State Environmental Policy Act
Final Environmental Impact Statement

Volume I: Final Environmental Impact Statement

April 28, 2017
April 28, 2017

Dear Interested Parties, Jurisdictions, and Agencies:

Cowlitz County and the Washington State Department of Ecology (the co-lead agencies) are pleased to present the Final Environmental Impact Statement (Final EIS) for the proposed Millennium Bulk Terminals—Longview project. Millennium Bulk Terminals—Longview, LLC (the Applicant) is proposing to construct and operate a coal export terminal (Proposed Action) in Cowlitz County, Washington, along the Columbia River.

Under the Proposed Action, the Applicant would develop the coal export terminal on 190 acres (the project area) primarily within an existing 540-acre site that is currently leased by the Applicant. The coal export terminal would receive coal from the Powder River Basin in Montana and Wyoming and the Uinta Basin in Utah and Colorado via rail shipment. Coal would be unloaded from rail cars, stockpiled, and loaded by conveyor onto ocean-going vessels for export using two new docks located in the Columbia River. Once construction is complete, the Proposed Action could have a maximum annual throughput capacity of up to 44 million metric tons of coal per year.

The Final EIS has been prepared in accordance with the Washington State Environmental Policy Act (SEPA) and Cowlitz County Code. The purpose of the Final EIS is to evaluate the potential environmental impacts of constructing and operating the Proposed Action.

During the EIS scoping phase, the co-lead agencies identified areas of concern associated with the Proposed Action that were subsequently addressed in the Draft EIS. The co-lead agencies published the Draft EIS for review and comment on April 29, 2016. Comments on the Draft EIS were received April 29 through June 13, 2016. All comments received during the comment period were reviewed, compiled, and considered in the development of the Final EIS. The Final EIS reflects revisions and additional information in response to comments received on the Draft EIS. Responses to all comments on the Draft EIS are presented in the Final EIS.

The Final EIS evaluates the potential impacts from construction and operation of the Proposed Action, including potential impacts related to the rail and vessel transport of coal to and from the proposed export terminal. The Final EIS also evaluates the contribution of the Proposed Action to cumulative environmental impacts. In addition to the Proposed Action, the Final EIS evaluates a no-action alternative.

The following resource areas were evaluated in the Final EIS.

**Built Environment**
- Land and Shoreline Use
- Social and Community Resources
- Aesthetics, Light, and Glare
- Cultural Resources
- Tribal Resources
- Hazardous Materials
Natural Environment
- Geology and Soils
- Surface Water and Floodplains
- Wetlands
- Groundwater
- Water Quality

Operations
- Rail Transportation
- Rail Safety
- Vehicle Transportation
- Vessel Transportation

Vegetation
- Fish
- Wildlife
- Energy and Natural Resources
- Noise and Vibration
- Air Quality
- Coal Dust
- Greenhouse Gas Emissions and Climate Change

The Final EIS identifies proposed mitigation measures to address potentially significant adverse environmental impacts of the Proposed Action. In some cases, implementation of proposed mitigation measures would reduce but not completely eliminate the significant adverse impacts. These impacts are identified in the Final EIS as unavoidable and significant adverse environmental impacts. Potential unavoidable and significant adverse environmental impacts are identified for the following resource areas: social and community resources; cultural resources; tribal resources; rail transportation; rail safety; vehicle transportation; vessel transportation; noise and vibration; and air quality.

The Final EIS will be used by Cowlitz County, Washington State Department of Ecology, and other agencies to inform decision-making regarding permits for the Proposed Action. SEPA (WAC 197-11-460) requires agencies shall take no actions for 7 days after Final EIS issuance. All local, state, regional, and federal permits must be issued before the Proposed Action can begin in 2018.

Questions about this Final EIS may be directed to:

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Thank you for your interest in the Millennium Bulk Terminals—Longview project environmental review process.

Sincerely,

Elaine Placido, Building and Planning Director, Cowlitz County

Date: 28 April 2017  Signature: ________________________________

Sally Toteff, Southwest and Olympic Regional Director, Washington State Department of Ecology

Date: 28 April 2017  Signature: ________________________________
Project Title
Millennium Bulk Terminals—Longview

Proposed Action and Alternatives

Millennium Bulk Terminals—Longview, LLC (Applicant) is proposing to construct and operate a coal export terminal (Proposed Action) in Cowlitz County, Washington, along the Columbia River. The coal export terminal would receive coal from the Powder River Basin in Montana and Wyoming, and the Uinta Basin in Utah and Colorado via rail. The coal would be unloaded and stockpiled in the project area and then loaded onto vessels for transport to Asian markets via the Columbia River and Pacific Ocean.

Proposed Action

Under the Proposed Action, the Applicant would develop the coal export terminal on 190 acres (project area) primarily within an existing 540-acre site that is currently leased by the Applicant (Applicant’s leased area). The project area is adjacent to the Columbia River in unincorporated Cowlitz County, Washington, near Longview, Washington. The Applicant currently operates and would continue to operate a bulk product terminal within the Applicant’s leased area.

BNSF Railway Company (BNSF) or Union Pacific Railroad (UP) trains would transport coal in unit trains (rail cars that carry the same commodity) on BNSF main line routes in Washington State, and the BNSF Spur and Reynolds Lead in Cowlitz County to the project area. Coal would be unloaded from rail cars, stockpiled, and loaded by conveyor onto ocean-going vessels for export at two new docks (Docks 2 and 3) located in the Columbia River.

Once construction is complete, the Proposed Action could have a maximum annual throughput capacity of up to 44 million metric tons of coal per year. The coal export terminal would consist of one operating rail track, eight rail tracks for storing up to eight unit trains, rail car unloading facilities, a stockpile area for coal storage, conveyor and reclaiming facilities, two new docks in the Columbia River (Docks 2 and 3), and shiploading facilities on the two docks. Dredging of the Columbia River would be required to provide access to and from the Columbia River navigation channel and for berthing at the two new docks.

Vehicles would access the project area from Industrial Way (State Route 432), and vessels would access the project area via the Columbia River. The Reynolds Lead and BNSF Spur—both jointly owned by BNSF and UP, and operated by Longview Switching Company (LVSW)—provide rail access to the project area from a point on the BNSF main line (Longview Junction) located to the east in Kelso, Washington. Coal export terminal operations would occur 24 hours per day, 7 days per week. The coal export terminal would be designed for a minimum 30-year period of operation.

At full terminal operations, the Proposed Action would bring approximately 8 loaded unit trains each day carrying coal to the project area, send out approximately 8 empty unit trains each day from the project area, and load an average of 70 vessels per month or 840 vessels per year, which would equal 1,680 vessel transits in the Columbia River annually.
No-Action Alternative

The Applicant plans to continue operating its existing bulk product terminal located adjacent to the project area. Ongoing operations would include storing and transporting alumina and small quantities of coal, and continued use of Dock 1. Maintenance of the existing bulk product terminal would continue, including maintenance dredging at the existing dock. The Applicant plans to expand operations at the existing bulk product terminal, which could include increased storage and upland transfer of bulk products using new and existing buildings. The Applicant would likely need to undertake demolition, construction, and other related activities to develop expanded bulk product terminal facilities.

If the coal export terminal is not constructed, the Applicant would likely propose expansion of the bulk product terminal onto areas that would have been subject to construction and operation of the proposed coal export terminal. Additional bulk product transfer activities could involve products such as a calcined pet coke, coal tar pitch, cement, fly ash, and sand or gravel. The Applicant has stated this new development or operations would be designed so that they would not require a shoreline or U.S. Army Corps of Engineers permit. Any new operations would be evaluated under applicable regulations, including the State Environmental Policy Act (SEPA). Upland areas of the project area are zoned Heavy Industrial and it is assumed future proposed industrial uses in these upland areas could be permitted. Any new construction would be limited to uses allowed under existing Cowlitz County development regulations.

Location

The location for the Proposed Action is a 190-acre site (project area) located at 4029 Industrial Way (State Route 432) in unincorporated Cowlitz County. The project area is the location of the former Reynolds Metals Company facility.

Proposed Date of Implementation

Construction could begin in 2018. The Proposed Action is expected to be fully operational at maximum capacity (44 million metric tons of coal per year) by 2028.

Proponent

Millennium Bulk Terminals—Longview, LLC

Co-Lead Agencies

Cowlitz County (SEPA nominal lead agency)
Washington State Department of Ecology

Responsible Officials

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Required Permits, Plans, and Approvals

The following permits, plans, and approvals would be required for the Proposed Action.

Local
- Cowlitz County Department of Building and Planning—Shoreline Substantial Development Permit
- Cowlitz County Department of Building and Planning—Shoreline Conditional Use Permit
- Cowlitz County Department of Building and Planning—Critical Areas Permit
- Cowlitz County Department of Building and Planning—Floodplain Permit
- Cowlitz County Department of Building and Planning—Building and Site Development Permits
- Three Rivers Regional Wastewater Authority—Wastewater Discharge Permit
- City of Longview—Utility Service Permit
- Southwest Clean Air Agency—Notice of Construction
State
- Washington State Department of Ecology—Clean Water Act Section 401 Water Quality Certification
- Washington State Department of Ecology—National Pollutant Discharge Elimination System Construction Stormwater Permit
- Washington State Department of Ecology—National Pollutant Discharge Elimination System Industrial Stormwater Permit
- Washington State Department of Ecology—Water Rights Permit
- Washington State Department of Ecology—Shoreline Conditional Use Permit
- Washington Department of Fish and Wildlife—Hydraulic Project Approval
- Washington State Department of Natural Resources—Site Use Authorization or Flow Lane Disposal Authorization
- Washington State Department of Natural Resources—Aquatic Lands Lease

Federal
- U.S. Army Corps of Engineers—Clean Water Act Section 404 Permit
- U.S. Army Corps of Engineers—Rivers and Harbors Act Section 10 Permit
- U.S. Army Corps of Engineers—Rivers and Harbors Act Section 14 (Section 408) Permit
- U.S. Army Corps of Engineers—Section 106 of the National Historic Preservation Act compliance
- U.S. Fish and Wildlife Service and National Marine Fisheries Service—Endangered Species Act Consultation
- National Marine Fisheries Service—Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, Section 305 Consultation
- National Marine Fisheries Service—Marine Mammal Protection Act

Environmental Impact Statement Authors and Principal Contributors

This document has been prepared under the direction of the co-lead agencies. Key authors and principal contributors to the analyses are listed below. The co-lead agencies determined the significance of potential adverse impacts of the Proposed Action, proposed mitigation measures, and determined the unavoidable and significant adverse impacts of the Proposed Action.

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1 The project area landowner (Northwest Alloys) holds a 30-year aquatic lands lease (20-B09222) with the Washington State Department of Natural Resources (WDNR). According to WDNR, under the terms of the lease, Northwest Alloys must obtain WDNR’s written consent prior to construction of improvements.
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Date of Draft Environmental Impact Statement Issuance
April 29, 2016

Date Draft Environmental Impact Statement Comments Were Due
June 13, 2016

Dates and Locations of Draft Environmental Impact Statement Public Hearings

May 24, 2016, 1:00 to 4:00 p.m. and 5:00 to 9:00 p.m.
Cowlitz County Regional Conference Center
1900 7th Avenue
Longview, WA 98632

May 26, 2016, 1:00 to 4:00 p.m. and 5:00 to 9:00 p.m.
Spokane Convention Center
334 W Spokane Falls Boulevard
Spokane, WA 99201

June 2, 2016, 1:00 to 4:00 p.m. and 5:00 to 9:00 p.m.
TRAC Center
6600 Burden Boulevard
Pasco, WA 99301

Date of Final Environmental Impact Statement Issuance
April 28, 2017

Final Environmental Impact Statement Availability
This Final EIS is posted on the EIS website at http://www.millenniumbulkeiswa.gov/. To obtain a printed copy or DVD of this Final EIS (for the cost of production), follow the instructions provided at http://www.ecy.wa.gov/services/disclosure/disclose.html. DVDs are also available at the Cowlitz County Administration Building, Department of Building and Planning.

The document is also available as a reference at the following locations:

Cowlitz County Administration Building—Department of Building and Planning
207 4th Avenue North
Kelso, WA 98626

Washington State Department of Ecology
300 Desmond Drive SE
Lacey, WA 98503

Longview Public Library
1600 Louisiana Street
Longview, WA 98632

Castle Rock Library
137 Cowlitz Street West
Castle Rock, WA 98632
Next Actions

The Final EIS provides information for public, state, and local agencies to support decision-making regarding permits for the Proposed Action. These agencies include Cowlitz County, City of Longview, Southwest Clean Air Agency, Three Rivers Regional Wastewater Authority, Washington Department of Fish and Wildlife, Washington State Department of Natural Resources, and Ecology. Local, regional, and state agencies will conduct their respective reviews as defined by adopted local, regional, and state rules. All primary local, regional, state, and federal permits must be issued before the Proposed Action may begin. The National Environmental Policy Act Final EIS, expected to be published in 2017, will also inform local, state, and federal permit decisions.

Previous Environmental Documents

Prior environmental review was conducted for the Millennium Bulk Terminals—Longview project, including the following documents.

- SEPA Checklist with attachments, October 6, 2010
- Joint Aquatic Resources Permit Application, February 22, 2012
- Shoreline Substantial Development and Conditional Use Permit Application, February 22, 2012

Prior environmental review was also conducted for the existing bulk product terminal operations, including the following documents.

- Air Discharge Permit/Nonroad Engine Preliminary Permit Application, October 22, 2014
- Air Discharge Permit/Nonroad Engine Permit Technical Support Document, October 22, 2014

When appropriate, prior environmental documents were considered in the preparation of this EIS.
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### Chapter 5 Operations: Existing Conditions, Project Impacts, and Proposed Mitigation Measures

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# Acronyms and Abbreviations

\[\text{°F}\] degrees Fahrenheit
\[\mu g/m^3\] micrograms per cubic meter
AADT annual average daily traffic
ABS Automated Block Signals
ACM active channel margin
ACS American Community Survey
ADT annual daily traffic
ALCOA Aluminum Company of America
AMR American Medical Response
Applicant Millennium Bulk Terminals—Longview
Applicant’s leased area 540-acre site currently leased by the Applicant
ARAR applicable or relevant and appropriate requirement
ASIL acceptable source impact level
Bar Pilots Columbia River Bar Pilots
BiOp biological opinion
BMP Black Mud Pond
BNSF BNSF Railway Company
BPA Bonneville Power Administration
Cadna/A® Computer-Aided Noise Abatement
CCA copper chromate arsenic
CCC Cowlitz County Code
CDID Consolidated Diking Improvement District
CEQ Council on Environmental Quality
census U.S. Census Bureau
CEQ Council on Environmental Quality
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
CFR Code of Federal Regulations
cfs cubic feet per second
CMIP5 Fifth Coupled Model Intercomparison Project
CO carbon monoxide
CO\(_2\) carbon dioxide
CO\(_2\)e carbon dioxide equivalent
co-lead agencies Cowlitz County and Washington State Department of Ecology
COLRIP Columbia River Pilots
Corps U.S. Army Corps of Engineers
County Cowlitz County government
CPAH carcinogenic polycyclic aromatic hydrocarbon
CRD Columbia River Datum
CREOFS Columbia River Estuary Operational Forecast System
CRITFC Columbia River Inter-Tribal Fish Commission
CSZ Cascadia Subduction Zone
CTC Centralized Traffic Control
DAHP   Department of Archaeology and Historic Preservation
dB   decibel
dBA   A-weighted decibels
DDT   dichlorodiphenyltrichloroethane
DPS   distinct population segment
Draft EIS   Draft Environmental Impact Statement
DWZ   deep water zone
Ecology   Washington State Department of Ecology
EFH   essential fish habitat
EIS   environmental impact statement
EMS   emergency medical services
EMT   emergency medical technicians
EO   Executive Order
EPA   U.S. Environmental Protection Agency
ESA   Endangered Species Act
ESU   evolutionarily significant unit
FAST   Fixing America’s Surface Transportation
FEMA   Federal Emergency Management Agency
FHWA   Federal Highway Administration
Final EIS   Final Environmental Impact Statement
FIRM   Flood Insurance Rate Map
FNU   formazin nephelometric unit
FR  Federal Register
FRA   Federal Railroad Administration
FTA   Federal Transit Administration
g   gravity
g/m²/month   grams per square meter per month
g/m²/year   grams per square meter per year
GCTM   global chemical transport model
GHG   greenhouse gas
GIS   geographic information system
GMA   Growth Management Act
gpm   gallons per minute
HAP   hazardous air pollutant
HGM   hydrogeomorphic
IBC   International Building Code
JARPA   Joint Aquatic Resources Permit Application
Ldn   day-night sound level
Leq(h)   hourly sound-level equivalent
LMC   Longview Municipal Code
LNG   liquefied natural gas
LVSW   Longview Switching Company
MCL   maximum contaminant level
mg/km²-yr   milligrams per square kilometer per year
MM   mitigation measure
MMT/year   million metric tons per year
MOU  Memorandum of Understanding
mph  miles per hour
MT/year metric tons per year
MTCA  Model Toxics Control Act
NAAQS National Ambient Air Quality Standards
NAVD88 North American Vertical Datum of 1988
NEPA National Environmental Policy Act
NFA no further action
NFIP National Flood Insurance Program
NFPA National Fire Protection Association
ng/m³ nanograms per cubic meter
NMFS National Marine Fisheries Service
NO₂ nitrogen oxides
NOAA National Oceanic and Atmospheric Administration
NORPAC North Pacific Paper Corporation
NPDES National Pollutant Discharge Elimination System
NRHP National Register of Historic Places
NTU nephelometric turbidity units
O₃ ozone
OFW Oregon Department of Fish and Wildlife
OHW ordinary high water
OHWM ordinary high water mark
Oregon DEQ Oregon Department of Environmental Quality
PAH polycyclic aromatic hydrocarbon
PBDp polybrominated diphenyl ether
PCB polychlorinated biphenyl
PDMEX Merchants Exchange of Portland, Oregon
PHS priority habitat and species
PEM palustrine emergent
PFO palustrine forested
pg/m³ picograms per cubic meter
PHS Priority Habitat and Species
PM2.5 particulate matter with a diameter of 2.5 micrometers or less
PM10 particulate matter with a diameter of 10 micrometers or less
ppb parts per billion
ppm parts per million
Proposed Action construction and operation of a coal export terminal
project area 190-acre site
PSS palustrine scrub-shrub
PTC Positive Train Control
PUD Public Utilities District
RI/FS Remedial Investigation/Feasibility Study
RCRA Resource Conservation and Recovery Act
RCW Revised Code of Washington
Reclamation U.S. Department of the Interior, Bureau of Reclamation
Reynolds facility former Reynolds Metals Company facility
RI/FS  remedial investigation and feasibility study
SEPA  State Environmental Policy Act
SMA  Shoreline Management Act
SMP  shoreline management master program
SO₂  sulfur dioxide
SPL  spent potliner
SR  State Route
SWCAA  Southwest Clean Air Agency
SWMP  stormwater management plan
SWPPP  stormwater pollution prevention plan
SWZ  shallow water zone
TESC  temporary erosion and sediment control
TMDL  total maximum daily load
TPH  total petroleum hydrocarbons
TWC  Track Warrant Control
U.S. DOE  U.S. Department of Energy
UP  Union Pacific Railroad
US 30  U.S. Route 30
USC  United States Code
USDOT  U.S. Department of Transportation
USFWS  U.S. Fish and Wildlife Service
USGS  U.S. Geological Survey
v.  versus
VdB  velocity decibels
VEAT  Vessel Entries And Transits
VOC  volatile organic compound
WA HSL  Washington Hazardous Sites List
WAC  Washington Administrative Code
WDFW  Washington Department of Fish and Wildlife
WDNR  Washington Department of Natural Resources
WRIA  Water Resources Inventory Area
WSDOT  Washington State Department of Transportation
WUTC  Washington Utilities and Transportation Commission