

1.1 What is the proposed action?

Westway Terminal Company LLC (applicant) proposes to expand its existing bulk liquid storage and distribution facility at the Port of Grays Harbor (Port) in Hoquiam, Washington. The expansion would enable the applicant to receive crude oil by train, store it on site, and load it onto tank vessels for shipment to refineries located primarily on the West Coast (proposed action). At full build-out, the expansion would enable the applicant to receive approximately 751.8 million gallons (17.9 million barrels) of crude oil per year and store 42 million gallons (1 million barrels) at one time. The proposed action would include constructing up to five storage tanks, each with a capacity of 8.4 million gallons (200,000 barrels), and the pumps and pipelines required to connect the tanks to vessel loading facilities at the Terminal 1 dock and an expanded onsite rail unloading area.

Chapter 2, *Proposed Action and Alternatives*, provides a detailed description of the existing and proposed facilities and operations at the project site.

1.2 Why was this document prepared?

This final environmental impact statement (Final EIS) addresses the environmental impacts associated with the proposed action. The EIS was prepared under the Washington State Environmental Policy Act (SEPA) Chapter 43.21C of the Revised Code of Washington [RCW]), the SEPA Rules (Chapter 197-11 Washington Administrative Code [WAC]), and the City of Hoquiam Municipal Code (HMC) 11.10.

The proposed action triggers SEPA review because it requires state and local permits. The Final EIS supports decisions regarding the issuance of these permits. The Washington State Department of Ecology (Ecology) and City of Hoquiam are serving as co-lead agencies in the development of the Final EIS.

The co-lead agencies issued a determination of significance on April 4, 2014, and requested public and agency comments on the scope of the Draft EIS. The Draft EIS scoping period concluded on May 27, 2014 (scoping comments are included in Appendix A, *Scoping Comments*). The co-lead agencies established the scope of the Draft EIS based, in part, on comments received during the scoping period, and identified elements of the environment that should be addressed in the Draft EIS. Accordingly, the Draft EIS addressed the potential impacts on 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; and environmental health and safety. The Draft EIS also considered economics, social policy, and the costs and benefits of the proposed action consistent with HMC 11.10.160.

The co-lead agencies issued the Draft EIS for public review and comment on August 31, 2015. Public comments were received between August 31 and November 30, 2015. All comments received during the comment period were reviewed, compiled, and considered in the development of this Final EIS.

All comments and responses to those comments are presented in this Final EIS. The Final EIS reflects updates based on public comments, updated analysis, and new or revised regulations as described below in Section 1.4, *What changes are reflected in the Final EIS?*

1.3 How is this document organized?

The remainder of this Final EIS is organized as follows.

Chapter 2, Proposed Action and Alternatives. Chapter 2 provides a description of the proposed action (project location and existing and proposed facilities and operations), construction schedule and methods, and the no-action alternative.

Chapter 3, Affected Environment, Impacts, and Mitigation. Chapter 3 describes existing conditions in the study area, environmental impacts that would likely result from the proposed action and no-action alternative, and any measures to mitigate impacts of the proposed action. The chapter is subdivided into 17 sections, with each section addressing one element of the environment and the potential impacts related to construction and routine operations. Chapter 3, Section 3.0, *Introduction*, provides an overview of the scope and approach to completing the analysis of impacts.

- 3.0 Introduction
- 3.1 Earth
- 3.2 Air
- 3.3 Water
- 3.4 Plants
- 3.5 Animals
- 3.6 Energy and Natural Resources
- 3.7 Noise and Vibration
- 3.8 Land and Shoreline Use
- 3.9 Aesthetics, Light, and Glare
- 3.10 Recreation
- 3.11 Historic and Cultural Preservation
- 3.12 Tribal Resources
- 3.13 Public Services and Utilities
- 3.14 Hazardous Materials
- 3.15 Rail Traffic
- 3.16 Vehicle Traffic and Safety
- 3.17 Vessel Traffic

Chapter 4, Environmental Health and Safety. In addition to potential impacts associated with routine operations, the proposed action could result in impacts from potential incidents (e.g., storage tank failures, train derailments, vessel collisions) and related consequences (e.g., spills of

crude oil, fires, or explosions). Chapter 4 addresses the likelihood of various spill scenarios related with onsite operation of the proposed facility and offsite rail and vessel transport in the study area and describes potential impacts related to oil spills, fires, and explosions. This section also includes a discussion of the regulatory framework for spill prevention and preparedness and emergency service response, and identifies any additional measures that would be required to mitigate the impacts of the proposed action.

Chapter 5, Extended Rail and Vessel Transport. Chapter 5 addresses the impacts associated with transporting crude oil beyond the study area addressed in Chapters 3 and 4. It is expected this would most likely entail the transport of Bakken crude oil to the project site by rail from the Williston Basin in North Dakota and transport from the project site by vessel to refineries on the West Coast. However, transport could vary depending on the volume, source, and final market for delivery. This chapter considers existing and projected (where available) traffic in these areas and addresses potential impacts related to routine transport and risk.

Chapter 6, Cumulative Impacts. Chapter 6 addresses the potential impacts of the proposed action when considered in combination with all other past, present, and reasonably foreseeable future projects.

Chapter 7, Economics, Social Policy, and Cost-Benefit Analysis. As required by the City of Hoquiam Municipal Code 11.10.160, Chapter 7 addresses economics, social policy, and the costs and benefits related to the proposed action. Because the cost-benefit analysis informs the City of Hoquiam's decision regarding issuance of the land use permits, the scope of the analysis is limited to potential costs and benefits to the residents of Hoquiam.

Chapter 8, Distribution List. Chapter 8 lists the individuals, agencies, and companies that received notice of the Draft and Final EIS.

Chapter 9, References. Chapter 9 lists the references cited in the Final EIS.

Appendix A, Scoping Comments. This report presents all written comments received during the public scoping comment period.

Appendix B, Applicable Regulations. This appendix presents regulations applicable to the proposed action and related rail and vessel transport.

Appendix C, Tsunami Impact Modeling and Analysis. This technical memorandum presents the results of analysis and numerical modeling of tsunami wave generation and propagation to estimate elevation of inundation in the project area during the design tsunami event and determine possible forces on oil tank structures from the tsunami wave during the design earthquake event.

Appendix D, Air Data. This appendix presents information on existing air quality conditions and estimated emissions of criteria air pollutants and air toxins related to construction and operation of the proposed action.

Appendix E, FEMA Flood Insurance Rate Maps. This appendix presents current Federal Emergency Management (FEMA) flood mapping for the project site.

Appendix F, Special-Status Species. This appendix lists all special-status plant and animal species known to occur in the study area counties.

Appendix G, Noise Data. This appendix presents the results of the technical noise surveys conducted in the study area, including horn and wayside noise levels and counts of sensitive noise receptors affected at all grade crossings.

Appendix H, Local Policies Governing Land and Shoreline Use. This appendix presents the City of Hoquiam and City of Aberdeen policies governing land and shoreline use.

Appendix I, Local Policies Governing Aesthetics, Light, and Glare. This appendix presents the City of Hoquiam and City of Aberdeen policies governing aesthetics, light, and glare.

Appendix J, Cultural Resources Technical Report. This appendix presents the cultural resources study, which characterizes cultural resources sensitivity and describes potential impacts of the proposed action on these resources.

Appendix K, Rail Traffic Technical Information. This appendix provides information on the basics of rail operations and characteristics, defines common railroad terminology, presents graphic simulations and data tables of current scheduled traffic and typical traffic patterns, and illustrates how switching operations occur.

Appendix L, Vehicle Traffic Analysis. This appendix presents the results of the vehicle traffic and safety analysis, including vehicle grade-crossing delay and safety and emergency vehicle access under existing conditions, the no-action alternative, and the proposed action. Attachment L-1, *Vehicle Traffic Modeling*, presents the specific PS&P rail line grade crossings considered in the analysis and describes information sources and how impacts were evaluated.

Appendix M, Risk Assessment Technical Report. This appendix presents the detailed methods, assumptions, sources of data, and results for the likelihood that different spill scenarios could occur from onsite operation of the proposed facility and offsite rail and vessel transport in the study area.

Appendix N, Oil Spill Modeling. This appendix presents information about how various factors interact to influence the movement of spilled oil and depicts the movement of oil spilled at the facility or from a train or tank vessel under different combinations of weather and water flow conditions specific to the study area. This appendix also presents the methods, assumptions, and tools used in modeling oil spills.

Appendix O, Economic Impact Analysis. This appendix presents the analysis of economic impacts of construction and operation of the proposed action.

Appendix P, Census Block Group Data. This appendix presents data on minority and low-income populations in the study area census block groups.

Appendix Q, Crude Oil Market Analysis. This appendix presents information about existing and projected oil production at the likely sources of crude oil, existing and planned infrastructure to move the projected volumes of oil, and the potential for the proposed action to result in additional crude oil development and production at these sources. The analysis also considers the implications of the recently lifted ban on the export of crude oil and the potential for crude oil transloaded under the proposed action to be exported.

1.4 What changes are reflected in this Final EIS?

The Final EIS reflects the following changes to the Draft EIS. In general, revisions have been made to clarify details of the proposed action, correct inadvertent errors, provide additional information related to the analysis of impacts, and refine and present additional mitigation measures to address potentially significant impacts. No new or more significant impacts were identified as a result of these updates. Substantive revisions are identified below.

Chapter 2, Proposed Action and Alternatives

- The applicant's objective for the proposed action, which was presented in the Draft EIS *Summary*, has been added to this Final EIS along with the supporting conditions.
- Additional detail has been added to describe onsite operations (automated monitoring) and storage tank construction.
- Text has been added to clarify that bunkering is not included in the proposed action.
- The no-action alternative description has been revised to clarify that the analysis did not consider another development at the project site.

Chapter 3, Affected Environment, Impacts, and Mitigation

- **Section 3.0, Introduction.** The description of the alternatives analyzed has been revised to clarify that impacts are identified in the Draft EIS for the life of the proposed action and proposed mitigation measures are intended to apply for the life of the proposed action as well.
- **Section 3.2, Air**
 - The cancer risk analysis for diesel particulate matter has been updated to reflect revised assumptions regarding rail operations based on information from PS&P. The revised analysis resulted in lower emissions that are not considered significant; therefore, mitigation to conduct monitoring for diesel particulate matter has been removed.
 - Greenhouse gas emissions estimates from rail and vessel transport have been revised to include emissions beyond Washington State. The estimates reflect rail transport from the likely source (Williston Basin, North Dakota) and vessel transport to the furthest likely destination (Port of Long Beach, California). In addition, roundtrip emissions between Valdez, Alaska, and Port of Long Beach have been estimated to represent offset transport emissions of crude oil likely replaced by the crude oil transported under the proposed action.
 - A discussion of potential odor impacts from the proposed action has been added.
 - Emissions estimates have been updated to reflect the applicant's revised notice of construction (air permit) application. The application was updated to reflect recently published crude oil data. As a result, emission estimates for two criteria pollutants—carbon monoxide and volatile organic compounds—changed. In both cases emissions decreased from those presented in the Draft EIS. Emissions of all air toxics changed; the updated emissions are still under regulatory thresholds for all air toxics.
- **Section 3.4, Plants.** A discussion of potential impacts on plants from emissions related to the proposed action has been added.

- **Section 3.5, Animals.** Birds of Conservation Concern and additional special-status species and critical habitat have been identified in the study area. Additional information has been provided on several species in the study area, including Chinook salmon, whales and other marine mammals, and sea turtles. Information has been added to the discussion of potential impacts on animals from routine rail transport.
- **Section 3.12, Tribal Resources.** The description of Quinault Indian Nation fishing methods and gear has been updated and the related impacts clarified. A discussion of potential impacts on tribal hunting has been added. Details have been added to the discussion of impacts on access to tribal resources from rail traffic. Impacts on tribal fishing from vessel activity have been clarified.
- **Section 3.15, Rail Traffic.** Revisions include adding the results of recent bridge inspections; a description of PS&P operating guidelines related to track maintenance, inspection, and safety in handling for any crude oil trains in the study area; and the requirements of the Federal Railroad Administration's bridge management program.
- **Section 3.16, Vehicle Traffic and Safety.** Clarifying information has been added on existing emergency response procedures and communication protocols between PS&P and the Aberdeen and Hoquiam Fire Departments if a train is blocking access to a crossing. Details regarding emergency access impacts at Olympic Gateway Plaza and Port of Grays Harbor areas have been clarified. An additional mitigation measure related to access to industrial areas south of the PS&P line near the Port of Grays Harbor has been added.
- **Section 3.17, Vessel Traffic.** The capabilities of the tugs stationed in Grays Harbor have been clarified. Additional information on vessel traffic management has been included. The discussion of impacts on tug availability has been expanded. Potential impacts on commercial fishing have been clarified.

Chapter 4, Environmental Health and Safety

- **Section 4.1, Introduction.** The basis for selecting the various spill scenarios considered in the risk analysis has been clarified. Because risk figures have been deleted from Sections 4.4, 4.5, and 4.6, the description of qualitative terms used in Chapter 4 to describe the magnitude of environmental consequences depicted in the figures has also been deleted.
- **Section 4.2, Applicable Regulations.** Updated information about new or revised state and federal regulations pertaining to facility operations and the transport of crude oil by rail and vessel has been added. Requirements and existing local emergency response capabilities for preparing for and responding to a potential incident involving the release of crude oil have been clarified.
- **Section 4.3, Risk Considerations.** Information has been added about the types of crude oil likely to be handled, stored, and transported related to the proposed action, including a broader range of chemical properties, weathering behaviors, and unique response and cleanup considerations.
- **Section 4.4, Environmental Risks—Terminal (Onsite), Section 4.5, Environmental Risks—Rail Transport, and Section 4.6, Environmental Risks—Vessel Transport.** These sections have been revised to include a fuller discussion of the existing preparedness and response capabilities and requirements and the potential for impacts to occur under the no-action alternative. Section 4.5 has been updated to reflect additional incidents along the PS&P rail line

since the release of the Draft EIS. The risk figures (depicting the range of risks related to the proposed action) have been replaced with a fuller discussion of the potential impacts of the proposed action, the risk assessment methods (from Appendix M, *Risk Assessment Technical Report*), and the potential for significant unavoidable impacts to occur. Additional mitigation measures have been added to help address the potential for the environmental impacts described in Section 4.7, *Impacts on Resources*.

- **Section 4.7, Impacts on Resources.** The type and range of potential environmental consequences that could occur as the result of a spill, fire, or explosion have been clarified. This includes information regarding the potential for impacts on air quality, human health, tribal and commercial fishing, and public services and information about past incidents during rail transport. This section has also been revised to clarify that the potential impacts identified in Section 4.7 could also affect the resources listed in Chapter 3, *Affected Environment, Impacts, and Mitigation*.

Chapter 5, Extended Rail and Vessel Transport. A discussion has been added regarding the likely sources and destinations for crude oil transloaded under the proposed action and the potential for the proposed action to induce growth at these sources, based on the analysis in Appendix Q, *Crude Oil Market Analysis*. In addition, this section has been revised to clarify the anticipated rail and vessel routes to and from the project site, existing and projected (where available) rail and vessel traffic along these routes, and the types and magnitude of impacts that could occur under existing conditions, the no-action alternative, and the proposed action.

Chapter 6, Cumulative Impacts. This section has been revised to reflect applicable updates to the analysis of impacts of the proposed action described above.

Chapter 7, Economics, Social Policy, and Cost-Benefit Analysis.

- **Section 7.2, Social Policy.** This section has been revised to reflect applicable updates to the analysis of impacts of the proposed action.
- **Section 7.3, Cost-Benefit Analysis.** This section has been revised to add information about the range of social and economic impacts that could occur in the event of an oil spill, fire, or explosion.

Appendices

- **Appendix A, Scoping Comments.** This report has been revised to present all written comments received during the public scoping comment period compared to the Draft EIS Scoping Report, which only included comments submitted via the web.
- **Appendix B, Applicable Regulations.** This appendix has been revised to include updates to regulations applicable to the proposed action and related rail and vessel transport.
- **Appendix N, Oil Spill Modeling.** This report has been updated to include an attachment providing information about considerations relevant to the use of the select modeling tool.
- **Appendix Q, Crude Oil Market Analysis.** This analysis has been prepared for the Final EIS. It describes the likely sources of crude oil shipped through the proposed facility and the potential for the proposed action to induce production at those sources; it also considers the implications of the lifting of the ban on U.S. crude oil exports. It supports the greenhouse gas analysis in Section 3.2, *Air*, and the study area for extended vessel transport in Chapter 5, *Extended Rail and Vessel Transport*.