Comment form

Please submit your comments on the Gateway Pacific Terminal/Custer Spur Environmental Impact Statement by January 21, 2013 to be included in the scoping summary report. Comments can also be submitted online at *www.eisgatewaypacificwa.gov*.

What part of the proposal does your comment relate to?

- ☐ Vessel
- ☒ Rail
- ☐ Industrial site
- ☐ Multiple/not listed

Does your comment relate to any of the following topic areas? Comments can relate to any topic. If your comment relates to any of the topics below, please check the appropriate box. **(check all that apply)**

Human environment

- ☐ Noise
- ☐ Air quality
- ☐ Human health
- ☒ Traffic or safety
- ☐ Other human environment topic

Natural environment

- ☐ Wildlife or vegetation
- ☐ Marine species, fish or fisheries
- ☐ Wetlands or streams
- ☐ Water quality
- ☐ Other natural environment topic

EIS Process

- ☐ Alternatives
- ☒ Areas of potential effect
- ☐ EIS regulatory process
- ☐ Other EIS process topic

Please share your comments below: (comments can also be attached to this form)

STATEMENT ATTACHED

Updated: December 10, 2012

First name: 25TH DISTRICT DEMOCRATS CHAIRMAN ED HERDE

Last name: COAL COMMITTEE CHAIRMAN DON RAHM

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Would you like to be added to the mailing list? ☒ Yes ☐ No

Note: Any information provided to the agencies will be posted on the website and may be released to a third party as part of the agencies' record for this action. This includes the release of identifiable personal information such as personal name, address, phone number, etc., that is provided in the response.

Combined NEPA/SEPA

Environmental Impact Statement

Proposed Gateway Pacific Terminal/Custer Spur

Place Stamp Here

GPT/BNSF Custer Spur EIS Co-Lead Agencies
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The scope of the Environmental Impact Statement for the export terminal at Cherry Point near Bellingham, Washington should include the indirect impacts inflicted upon communities between Powder River and Cherry Point by the massive trains required to ship the coal intended for export.

Because leaking and spilled coal dust weakens the support provided by rail bed ballast and has already caused at least two derailments. The EIS should consider the impacts on the environment of derailments. While coal trains will increase the risk of derailment, the actual wrecks may well occur to other types of trains with significantly different cargos. AMTRAK and Sounder Trains and, of course, their passengers will risk derailment, destruction, and death on tracks weakened by heavy, leaking coal trains. Communities adjacent to damaged tracks could face devastation if a train carrying dangerous chemicals derailed because of the damage wrought by shipping millions of tons of coal. A wreck could also impair the national defense to the extent it impaired rail access to Joint Base Lewis McChord or other installations. These impacts are both foreseeable and potentially catastrophic. Every effort should be made to understand and to prevent them.

The coal trains are expected to have a hundred or more cars, each with 105 to 125 tons of coal and extending for as much as a mile and a half. They will tie up traffic at grade crossings, add pollution, noise, and vibration to communities but contribute nothing to the communities they traverse.

Worse, the coal trains will shed coal and coal dust continuously on their journey from the Powder River Basin to the export terminals on the West Coast. In the absence of successful containment, each open coal car will lose between one and three tons of coal between the mine and the export terminal. That lost coal in the form of loose coal and coal dust will average between 1.4 and 4.0 pounds of coal per car per mile and from 175 to 500 pounds of coal and coal dust per train per mile. BNSF has tried to control the danger coal dust presents but has faced shipper and regulatory resistance. It's not clear the railroad's current effort will suffice.

The coal dust won't help anyone's asthma or COPD in a region already burdened by air-borne particulates and routinely imposing burn bans and other responses to air pollution. Nor will it make nearby households, schools, streets, ecosystems, and businesses cleaner. Worst of all, escaping coal dust will make the tracks more dangerous.

Railroad tracks rest on ties and their ties rest on ballast. The ballast is composed of irregular rock. The spaces between the rocks where their shapes don't match allow rain water to drain. Coal dust threatens the stability of the ballast because it clogs the pores in the ballast and lubricates the surfaces of the rocks.

When rains fall, the coal dust absorbs the precipitation, the ballast retains that water, and its rocks can slide. The entire structure becomes less stable allowing the tracks to move when stressed by a train's weight. When the tracks move, the train's cars are derailed with their

contents—whether coal, grain, passengers, or dangerous chemicals—damaged and often released or ejected.

As dangerous as a mile and a half of derailed coal cars might be, that is not the most serious threat. In Western Washington, AMTRAK trains share the tracks and in Pierce, King, and Snohomish Counties, the Sounder Heavy Rail commuter trains join them. As coal dust damages track ballast, derailments will cause train wrecks, and the wrecks need not be limited to the coal trains that create the risks. The weight of an AMTRAK or Sounder locomotive could cause track weakened by coal dust to fail catastrophically. A derailment of a fully loaded, high-speed, passenger train would be a disaster that could be compounded if the train itself blocked access to the nearest hospitals.

A passenger train wreck with dozens of hundreds of injuries and deaths is not even the worst case. Derailments of trains carrying industrial chemicals threaten surrounding communities. Freight trains routinely and efficiently move dangerous chemicals from suppliers to markets. When all goes well, vendors and purchasers benefit from low-cost transportation, and the railroad earns its profit for providing the service. Even at the best of times, however, freight traffic rarely pays its full costs because shippers are able to ignore external costs caused by their freight but that fall on someone other than themselves or the railroad itself. Motorists lose time at grade crossings. Neighbors suffer from noise, vibration, and pollution. Occasionally, people near railroads die from spills, fires, and explosions.

While derailment wrecks are not every day occurrences, when huge trains go wrong, catastrophes can follow. Vinyl Chloride, feed stocks for manufacturing, industrial ethanol and compressed Chlorine gas, are but a few of the products shipped by rail that put communities at risk from derailments.

The price of shipping any product should include all the costs incurred and imposed in its transit whether routine compensation for delays, noise, vibration, and pollution or secure compensation for tragedies.

In particular, all freight should pay for effective prevention of harms. Protecting both communities and rail beds from the harms caused by escaping coal dust are absolutely necessary preconditions to imposing ten thousand ton coal trains on communities. No one else should suffer harm from a shipper's negligent dispersal of coal dust. BNSF's current states coal dust FAQ states, "BNSF does not believe that any commodity should be permitted to escape from its shipping container and foul the railroad's roadbed or surrounding areas." An earlier version added, "Coal shippers are no different from other shippers who are responsible for securing their freight for transit by rail."

Having suffered two coal train derailments they attribute to coal dust fouling track ballast, BNSF has funded research, shared their results and attempted to limit escaping coal dust. Their findings include:

*Coal dust looks like sand but acts like a very fine clay.
*Coal dust weakens ballast.
*Coal dust can accept and retain more water than many soil types.
*Wet coal dust weakens ballast more than dry coal dust.
*Wet coal dust at its optimal saturation of 25% has only one tenth the strength of clay.
*Wet coal dust can reduce the strength of ballast to little more than the strength of coal dust itself.
*Fully saturated wet coal dust causes even more drastic strength reductions.

The Surface Transportation Board agreed that coal dust presents a threat to the safety of BNSF's tracks but overturned BNSF's first effort to require shippers to control coal dust. The railroad's current effort seeks to reduce coal dust by "at least 85%." It is unclear whether that will suffice in practice to protect both BNSF's tracks and the communities through which it runs.

Because dry coal dust reduces the strength of dry ballast, it is a threat everywhere coal trains pass. Because wet coal dust can reduce the strength of ballast to about the same strength as a pile of coal dust, coal dust is an unacceptable risk to rail beds and communities in the vicinity of the Puget Sound with their notably wet winters.

Puget Sound is also seismically active. Just as the ground in the Marina district of San Francisco liquefied during the 1989 Loma Prieta earthquake, fouled ballast would be at risk of liquefaction during an earthquake in Western Washington.

Unless the BNSF can develop and impose a "zero-tolerance" tariff that eliminates escaping coal dust, each 100 plus ton coal car in each 100 car train will deposit appreciable coal dust onto the tracks and into the ballast. An 85% reduction in coal dust dispersal is a start but not nearly a solution. Even if the BNSF's plan works as expected and even if the coal shippers faithfully implement it, then only seven trains will be required to match the negative impact of one train without BNSF's plan. With nine trains expected each day, and with coal dust a pollutant that accumulates, an 85% reduction is insufficient. Moreover, if BNSF is overly optimistic about an 85% reduction, or if the shipper is unfaithful in its compliance, then the risks to the track, to other users, and to the communities adjacent to the track will be all the greater. Because (a) it is difficult to know the degree to which coal dust has fouled ballast, and (b) BNSF has identified no simple, reliable method to clean fouled track, it is better—no essential—to prevent fouling.

The risk of derailment will vary along the route from the coal field to the deep-water port. It will be greater in areas of increased precipitation. It will be greater in areas with more seismic activity. And it will vary with the amount of fouling by coal dust. The average amount of fouling would be useful to know but only a beginning. The variance in the amount of fouling must also be known in order to assess the safety of the track. Each combination of coal dust and moisture will present a probability of track failure. Variation in the distributions of moisture and coal dust invasion will create variations in those probabilities. In turn, those probabilities will imply expected frequencies of wrecks. Low probabilities might imply an expected frequency of one wreck every thousand years; high probabilities might imply an expected frequency of a wreck

every year or oftener. After all, BNSF suffered two wrecks in 2005 in a relatively dry environment.

A rough estimate suggests that unrestricted shipping could fully foul the ballast supporting the tracks within a year or two at the proposed rate of traffic. The ballast has a width and a depth. If we consider a mile's worth of ballast, we can picture a box about 93 inches wide and about 9 inches deep. A mile of ballast would be a box of about 974 cubic meters. BNSF's researchers report that clean, compacted ballast has void air space of about 43%, making the void space about 419 cubic meters per mile. They also report the density of coal dust to be 1.28 grams per cubic centimeter. Filling all the voids in a mile of ballast thus requires about 591 tons of coal dust. With each unregulated train spilling from 175 pounds to 500 pounds of dust per mile, it would take from 2364 to 6754 trains to drop enough dust to fill the voids. At nine trains per day, that would be 263 to 750 days.

This estimate, however, understates the dangers of unregulated trains. Even if it took the full 750 days to fill all the voids in a mile of track, the filling would not be uniform. Statistical variation would ensure that some sections would be more highly fouled sooner than others. We need not worry about when every inch of track has been destroyed. We need to worry about when enough track has been fouled to make derailment if not certain, at least unacceptably likely. This estimate also understates the risk that partial fouling presents. Given enough miles of track there will be vulnerable sections. The only uncertainties are how soon, how near inhabited areas, and what cargo the unlucky train will be carrying.

In order to describe the indirect impact of an export terminal, the Environmental Impact Statement must, among other things, describe the risk of derailment along the train tracks leading to the export terminal. The EIS should identify the variables that contribute to the risk of derailments. The EIS should further determine (a) the smallest length of track that is subject to failure, (b) the probability of failure as a function of at least precipitation and coal dust loading, (c) the mean values for at least those two variables, (d) the variance in those (and other relevant) variables, and (e) the consequent distribution of risk of failure per track unit per train along the entire route from the coalfield to the terminal.

If gathering this data or monitoring the problem is difficult, then caution is all-the-more indicated. Once fouled, the track must be replaced. It would be more than inconvenient to discovery catastrophic fouling only after a catastrophic wreck.

BNSF states "Current methods of track inspection including visual assessment, pumping and ponding at ballast toe, etc., lack the necessary techniques to accurately quantify ballast fouling condition except for Ground Penetrating Radar." Research at the University of Wollongong in Australia has also considered seismic surface-wave analysis of shear wave velocities as an alternative to ground penetrating radar finding, "Seismic survey is relatively slow when compared to GPR survey however it gives quantifiable results. In contrast, GPR survey is faster and better in estimating the depth of fouling." To date, BNSF has not announced its plans to monitor the impact of coal dust on its track. Approval of massive shipments of coal should be

contingent upon development and validation of a reliable method to monitor the health of the ballast and other track components.

Escaping coal dust will either accumulate in the ballast until the ballast is unsafe or disperse as pollution into the community or both. At least one retired Investigator-in-Charge_from the National Transportation Safety Board fears "Congress has its head in the sand with regard to transit safety." The Surface Transportation Board correctly agreed with BNSF that coal dust threatened the stability and safety of BNSF's track, but should not have overturned BNSF's attempt to protect that track.

The Surface Transportation Board put the burden of proof on the railroad. That is backward. If a common carrier establishes that a shipper's cargo poses a threat to the carrier's equipment, property, or safe operation, then the shipper should have the burden to establish that its container protects the carrier from harm. This burden is all-the-more essential when the shipper's cargo threatens not just the carrier but also the public's environment. Arguably, the carrier can charge a shipper for the harms its freight causes the carrier, but the public has only the hope of tort remedies after the fact. The Exxon-Valdez experience confirms that tort recovery against a shipper is slow, uncertain, and insufficient even when the shipper remains solvent and collectible. Smaller shippers might be wiped out by their wrecks or financially engineered to be insolvent following catastrophes. If the hazard is clear but the remedy is uncertain, then the cargo should not move until the shipper solves the problem to the satisfaction of the carrier, the regulators, and the communities at risk.

Coal dust's threat to the integrity and safety of BNSF's tracks also has national defense implications. The Military Surface Deployment and Distribution Command states, "Rail transportation is extremely important to DOD since our heavy and tracked vehicles will deploy by rail to seaports of embarkation." Joint Base Lewis McChord sits astride and appears to depend upon BNSF track that is part of the Strategic Rail Corridor Network. That same BNSF track, however, is the route the coal trains will use through the Columbia River Gorge and northward in Western Washington to avoid climbing the Cascades. Accumulated coal dust will threaten the integrity of that track. No private shipper should be free to endanger a strategic defense asset.

The Surface Transportation Board's decision allows shippers to externalize the risks their dangerous cargos create. That is both inefficient and wrong. Massive coal trains should not impose coal dust's risks on communities. No export facility should obtain approval until the science of coal dust accumulation into and dispersal from ballast is clear and the regulations both to control coal dust and to inspect ballast for coal dust accumulation are adopted, effective, and enforced.

Don Rahm