Draft Environmental Impact Statement

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KALAMA SEPA

Manufacturing & Marine Export Facility

kalamamfgfacilitysepa.com

COWLITZ COUNTY WASHINGTON

Port OF KALAMA

EX 0183-TSS

2.6.1.3 Components Unique to the ULE Alternative

Power Generation Facility

The ULE Alternative would meet its electric power demands using a combination of grid electric power and on-site power generation. As discussed below, it is expected that new power lines would be run on existing poles to the project site and a new substation would be constructed within the project site. The ULE Alternative would have greater demand for electric power than the CR Alternative (200 megawatts compared to 30 megawatts), so the proposed project with the ULE Alternative would need to supplement the grid electric power.

The ULE Alternative would supplement grid electric power with an on-site 125-megawatt power generation facility. The power generation facility would consist of two natural gas-fired combustion turbines and one steam turbine. Natural gas mixed with air would combust in the gas turbine to generate electricity, and the exhaust gas from each combustion turbine would be used to generate high pressure steam to produce power through a steam turbine. The exhaust stacks would be the tallest element of the power generation facility and would be approximately 90 feet tall. If in the future, Cowlitz County PUD constructs transmission capacity adequate to supply all of the power needs for the ULE Alternative, the on-site power generation facility may not be necessary.

Waste heat from the power generation facility would be managed through cooling towers. Under the ULE Alternative, one cooling tower with two cells would be installed for the power generation facility. This tower would be located adjacent to the cooling towers installed for the methanol production process as discussed below.

Methanol Production Lines

The proposed project with either of the Technology Alternatives would include two methanol production lines. The size, layout, and appearance of the methanol production lines would vary slightly for the CR Alternative and the ULE Alternative. The GHR used in the ULE Alternative would be of similar height to the SMR, but has a smaller footprint and would look like a large vessel or tank. The production lines would occupy approximately 14 acres of the project site with the ULE Alternative. **Figure 2-8** shows an elevation of a methanol production line under the ULE Alternative.

2.6.1.4 Components Common to both Technology Alternatives

The proposed project, with either of the Technology Alternatives, would result in the development of a methanol manufacturing facility that would produce up to 10,000 tonnes[2] of methanol per day when operating at full capacity. The anticipated yearly production at full capacity with both production lines would be approximately 3.6 million tonnes. The methanol would be stored on site for transfer to shipping vessels at the marine terminal.

With either Technology Alternatives, the proposed methanol manufacturing facility would consist of the following major components.

[2] One tonne (approximately 2,204 pounds) is equivalent to approximately 333 U.S. gallons.

Any accidental spills from pipelines on the dock (for both alternatives) would be captured on the dock surface and collected by the stormwater system. Valving would be installed on the storm conveyance pipes so that the spill could be diverted to a separate pumping system that would convey the contaminated water back to the proposed methanol manufacturing facility for treatment and reuse.

Marine Vessels

The marine terminal would be designed to load methanol onto oceangoing vessels that can handle methanol as a cargo. Vessels would arrive at the terminal from the Pacific Ocean via the Columbia River navigation channel. As noted above, the dock would be designed to accommodate vessels ranging in size from 45,000 DWT to 127,000 DWT, which would include vessels measuring from approximately 600 feet to 900 feet in length and 106 feet to 152 feet in width.

The typical speed of the types of vessels that would serve the proposed project is 15 knots in the ocean and 10 knots in the Columbia River. Vessels would be piloted across the Columbia River bar and up the river to the terminal as required by state and federal regulations. Assist tugs would help vessels arriving at and leaving the berth. Based on the typical vessel size and production of the plant, an estimated 3 to 6 ships per month or 36 to 72 ships per year would use the berth for loading and unloading methanol. Additional ships may use the berth for other cargo operations, as a lay berth, and for topside vessel maintenance activities.

2.6.2.4 Mitigation Activities under the Marine Terminal Alternatives

Compensatory mitigation would be proposed to offset the reduction in habitat function of the water column due to shading and the loss of benthic habitats from pile installation under both Marine Terminal Alternatives. It is expected that each alternative would include three compensatory mitigation activities: (1) pile removal in the area shown on **Figure 2-17**; (2) engineered log jams (ELJ); and (3) riparian habitat restoration and wetland buffer enhancement. Potential aquatic habitat mitigation activities are discussed in more detail in Chapter 6, Plants and Animals.

The proposed project with either Marine Terminal Alternative would also include best management practices (BMPs) to minimize the extent of any impacts to marine mammals or the aquatic environment due to dredging, overwater work, and pile installation.

2.6.2.5 Marine Terminal Alternatives Construction Procedures

Mobilization

Most of the construction activities would be water based and mobilization would generally consist of moving barge-mounted equipment to the site with tug boats. Two to four barges would typically be used at the site at any given time.

Pile Installation

Concrete and steel piles would be installed using vibratory and/or impact hammers (depending upon pile type, as described below), most likely operated from a barge. Piles would typically be transported to the site and stored at the site on a work barge. The contractor's water-based equipment would include a barge-mounted crane with pile-driving equipment and a materials barge with piles. At times, a second barge-mounted crane may be on site with an additional materials barge.

ATTACHMENT X