

Chapter 4

Updated Information and Analysis

4.0 UPDATED INFORMATION AND ANALYSIS

This chapter updates the analysis of environmental impacts contained in the DEIS and provides a listing of the updated information and analysis performed subsequent to the publication of the DEIS. Information on the Preferred Alternative, new analyses performed as a result of comments on the DEIS, and new information that is now available are provided.

4.1 CHAPTER 1 – SUMMARY

4.1.1 UPDATED INFORMATION ON SELECTION OF A PREFERRED ALTERNATIVE

The Port has selected a Preferred Alternative as described in Chapter 1 of this FEIS. The level of development and uses assumed in the Preferred Alternative fall within the range of the alternatives analyzed in the DEIS.

The Port has stated in the Project Goals and Objectives section of the EIS that it seeks to maintain Terminal 5 as a major cargo terminal capable of meeting expected vessel traffic needs and provide modern, flexible, and efficient terminal infrastructure.

The Port is proceeding with project impacts that were disclosed in Alternative 2 as the Preferred Alternative and is in the process of acquiring permits with the City of Seattle that approve the project infrastructure improvements and manage the impacts from operations that consider throughput of up to 1.3 million TEUs (twenty-foot equivalent units).

The Port, through the EIS analysis, identified the steps needed to reduce, minimize, avoid, or mitigate the impacts from operations and construction consistent with the Project described as Alternative 2 in the DEIS and modified in the FEIS based on public and agency comment. The Port will commit to the permit conditions created for the mitigation measures needed for the operational throughput of 1.3 million TEUs annually and follow the specific milestones established through the City of Seattle Master Use Permit and building permit processes and other agency regulatory processes.

The Port is the property owner and the permit holder. In that capacity, the Port will ultimately be responsible for compliance with all permit requirements during the construction and completed terminal operations. The NWSA is acting as the agent on behalf of the Port during the construction phase and subsequent terminal operations. Such a role does not diminish the Port's ultimate responsibility for permit compliance.

The Port/NWSA will eventually negotiate an agreement with a terminal operator to run Terminal 5 as a cargo facility. During the course of the negotiations, the Port/NWSA will discuss with the proposed tenant or user the obligations that must be observed to comply with the permits for the site. Even in those situations where the tenant or user has undertaken the obligation for compliance, the Port/NWSA will remain responsible for complying with the permit conditions. The Port/NWSA will consult and provide assistance to the eventual tenant or user to

help them comply with the permit conditions. Conditions of approval will be inserted in all lease and site use agreements with a selected marine terminal operator to ensure comprehensive compliance with city, state, federal, and Treaty tribe conditional approvals.

4.2 CHAPTER 2 – DESCRIPTION OF THE ALTERNATIVES

4.2.1 CLARIFICATION OF THE ELECTRIFICATION SCHEDULE AND ACCELERATED SCHEDULE FOR ADOPTION OF ALTERNATIVE 3

Alternatives 2 and 3 represent two different possible site configurations after upland improvements have been completed. The maximum TEU throughput for Alternative 2 could be achieved without the improved movement efficiencies associated with the equipment needed for Alternative 3. However, the maximum throughput for Alternative 3 could not be achieved without using the more efficient, electrified equipment. Alternative 3 has lower emissions of all air pollutants because more of the onshore cargo handling equipment is electrified than in Alternative 2, which relies primarily on use of diesel-powered cargo handling equipment. However, even with use of the diesel-powered cargo handling equipment anticipated in Alternative 2, modelling indicates that operational off-site concentrations of criteria air pollutants attributable to capacity operations in 2020 and 2030 and beyond will comply with NAAQS. Emissions reductions relative to the No Action baseline at start-up in 2020 occur with Alternative 2 because the benefits of fleet turnover use of low sulfur fuels and the use of shorepower available to ships at the beginning of operations.

The Port does not have an MTO yet. Interested parties in the facility have indicated that Alternative 2 represents the necessary physical improvements and the anticipated level of throughput required for both the Port and an MTO to make efficient and effective use of the space. Capital improvements to construct an all electrical operation in the next 10 years to support a throughput consistent with the levels anticipated in Alternative 3 are not warranted at this time. After selection, the Port will discuss with any potential MTO its goals to reduce and minimize air quality impacts especially relative to the potential to control emissions using less polluting cargo handling alternatives. But the established mitigation steps in Alternative 2 are protective of air quality.

4.3 CHAPTER 3 – AFFECTED ENVIRONMENT, IMPACTS, MITIGATION MEASURES, SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

4.3.1 EARTH, SECTION 1

4.3.1.1 UPDATED INFORMATION ON SLOPE STABILITY AND VIBRATIONS

Information was added to the section on potential impacts from slope stability to include potential impacts to buildings and homes from vibratory hammers used in pile driving during construction (See Chapter 3, Section 3.1.3.2).

4.3.1.2 UPDATED GEOTECHNICAL ENGINEERING DESIGN STUDY

The 95% Geotechnical Engineering Design Study for Terminal 5 Cargo Wharf Rehabilitation and Berth Deepening (Hart Crowser, Inc. [June 14, 2016]) is included in this FEIS in Volume II, Appendix J.

4.3.2 AIR, SECTION 2

4.3.2.1 UPDATED AIR QUALITY TECHNICAL REPORT

The Air Quality Technical Report has been updated and can be found in FEIS, Volume II, Appendix A. Portions of FEIS, Volume I, Chapter 3, Section 3.2 include updates for air analysis. It is dated September 2016.

4.3.2.2 UPDATED INFORMATION ON USE OF SHOREPOWER

The DEIS, on page 2-11, Section 2.3.3 Proposed Alternative 2 Construction states, “the conduit, wiring and a connection system would be provided for a shore power system for two berths. This would allow the terminal to be plug-in ready; for those ships with (that) have the capability and choose to use shore power.” Furthermore the DEIS in in the Air Quality technical appendix, in describing the analytical methods assumed in its model, states “For 2020, 2030 and 2040 shore power efficacy of . . . and 30%, 50% and 70% was applied for the action alternatives.” The conclusion that the Terminal 5 operations do not exceed the NAAQS, and therefore do not cause significant environmental impacts, is supported with the understanding that, over time, shorepower will be used by an increasing percentage of oceangoing vessels while at berth.

It is unlikely that 100 percent of container ships will adopt shorepower at berth in the near future. Even the most stringent shorepower adoption requirement in California, whose regulations were promulgated due to severe air quality degradation in the Los Angeles basin, require an 80 percent plug-in rate by 2020. The Port of Seattle and NWSA anticipated the need to reduce air quality impacts as part of the Project and directed planners to include a component of shorepower as part of operations, even though there are no regulatory mandates to do so. Shorepower in Seattle is a voluntarily implementation scheme to minimize potential adverse impacts. The estimated adoption rates, which increase over time, are based on reasonable estimates of vessels with the capability to connect to shorepower. The likelihood of being able to connect 30 percent of the vessels calling Terminal 5 after its rehabilitation is complete is probable. The potential to increase usage up to 50 percent in the following decade is also likely due to the opportunity to plug in and a competitive cost structure relative to diesel fuel.

Adoption rates will be variable and the Port cannot guarantee either that ships with shorepower capability will call at Seattle or that the vessels will utilize shorepower instead of diesel to support vessel needs at berth. However, penetration of plug-in-capable vessels calling at Terminal 5 and utilization of shorepower at berth is encouraged by several developments and policies:

1. Ships entering the ECA (Emissions Control Area) are required to burn fuel with a maximum sulfur content of 0.1 percent as of January 1, 2015. The higher cost of lower sulfur fuels versus electricity costs for shorepower may approach parity, encouraging use of shorepower over diesel generation.
2. The CARB (California Air Resources Board) requires ships in California to use shorepower or equivalent control techniques to reduce at berth emissions by 2020. The number of vessels modified to accept shorepower has increased since passage of the policy. Vessels that call at California ports often call at Pacific Northwest ports as their next destination, increasing the chance that a vessel is equipped to accept shorepower connections.
3. Seattle City Light sells power at rates often less than that of other major shipping centers, making shorepower financially less, or equal in cost, to using diesel when not factoring labor costs. EPA and other organizations may provide grants or matching funds to expedite operator uptake of plug-In capabilities.

Although shorepower connection will be voluntary, the Port recognizes that it must provide additional impetus to encourage shorepower adoption when the terminal goes online with a new terminal operator. Within the existing Clean Air Strategy plan, the NWSA and Port in coordination with an MTO will define a program focused on attracting ships that are already carrying shipside onshore power equipment and encourage usage of electric shorepower at berth to meet the 30 percent adoption goal beginning when the terminal restarts operations. The Program will define specific incentive plans to attract ships which perform better in reducing air emissions and that will use the Port's shorepower system. The Port will be responsible under its Clean Air Strategy plan to report progress to meeting the goal and determine how frequently reporting is needed.

4.3.2.3 ADDITION OF MONITORED AIR DATA

The air analysis added monitored air data for 2011-2013 at the Marginal Way Duwamish site for PM_{2.5}. See Section 3.2.2.1.

4.3.2.4 ENHANCED DISPERSION MODELING

The dispersion modeling was enhanced and more detail is provided in the FEIS, Volume II, Appendix A, Air Quality Technical Report and in Section 3.2.2.8 of the FEIS.

4.3.2.5 ADDITION OF COMPARISON OF ALTERNATIVES EMISSIONS

A section on the comparison of alternatives emissions was added to the FEIS, Volume II, Appendix A, Air Quality Technical Report and in Section 3.2.3.4 of the FEIS.

4.3.2.6 ADDITION OF TRACKING TERMINAL PROGRESS

A section on tracking terminal progress with air quality conditions was added to the FEIS, Volume II, Appendix A, Air Quality Technical Report and in Section 3.2.3.10 of the FEIS.

4.3.2.7 ADDITION OF MITIGATION MEASURES TO BE IMPLEMENTED

Section 3.2.4 has been revised to state mitigation measures that will be implemented.

4.3.3 WATER, SECTION 3

4.3.3.1 ADDITIONAL INFORMATION ON ENVIRONMENTALLY CRITICAL AREAS

Information on City of Seattle Environmentally Critical Areas has been added to Section 3.3.1.

4.3.3.2 ADDITIONAL INFORMATION ON FISHING VESSEL USE

Information on fishing vessel use has been added to Section 3.3.2.3.

4.3.4 NOISE, SECTION 6

4.3.4.1 UPDATED NOISE QUALITY TECHNICAL REPORT

The Noise Quality Technical Report has been updated and can be found in FEIS, Volume II, Appendix B. Portions of FEIS, Volume I, Chapter 3, Section 3.2 include updates for noise analysis including an analysis of low frequency noise measurements of vessels at berth running generators. It is dated October 2016.

4.3.4.2 UPDATED INFORMATION ON THE ADDITION OF A FRAMEWORK FOR AN OPERATIONAL NOISE MANAGEMENT PLAN

An Operational Noise Management Plan has been provided as part of the environmental review and mitigation process and can be found in FEIS, Volume II, Appendix M). It is dated October 2016.

4.3.5 CULTURAL HISTORICAL, SECTION 10

4.3.5.1 ADDITIONAL INFORMATION ON TREATY FISHING

Additional information on Treaty Fishing has been added to Section 3.10.1.

4.3.6 TRANSPORTATION, SECTION 11

4.3.6.1 UPDATED TRANSPORTATION TECHNICAL REPORT

The Transportation Technical Report has been updated and can be found in FEIS, Volume II, Appendix C). Portions of the FEIS, Volume I, Chapter 3, Section 3.11 include updates for traffic analysis.

4.3.6.2 UPDATED TRANSPORTATION TECHNICAL REPORT

The geographic area of the traffic study was expanded. The truck trip distribution pattern and trip assignments in Section 4.3 the Transportation Technical Report (see FEIS, Volume II, Appendix C) have been extended to show the net change in truck trips to the state highway network, including Interstate 5, Interstate 90, and SR 99. Analysis has also been added in Section 5.1 of the Transportation Technical Report to show the percentage of total traffic at key locations on the network.

4.3.6.3 ADDITION OF CONCURRENCY REVIEW

The Transportation Concurrency review was added to Chapter 3, Section 11 and is found in Section 3.11.3.1.

4.3.6.4 ADDITION OF GATE QUEUE MANAGEMENT PLAN

The Transportation Technical Report now includes a Queue Management Plan. See FEIS, Volume II, Appendix C).

4.3.6.5 UPDATED MITIGATION MEASURES

Mitigation measures have been updated in Section 6 of the Transportation Technical Report to include several Intelligent Transportation System (ITS) components. These include:

- Replacing the Flashing Alert Sign located on northbound West Marginal Way that notifies motorists approaching Terminal 5 (and local businesses) that the railroad tracks are blocked by a train. This would allow them time to move from the right turn lane to the left turn lane so they can access the terminal and local businesses via the Terminal 5 Access Bridge. (It is noted that the foundation and conduit for the sign still exist, but the sign was damaged by a collision and removed.) The alert sign should be maintained until the surface access via W Marginal Way is closed to vehicular traffic.
- Upgrading the signal system along the lower Spokane Street corridor between Harbor Avenue and East Marginal Way, and providing for interconnection between signals as well as between the signal system and the Spokane Street Swing Bridge.
- Connecting Terminal 5 to the Northwest Seaport Alliance's (NWSA's) Gate Wait Time Awareness System or a similar system, which provides real-time information to truck drivers and dispatchers about the time it will take to get through a terminal gate and the terminal.

4.3.7 CHAPTER 3, SECTION 12, PUBLIC SERVICES

4.3.7.1 ADDITIONAL INFORMATION ON FIRE AND EMERGENCY ACCESS

Additional information on fire and emergency access has been added to Section 3.12.2.

Chapter 5

Errata

5.0 ERRATA

This chapter identifies corrections to the DEIS and Appendices to the DEIS, including language changes and clarifications, based on comments received on the DEIS and other updated information.

5.1 VOLUME I (DRAFT EIS)

5.1.1 CHAPTER 2

5.1.1.1 SECTION 2.3.7.3 AND 2.3.7.4

Sections 2.3.7.3, and 2.3.7.4 refer to “RTG Cranes” but the term should be “RMG Cranes” as the discussion is about Alternative 3.

5.1.2 CHAPTER 3

5.1.2.1 SECTION 3.8.1

The word “Greater” has been removed from the title for Duwamish Manufacturing/Industrial Center Plan in Section 3.8.1 as the organization is now known.

5.1.2.2 SECTION 3.11.4

The reference to the Section on Mitigation has been corrected to correctly identify it as Section 3.11.4.

5.2 VOLUME II (DRAFT EIS)

5.2.1 APPENDIX C TRANSPORTATION TECHNICAL REPORT

5.2.1.1 TABLE 8

There should be no outbound employee trips during the AM peak hour for any of the alternatives since the night shift would end at 3:00 AM. As noted in the Transportation Technical Report, “A ‘hoot shift’ (typically from 3:00 AM to 7:00 AM) may be needed to unload or load a ship on rare occasions, which can occur if the ship is delayed by weather” (Section 1.2.2). This condition would not occur on the Average Day or Design Day. This error has been corrected in Table 8 of the Transportation Technical Report. See FEIS, Volume II, Appendix C.

5.2.1.2 SECTION 2.9

The text in Section 2.9 of the Transportation Technical Report has been corrected to state that Terminal 5 currently has 540 spaces. There are 40 “other” spaces. See FEIS, Volume II, Appendix C.