	

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<ul style="list-style-type: none"> i Specific maneuvers necessary for the tug to maintain control of the tanker while transiting Grays Harbor waters specifically during incidents of loss of propulsion or steering. i Appropriate safe speed of transit in Grays Harbor when tugs are tethered. i Guidelines for tanker or tank barge bridge team to rapidly recognize and respond to a loss of power or steering. By improving recognition and reaction time, the tug can more effectively steer the vessel through the navigation channel upon incident. i Requirement for a pretransit conference. i Refueling operations. i To reduce the risk of an incident during vessel refueling, the applicant will ensure that any tank barges loaded with fuel for purposes of refueling vessels at the project site follow the navigation and safety mitigation measures for crude oil tank barges described in this section. 	
4.6, Environmental Health Risks- Vessel Transport	Increased vessel traffic related to the proposed action would result in increased potential for environmental damage from an incident involving the spill of crude oil compared to the no-action alternative although the overall risks of large spills would remain relatively low.	<ul style="list-style-type: none"> i To improve response times and increase coordination of responses, the applicant will develop and implement a program approved by Ecology to educate its tankers and tank barge customers on the reporting requirements for vessel incidents resulting in a threat of a spill under Revised Code of Washington 88.46.100, Notification of Vessel Emergencies Resulting in Discharge of Oil, prior to beginning the proposed operations. i To improve response times and communication in the event of an incident that could affect commercial or recreational fishing, the applicant will develop a method for provide information on potential incidents to commercial and recreational fishing boats and will describe this measure in the oil spill contingency plan prior to beginning operations. 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
6.5.1, Air (Cumulative Impacts)	Increased air emissions under cumulative conditions could exceed acceptable levels of nitrogen oxides and diesel particulate matter near Poynor Yard and at the project site.	<ul style="list-style-type: none"> i The applicant will ensure that all engine-powered equipment and vehicles used in construction, operation, and maintenance at the facility are subject to a regular inspection and maintenance schedule in order to minimize air pollutant emissions, greenhouse gas emissions, and fuel consumption. Preventive maintenance activities will include but not be limited to the following actions. <ul style="list-style-type: none"> i Replacing oil and oil filters as recommended by manufacturer instructions. i Maintaining proper tire pressure in on-road vehicles. i Replacing of worn or end-of-life parts. i Scheduling routine equipment service checks. i The applicant will develop and implement an anti-idling policy for both construction and operation and ensure that equipment operators receive training on best practices for reducing fuel consumption in order to reduce project-related greenhouse gas emissions. The anti-idling policy will include required warmup periods for equipment and prohibit idling beyond these periods. The policy will define any exemptions where idling is permitted for safety or operational reasons, such as when ambient temperatures are below levels required for reliable operation. In addition, the use of technologies such as idle management systems or automatic shutdown features will be considered part of the policy. <ul style="list-style-type: none"> i In order to identify NOx emissions if the Westway, Imperium, and Grays Harbor Rail Terminal Projects are permitted, the applicant will ensure air monitoring stations are installed to monitor the NO₂ emissions at or near the facility prior to the third proposed facility beginning operations. Air monitoring reports will be submitted to Olympic Region Clean Air Agency annually. If levels are observed to be approaching the National Ambient Air 	No

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>Quality Standards, then additional measures could be required in the agency’s air permit.</p> <ul style="list-style-type: none"> i To monitor diesel particulate matter (DPM) emissions associated with rail operations at and near the project site, the applicant will ensure a DPM monitoring station is installed prior to beginning operations. The applicant will ensure the DPM emission report is submitted to the City of Hoquiam annually. The City of Hoquiam will coordinate with the City of Aberdeen, Ecology, and the Olympic Region Clean Air Agency as applicable, to review the emission report. If DPM emissions are observed to approach levels of concern for sensitive receptors, then the City of Hoquiam will require the applicant to modify operations to reduce DPM emissions. These actions could include: <ul style="list-style-type: none"> i Modifying or reducing switching operations between Poynor Yard and the project site to reduce DPM emissions during switching operations. i Installing a commercial idle control retrofit device on switching locomotives to reduce DPM emissions from idling. i Using Tier 3 or Tier 4 compliant¹⁰ switching engines at Poynor Yard. i To reduce greenhouse gas emissions, DPM, and other air pollutants from the locomotives, idling will be minimized to the maximum extent practicable. Shutting down locomotive engines as soon as practicable when not in use and delaying restart until necessary for car switching or departure from the facility would reduce these pollutants. 	

¹⁰ These refer to standards for implementing the Environmental Protection Agency’s program to improve locomotive efficiency to reduce emission of particulate matter and nitrous oxides.

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
Section 6.5.2, Noise and Vibration (Cumulative Impacts)	Increased noise, primarily related to train horns, under cumulative conditions could result in substantial noise increases along the PS&P rail line compared to the no-action alternative.	<ul style="list-style-type: none"> In order to minimize idling from trains and vessels and resulting emissions, the Applicant will coordinate with the Port of Grays Harbor and PS&P to manage waiting times for rail and vessel arrivals or departures. To address increased noise from rail traffic, the applicant will coordinate with PS&P and interested communities along the PS&P rail line on the creation of quiet zones, if requested. Elimination of locomotive horn sounding at the affected grade crossings would eliminate and not just reduce increased horn noise. Quiet zones can only be established by public agencies using a procedure established in FRA regulations. This may include installation of enhanced safety measures at grade crossings such that train horns would not be required to be used. Implementation of a quiet zone is subject to FRA approval. Quiet zones include measures to maintain the level of safety while reducing noise. 	Yes
Section 6.5.3, Tribal Resources (Cumulative Impacts)	Increased vessel traffic under cumulative conditions, could result in increased disruption of access to fishing areas by the Quinault Indian Nation compared to the no-action alternative.	<ul style="list-style-type: none"> To mitigate potential impacts on tribal fishing, the applicant will coordinate with the Quinault Indian Nation and Washington Department of Fish and Wildlife, as requested, to support review and possible adjustments of docking schedules to minimize conflict with fishing schedules negotiated pre-season by the state and tribe. Consultation will account for operations, including anticipated vessel movements related to the proposed action. While tribal fishing boats are required to follow the U.S. Coast Guard navigation rules, to improve awareness of vessel traffic in the navigation channel, the applicant will work with the Grays Harbor Safety Committee, including the U.S. Coast Guard and Port of Grays Harbor, to establish procedures to announce project related vessel traffic arrivals and departures over a designated VHF marine radio channel. 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
Section 6.5.5, Vehicle Traffic and Safety (Cumulative Impacts)	Increased rail traffic under cumulative conditions could result in substantial increases in vehicle delay and emergency service access at the Olympic Gateway Plaza and between Poynor Yard and the project site compared to the no-action alternative. There would also be an increased possibility of vehicle accidents along the PS&P rail line.	<ul style="list-style-type: none"> <li data-bbox="808 389 1575 609">1 To mitigate impacts on access to tribal treaty fishing areas, the applicant will initiate a process between stakeholders and Quinault Indian Nation tribal officials to discuss and identify additional mitigation measures such as, adjusting the timing of vessel calls during peak fishing seasons. Initiation of the process between the parties will occur before vessel operations begin. <li data-bbox="808 617 1575 1015">1 To mitigate vehicle traffic impacts associated with rail operations of the proposed action, the applicant will work with the City of Hoquiam, City of Aberdeen, Port of Grays Harbor, Grays Harbor Council of Governments, and PS&P to address vehicle delay and/or inform motorists of potential blockages at PS&P grade crossings between the project site and Poynor Yard. WSDOT, the City of Hoquiam, City of Aberdeen, and Port of Grays Harbor will approve proposed measures for the areas where they are responsible for vehicle safety. The applicant will ensure measures are in place prior to beginning operations. The proposed changes should include an evaluation of impacts on potentially affected low-income and minority populations. <li data-bbox="808 1023 1575 1364">1 To mitigate vehicle traffic impacts associated with rail operations related to the proposed action, the applicant will work with the City of Hoquiam, City of Aberdeen, Port of Grays Harbor, Grays Harbor Council of Governments, and PS&P to address vehicle delays and/or inform motorists of potential blockages at PS&P grade crossings into and out of the Olympic Gateway Plaza. WSDOT, the City of Hoquiam, City of Aberdeen, and Port of Grays Harbor will approve proposed measures for the areas where they are responsible for vehicle safety. The applicant will ensure acceptable measures are in place prior to beginning project operations. The proposed changes should 	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>include an evaluation of impacts on potentially affected low-income and minority populations.</p> <ul style="list-style-type: none"> To reduce the potential for increased delay of emergency vehicles at PS&P grade crossings during project operations, the applicant will work with local emergency service providers to provide advance notification of incoming trains. To ensure that local emergency service providers have access to areas south of the PS&P rail line in Aberdeen, the applicant will ensure an automobile with an 8-foot clearance and a combination truck (pumper and ambulance) are available for staging south of the PS&P rail line in the Olympic Gateway Plaza for use by local emergency service providers. The applicant will also ensure an ambulance is available for staging south of PS&P rail line in the Port of Grays Harbor area between the project site and Port Industrial Road for use by emergency service providers. These measures will be in place prior to beginning crude oil operations. <p>To address the potential for emergency access conflicts to areas along the PS&P rail line during unplanned unit train stoppages, the applicant will work with PS&P and local emergency service providers along the PS&P rail line to develop and implement a notification protocol to inform local emergency service providers and other interested parties of the duration and magnitude of the unplanned stoppages. The notification protocol will be in place prior to the beginning of operations involving transport of crude oil.</p> <ul style="list-style-type: none"> To address potential vehicle safety impacts, each of the public at-grade crossings on the rail line, the applicant will work with PS&P to provide permanent signs that prominently display both a toll-free telephone number and a unique grade-crossing identification number in compliance with Federal Highway Administration regulations (23 Code of Federal Regulations 655). The toll-free number would enable drivers to report 	

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
Section 6.5.7, Environmental Health and Safety (Cumulative Impacts)	Under cumulative conditions, there could be an increase in the likelihood of incidents involving a spill, fire, or explosion of bulk liquids, including crude oil, compared to the no-action alternative. Although the overall risks would remain relatively low, the potential environmental damage would be significant.	<p data-bbox="856 389 1554 511">promptly any accidents, malfunctioning warning devices, stalled vehicles, or other dangerous conditions. The signs will be in place prior to the beginning of operations involving transport of crude oil.</p> <p data-bbox="808 519 1575 730">i To address potential vehicle safety impacts, the applicant will coordinate with PS&P to make Operation Lifesaver educational programs available to communities, schools, and other organizations located along the rail line. Operation Lifesaver is a nationwide, nonprofit organization that provides public education programs to help prevent collisions, injuries, and fatalities at highway/rail grade crossings.</p> <p data-bbox="808 738 1575 1023">i Due to sensitivity of the local environment, tribal resources, and the potential presence of special-status species, to reduce potential risk of incident due to loss of propulsion, loss of steering, grounding, or severe weather, the applicant will not receive or load crude oil to tankers or tank barges unless the vessels have tug escorts through Grays Harbor as described below. This requirement will remain in place until rules are implemented pursuant to ESHB 1449, Section 12, at which time the rules will apply to the project.</p> <p data-bbox="856 1031 1554 1177">i At least one escort tug must accompany a laden tanker or tank barge carrying oil between the Hoquiam River and Grays Harbor entrance, and two tugs (one escort tug and one assist tug) must assist the vessel during mooring procedures.</p> <p data-bbox="856 1185 1533 1242">i For laden tankers, the escort tug must be appropriately tethered while transiting Grays Harbor.</p> <p data-bbox="856 1250 1522 1339">i Escort tugs must have an aggregate shaft horsepower equivalent to at least 5% of the deadweight tons of the escorted oil tanker or tank barge.</p> <p data-bbox="856 1347 1564 1409">i Escort tugs must have sufficient mechanical capabilities to provide for safe escort.</p>	Yes

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<ul style="list-style-type: none"> i To ensure adequate safety for tug operations and thereby reduce the risk of an incident, the applicant will not receive or load crude oil to tankers or tank barges unless the vessels supply Grays Harbor pilots and tug companies with bollard pull capacities of the vessels prior to entering Grays Harbor. i To reduce potential risk of incident of vessel collision or allision in Grays Harbor, the applicant will work with the U.S. Coast Guard, Ecology, Port of Grays Harbor, and Grays Harbor Safety Committee to propose, develop, and implement a formal vessel management system. The vessel management system will include the ability to schedule, track, and monitor vessel movements in the harbor and off the entrance to the harbor. The vessel management system will be active prior to the applicant beginning operations. i To reduce potential risk of incident of vessel collision while in Grays Harbor, the vessel management system will take the following actions. <ul style="list-style-type: none"> i Ensure vessel traffic is limited while a laden tank vessel is in the navigation channel. i Prohibit the transit of any other deep-draft vessels within the South Reach of the navigation channel (just off Westport) to Terminal 1 in both directions whenever a laden tank vessel is transiting within the same channel. i Include real-time automatic identification system tracking and monitoring. i To reduce the risk of a fire or explosion from tank barges, the applicant will not receive or supply Bakken crude oil to tank barges unless the tank barges are able to inert their tanks when carrying Bakken crude oil. i To reduce the risk of an incident, the applicant will coordinate with the Port of Grays Harbor and as a member of the Grays 	

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
		<p>Harbor Safety Committee, work to develop and implement specific procedures for escorting, tethering, and emergency maneuvering to control laden tank vessels. The procedures must be drafted prior to operations beginning. These procedures should be included in the Grays Harbor Safety Plan. At a minimum, these must include the following elements.</p> <ul style="list-style-type: none"> i Escort configurations and maneuvering characteristics of escorted tankers and tank barges. i Specific emergency connection and tethering procedures for connection of tugs to tankers and tank barges. i Specific maneuvers necessary for the tug to maintain control of the tanker while transiting Grays Harbor waters specifically during incidents of loss of propulsion or steering or in bad weather. i Appropriate safe speed of transit in Grays Harbor when tugs are tethered. i Guidelines for tanker or tank barge bridge team to rapidly recognize and respond to a loss of power or steering. By improving recognition and reaction time, the tug can more effectively steer the ship through the navigation channel upon incident. i Requirement for a pretransit conference. i Requirements for refueling of the vessel. i To improve response times and increase coordination of responses, the applicant will develop and implement a program approved by Ecology to educate its tankers and tank barge customers on the reporting requirements for vessel incidents resulting in a threat of a spill under Revised Code of Washington 88.46.100, Notification of vessel emergencies resulting in discharge of oil, prior to beginning operations. i To improve response times and communication in the event of an incident that could affect commercial or recreational fishing, 	

Environmental Resource	What is the potential impact that requires mitigation?	What are the applicant measures that would address these impacts?	Were potential unavoidable and significant adverse environmental impacts identified in the Draft EIS?
7.0 Economics, Social Policy, Cost Benefit Analysis	Implementation of the proposed action could result in an increased need to establish ways to provide and share information with the public, tribes, and City of Hoquiam.	<p>the applicant will develop a method for provide information on potential incidents to commercial and recreational fishing boats and will describe this measure in the oil spill contingency plan prior to beginning operations.</p> <ul style="list-style-type: none"> To reduce the risk of an incident during vessel refueling, the applicant will ensure that any tank barges loaded with fuel for purposes of refueling vessels at the project site follow the navigation and safety mitigation measures for crude oil tank barges described in this section. <hr/> <ul style="list-style-type: none"> The applicant will appoint a community liaison to consult with affected communities, businesses, and agencies; develop cooperative solutions to address local concerns; be available for public meetings; and conduct periodic public outreach. The applicant will provide the name, telephone number, and email address of the community liaison to mayors and other local officials in each community through which the PS&P rail line passes. The applicant will appoint a tribal liaison to assist in addressing issues of concerns to federally recognized tribes; develop cooperative solutions to tribal concerns; be available for tribal meetings; and conduct periodic outreach. The applicant will provide the name, telephone number, and email address of the tribal liaison to officials of each tribe that wish to be notified. The applicant will submit quarterly reports to the City of Hoquiam on the progress of, implementation of, and compliance with all mitigation measures. The reporting period for these reports will begin the first quarter after permit issuance and continue quarterly through the first year of project operations after which the applicant will submit a report annually through the first 5 years of operation. 	No