

Date: 1/19/2016

To: The Energy Facility Site Evaluation Council and the Department of Ecology

From: The Washington State Department of Health (WDOH), Division of Environmental Public Health

RE: Comments on the Draft EIS for the Tesoro Savage Vancouver Energy Terminal

Thank you for the opportunity to comment on the draft EIS for the Tesoro Savage Vancouver Energy Terminal's draft Environmental Impact Statement (DEIS). As the state health department we are interested in the impact this project will have on the health and well-being of people in Washington State. We recognize that noise, traffic, air pollution, and the risks of spills or explosions associated with the Tesoro Savage terminal could negatively impact public health. We also recognize that the project could impact social determinants of health such as employment, education, and transportation. For example, the Vancouver region has a higher unemployment rate than the state and neighboring Portland¹ and may therefore reap outsized benefits from new living wage jobs as long as a spill, derailment, or explosion doesn't harm the local economy. There are similar opportunities and risks for schools and transportation systems. We commend the studies projecting derailments, spills, explosions, and seismic activity as useful for risk management, however, mitigations on issues that impact health are either missing or use unenforceable and weak language related to appropriate or needed actions. We also recommend that, as the largest oil by rail project in Washington, Tesoro Savage follow the precedent set by the Millennium Bulk Terminal and British Petroleum's Cherry Point Project and conduct a health impact assessment (HIA) concurrently with the environmental impact assessment. WDOH's recommendations are bulleted below and then described in more detail.

WDOH Recommendations:

- Conduct a Rapid Health Impact Assessment to assess the impact of this project on the health of Washington State residents
- Monitor for nitrogen dioxide (NO₂) and PM 2.5 on or near the project area
- Provide a more thorough evaluation of contributions of site activities to local ozone air concentrations
- Include a more comprehensive analysis of the cumulative risks to surrounding communities from derailments, spills, and explosions
- Include an analysis of potential mental health impacts of spills, derailments, and explosions in the risk analysis
- Strengthen language to require recommended environmental health mitigation activities
- Improve DEIS organization and display of results for the public

¹ Source: Bureau of Labor Statistics

Conduct a Rapid Health Impact Assessment to assess the impact of this project on the health of Washington State residents

A Rapid HIA is a tool that communities and decision makers can use to objectively evaluate the potential health effects, both positive and negative, of a project before it is built. Some of the impacts outlined in our original scoping comments include diesel exhaust, passenger vehicle emissions, greenhouse gas emissions, noise, access to emergency care, drinking water systems and supply, impacts of train derailment, pedestrian safety, recreation, and community wellness impacts. The Department of Health has data available to describe the demographics and health status of impacted populations and staff available to help frame what a rapid HIA could look like.

Monitor for nitrogen dioxide and PM_{2.5} near the project area

Nitrogen Dioxide (NO₂) and PM_{2.5} are criteria pollutants regulated under the federal Clean Air Act because of their impacts on human health and regional impacts. The air quality assessment in the DEIS show these two pollutants as the most likely to cause exceedances in the project site due to background levels plus contributions from activities at the site (Tables 3.2-8 Chapter 3 and Table 9 Appendix F). Modeled 1-hour concentrations of NO₂ predict levels at 93% of the existing standard and PM_{2.5} 24-hour levels are predicted to be 74% of the existing standard. These pollutants are both lung irritants and can cause exacerbation of asthma and other respiratory diseases, heart disease, and hospital admissions. Air quality projections do not predict exceedances of air quality standards for these pollutants; however these models rely on air quality monitoring stations collected at some distance from the project site and may not reflect conditions at or near the site (e.g. SE Lafayette, OR (monitoring location for NO₂ listed in Table 3.2-2) is about 43 miles from Vancouver, WA). Also, air monitoring results and units is inconsistent in Chapter 3 and is confusing. For example Tables 3.2-2 and 3.2-8 present similar information but use different units and do not appear to match up in some cases.

We would recommend an approach used in the joint Westway and Imperium DEIS that proposed installing air quality monitors near the project site in order to be able to respond to air quality events and reduce the possibility of harmful exposures to nearby residents. We recommend that the Tesoro-Savage project also monitor air quality at or near the site and share the data with the Clark County Health Department, WDOH, the Department of Ecology, and Region 10 EPA. We recommend this monitoring station be located either on-site or off-site at a location near to local residents, such as the Clark County Jail Work Center (JWC). The DEIS predicts maximum concentrations of NO₂ and PM_{2.5} near the JWC (Chapter 3, page 3.2-18). Although the DEIS also states that impacts to the JWC population “would be minimized by the transitory nature of the adult population that is served by the JWC” (Chapter 3, page 3.2-13), individual residents and employees at this facility may experience symptoms from short-term elevations in air pollution, especially when outside during the summer months, and especially if residents or employees have pre-existing health conditions (e.g. asthma).

Provide a more thorough evaluation of estimated contributions of site activities to local ozone air concentration

The contribution of site activities to local ozone air concentrations should be more fully evaluated. As noted in Chapter 3, page 3.2-17, ozone was not included in modeling results. Both VOCs and nitrogen oxides contribute to ozone formation and Vancouver is a designated ozone maintenance area (Figure 3.2-2). The measured ozone concentration at Sauvie Island as listed in Table 3.2-2 (0.053 ppm, 8-hour) indicates that existing levels can be close to the new EPA ozone standard for ozone (0.070 ppm, 8-hour). The ozone standard listed in Table 3.2-2 (0.075 ppm) should be updated to reflect EPA’s new ozone standard.

Include a more comprehensive analysis of the cumulative risks to the surrounding communities from derailments, spills, and explosions improve organization and display of results from the DEIS for the public

The cumulative impact study could display information in a more accessible format. For example, there are at least six fossil fuel export facilities proposed that would increase rail traffic. A useful way to visualize that information would be similar to Table 1 below and could be used for topics such as air quality, noise, traffic, and derailment risk.

Table 1: Example of recommended cumulative impacts format

Project	Status	Additional Trains per day (Washington)	Additional Vessel Trips per day
Millennium Bulk Terminal	In Permitting	16	5.3
Tesoro - Savage	In Permitting	4	1
Oregon LNG Project	In Permitting	0	0.34
Phillips 66 Crude Unloading Rail Project	Permitted: under construction	0.5	0
Kalama Manufacturing	In Permitting	0	0.29 to 2
Grays Harbor Rail Terminal	In Permitting	0.5	0.12 to 0.16
Etc.	-	-	-
Total		Sum Total	Sum Total

There is considerable public interest in the sum total of not just trains and vessels but greenhouse gas emissions, diesel exhaust, and criteria pollutants. Displaying data you have already collected in a way that conveys this information would improve the public utility of the DEIS. The Rail Spill Risk Analysis in Appendix E informs the public about risks of spills of derailment related to the Tesoro – Savage site but does not provide any information about the cumulative risk of spills and derailments. Public comments on this and other facilities have made it clear that the cumulative risk of derailments from all fossil fuel activities combined is a primary concern and one that is relevant to public health. The Tesoro-Savage project should not bear the unique responsibility for estimating this risk. We recommend that you coordinate with FSEC and other projects in the permitting process to conduct a comprehensive risk assessment of the risk of derailments, spills, and explosions if none, some, or all projects are approved.

WDOH did a geospatial analysis of the populations within a half mile of rail lines in Washington State and found that they were more likely to be Hispanic or of mixed race, have lower incomes, and have lower educational attainment than residents of Washington State as a whole. Income, education, and the environment are all key social determinants of health. The socio-economic composition of these communities may put them at greater risk of experiencing poor health outcomes as a result of any incremental impacts to traffic safety, noise, air quality, or emergency response capacity. In a preliminary analysis of schools within an 80 decibel buffer of Washington rail lines we found that k-5 schools had lower language scores on standardized tests than schools outside of the buffer.

Include an analysis of potential mental health impacts of spills, derailments, and explosions in the risk analysis

The rail risk analysis mentions but does not explore in depth the risks for injury and death of humans in the event of a derailment, spill, or explosion. There is no mention of Mental Health, which would likely be the most prevalent public health impact following an explosion, spill, or derailment. Neria et al. 2008² assesses post-traumatic stress disorder following technological disasters. In 65 studies of 40 technological disasters they found that the prevalence of PTSD was between 15-75% in the first month after the disaster. This rate often dropped off sharply in the year following the event, however, in some instances rates stayed high for as long as a decade.

Strengthen language to require recommended environmental health mitigation activities

There are mitigations proposed in the DEIS related to public safety along the rail corridor that have the public safety at heart but are written such that they hold nobody accountable for conducting them. We propose the following changes to these mitigation measures.

- **Ensure** Further coordination ~~should occur~~ between EFSEC and BNSF, UTC, and affected local jurisdictions to determine if crossings along the rail corridor are protected at the appropriate level.
- ~~Appropriate measures should be implemented~~ **Implement appropriate measures** to prevent pedestrian and vehicular accidents, incidents, injuries, and fatalities at passenger stations or at grade crossings along the inbound rail route in consultation with EFSEC. Such measures include installing signs, signals, or other visual devices to warn of approaching trains; installing infrastructure at pedestrian and vehicular crossings to improve the safety of crossing railroad tracks; potential closures of at-grade crossings and/or grade separation, and installing fences to prohibit access to railroad tracks.

Naming agencies that will provide safety improvements will inspire more public trust and be more protective of health than naming agencies that should provide safety improvements.

There are a number of places in this DEIS where public & environmental health and safety measures and information relevant to public health could be improved. The Environmental Public Health Division of the Washington State Department of Health is interested in engaging earlier in projects like this one in

² Neria Y, Nandi A, Galea S. Post-Traumatic Stress Disorder following disasters: A systematic review. Psychological medicine. Apr 2008;38(4):467-480.

order to more efficiently incorporate public health into project design. For this DEIS we recommend a more accessible and comprehensive cumulative impact assessment that includes a more comprehensive human health risk assessment that includes mental health impacts and more information about risks of morbidity and mortality. We suggest stronger language and action in your environmental health mitigations and air quality monitoring onsite to assure healthy air for workers and the surrounding community.