

This comment concerns bilge water and shipping impacts.

On a ship, oil often leaks from engine and machinery spaces or from engine maintenance activities and mixes with water in the bilge, the lowest part of the hull of the ship. Oil, gasoline, and by-products from the biological breakdown of petroleum products can harm fish and wildlife and pose threats to human health if ingested. Oil in even minute concentrations can kill fish or have various sub-lethal chronic effects. Bilge water also may contain solid wastes and pollutants containing high amounts of oxygen-demanding material, oil and other chemicals. A typical large cruise ship will generate an average of 8 metric tons of oily bilge water for each 24 hours of operation. (Source: [http://en.wikipedia.org/wiki/Environmental\\_impact\\_of\\_shipping](http://en.wikipedia.org/wiki/Environmental_impact_of_shipping))

To maintain ship stability and eliminate potentially hazardous conditions from oil vapors in these areas, the bilge spaces need to be flushed and periodically pumped dry. However, before a bilge can be cleared out and the water discharged, the oil that has been accumulated needs to be extracted from the bilge water, after which the extracted oil can be reused, incinerated, and/or offloaded in port. If a separator, which is normally used to extract the oil, is faulty or is deliberately bypassed, untreated oily bilge water could be discharged directly into the ocean, where it can damage marine life. A number of cruise lines have been charged with environmental violations related to this issue in recent years. (See [http://en.wikipedia.org/wiki/Environmental\\_impact\\_of\\_shipping](http://en.wikipedia.org/wiki/Environmental_impact_of_shipping) for detailed citations.)

The EIS scope needs to include the (direct, indirect and cumulative) impacts of bilge water release from coal ships on all freshwater, marine, land and bird species in the river and sea surrounding the proposed coal terminal at the mouth of Columbia River and beyond along the entire shipping routes. Please also study the direct, indirect and cumulative impacts on human health (through consumption of seafood and seaweed) and public safety (beaches, shoreline) as well as the economic costs of the above impacts.

How much bilge water does a Panamax or capesize coal bulk carrier typically generate in a day on average? How is the bilge water disposed of and where? How much time does the entire journey from the Pacific ocean to the proposed project site to unloading coal at Longview and then loading, refuelling and travelling back out to the open sea again? How about the entire journey to Asia? What are the composition and range of concentrations of contaminants present in the bilge water? What are the locations with the largest amount of bilge water releases in the Columbia River ecosystem and the surrounding marine environment? At the terminal dock while offloading cargo/bulk goods and loading coal? At the ship fuel dock? Where do coal ships get refuelled before heading back out to Asia? What are the additional impacts from ships refuelling? If the fuel barges come from refineries in the Salish Sea, what are the risks and impacts of these additional fuel trips on the existing vessel traffic as well the marine environment in the Salish Sea and its human and other inhabitants? The EIS needs to answers the above questions.

In addition, which authority is responsible for checking if the oil separator for the bilge water is functional and not bypassed? What are the current regulatory requirements regarding bilge water? How are the regulations enforced? Are ships carrying flags of convenience treated different than US ships? How often do coal ships get checked? By which agency? How many person-days of staff are currently allocated for checking practices of crew on ships to ensure compliance of regulations? Are the current resources allocated sufficient to ensure compliance for the current level of shipping traffic? How about when the coal shipping traffic is added? How about when all the planned shipping traffic of cargo, coal, LNG and Bakken oil are considered? If not sufficient, what would be the appropriate level of resources (human, equipment and budgetary)? Are there plans to increase the resources commensurate with the increased shipping traffic? If so, how? Who pays for the ongoing costs of these additional resources? If not, what are the risks and ecological and economic costs of non-compliance? Who will pay for these costs?

We do not want verbal assurances. We want either full-coverage insurance against a worst-case situation or a legally enforceable agreement by the Millennium bulk terminal project to compensate and bear the costs of mitigating and reversing any ecology impacts that may occur.

If no such provisions can be offered to ensure we have full mitigation of the above impacts, please consider a no-build option.