



January 22, 2016

Via Electronic Submittal (efsec.wa.gov) and U.S. Mail

State of Washington
Energy Facility Site Evaluation Council
P.O. Box 43172
Olympia, WA 98504

Re: City's Comments on Draft EIS
Tesoro Savage, Vancouver Energy Project, Application No. 2013-01

Dear Council and Council Staff,

Enclosed are the City of Vancouver's comments on the Council's Draft Environmental Impact Statement, prepared for the Tesoro Savage Vancouver Energy Project.

Very truly yours,

A handwritten signature in blue ink, appearing to read "E. Bronson Potter".

E. Bronson Potter
City Attorney

Enclosures as referenced

CITY OF VANCOUVER'S

DRAFT ENVIRONMENTAL IMPACT STATEMENT
COMMENTS

JANUARY 22, 2016

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1. Introduction

The Council has authorized issuance of a DEIS assessing the Port of Vancouver's proposal to handle, on average, 360,000 barrels of crude oil per day. Vancouver is the fourth largest city in the state and, with Spokane, has the highest number and density of population living along the railroad route identified to transport crude oil to the proposed oil terminal. The oil terminal, if developed, will be the largest of its kind in the country. The City has carefully reviewed this document. Although the document is problematic in many ways, the City's most immediate concern is the way in which the document downplays the proposal's potential for major, catastrophic impacts on human health and safety. Based upon a selective sampling of statistical data and a decision to ignore real world impacts, the DEIS concludes:

Impacts to human health from a small to medium crude oil spill along the rail corridor would likely be negligible to minor, except for incidents that led to direct injury or fatality. Impacts to human health from a large to very large crude oil spill along the rail corridor would likely be negligible to moderate, depending on the location and extent of the spill, with greater impact in more heavily populated areas.¹

This assessment is at odds with the actual risk history associated with this type of proposal. An accident along the lines of Lac-Mégantic, in which an entire downtown was destroyed, 47 people died, and over 27 children were orphaned, cannot be encapsulated by the DEIS's phrase "negligible to moderate" impact.

This 2013 catastrophe was not an isolated event unlikely to ever occur again. Major accidents are occurring on an annual basis, and Washington's local, state, and federal technical and resource capacity to mitigate such accidents is entirely lacking, particularly in such a heavily populated area as Vancouver. In fact, the environmental risks, including those to land use and human health, are so great that it is uniformly acknowledged that the risk - from a purely economic standpoint - is not insurable.

The DEIS's flawed assessment directly conflicts with SEPA's requirement to accurately and fully disclose probable, significant impacts so as to protect the substantive, "inalienable" rights of City citizens to a healthful environment. In their permitting and SEPA lead agency roles, the Council and Governor serve not as mere officials determining whether to issue a non-discretionary permit. Rather, they are charged with determining not only types of energy to be permitted and how to mitigate such facilities, but also **the appropriate locations for energy projects**.

¹ Draft EIS, p. 4-88, ¶ 2.

The DEIS's limited scope with respect to both mitigation and alternatives evaluated entirely fails to adequately inform the Council and Governor so that they can make educated decisions. Further, instead of framing the proposal consistent with the Council and Governor's mission to consider the appropriate location for projects with the potential for catastrophic risks to the human population and their environment, the DEIS inappropriately frames the project as a purely private proposal. If the DEIS continues to frame the proposal in this way, it will be inadequate, because EFSEC's role is not so constrained.

Under both SEPA and Ch. 80.50 RCW, the Council and Governor serve as trustees for future generations. As such, they are under a duty to ensure a large-scale energy proposal with major impacts does not present a clear and present threat to the citizens of the fourth largest city in the state.

SEPA "directs that, to the fullest extent possible: (1) The policies, regulations, and laws of the state of Washington shall be interpreted and administered in accordance with the policies set forth in this chapter." RCW 43.21C.030. Among those policies is the recognition of "the responsibilities of each generation as trustee of the environment for succeeding generations," RCW 43.21C.020(2)(a), and the recognition that "each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment." RCW 43.21C.020(3).²

As the DEIS is presently written, it is of no use to the Council and Governor in meeting this duty and is wholly inadequate to inform their deliberations. The document must be withdrawn and revised to present an accurate assessment of actual proposal risks.

With the below comments, the City presents detailed analysis on the DEIS. While City comments are focused on SEPA's guarantee to the state's citizens of a healthful environment, the City also incorporates all SEPA comments being submitted by parties to the adjudication raising concerns over DEIS inadequacy.

2. Risk Analysis

The DEIS risk analysis is fatally flawed. It fails to provide an adequate basis to inform the Council of the proposal's impacts and the risks associated with High-Hazard Flammable Trains (HHFTs).³ The analysis diminishes and underestimates crude oil handling risks and impacts in at least six ways as it:

- Uses outdated non-HHFT accident data to describe the recent use of HHFTs;

²*Puget Soundkeeper Alliance v. Pollution Control Hrgs. Board*, 189 Wn. App. 127, 148, 356 P.3d 753 (2015).

³ "High-Hazard Flammable Trains" is the term used by USDOT-PHMSA to describe freight trains carrying 20 or more tank cars of crude oil in a block. 49 CFR 171.8.

- Uses freight trains of all kinds as a “proxy” for HHFTs which they are not;
- Ignores actual "real-world" HHFT accident data and, as a result, underestimates the frequency of HHFT derailment, number of cars involved in HHFT derailments, and spill volume in HHFT accidents;
- Fails to disclose the probability of accidents being under-reported;
- Lacks any analysis of the impacts of train speed or track condition on derailments; and,
- Is completely devoid of any analysis of the potential for fire and explosion in the event of a derailment.

The City is concerned that these failures are due, in part, to consultant conflicts of interests. However, regardless of the reason for the flawed analysis, it is so flawed that it is of no use for adjudicative deliberations and cannot be used to inform decision making.

2.1 The DEIS Uses Outdated Data to Diminish Actual Risks

The DEIS framework for assessing and disclosing risks is fatally flawed. The DEIS analysis uses 39 years of experience (1975 to 2014) of all varieties of freight trains to characterize the risk of the use of HHFTs.⁴ Yet, the use of HHFTs to transport crude oil is a new phenomenon that has only recently reached historic levels. The number of crude oil-containing rail tank cars has increased over 108 times in the last seven years.⁵ Including data from many years of non-HHFT freight train experience does not provide a representative sample of experience to calculate the HHFT risk.

The necessity of using current data is a general truism for all technical and scientific analysis, but is also established for this specific situation. The Pipeline and Hazardous Material Safety Administration (PHMSA) is an agency within the USDOT that is responsible for establishing and enforcing requirements for the safe transport of hazardous materials by all modes of transportation. This includes the design of railroad tank cars carrying crude oil. PHMSA was created in 2004 to provide USDOT with a more focused research organization and establish an operating administration for the inspection and enforcement of requirements for pipeline safety and hazardous materials transportation. In conducting its analysis of the risk of spills from HHFTs, PHMSA chose to focus on derailments from 2006 through 2013 because “it encompasses the beginning of the shipment of flammable liquids in HHFTs.”⁶ For the final regulatory impact analysis, PHMSA narrowed the focus to 2009 to 2013 to correspond to a time when a high volume of crude and ethanol was being shipped by rail.⁷ To accurately disclose the

⁴ DEIS, p. 4-28.

⁵ Washington State 2014 Marine and Rail Oil Transportation Study, Dept. of Ecology, March 1, 2015, p. 28.

⁶ USDOT-PHMSA Draft Regulatory Impact Analysis PHMSA-2012-0082, p. 25.

⁷ USDOT-PHMSA Final Regulatory Impact Analysis PHMSA-2012-0082, p. 78.

risks associated with HHFTs, the DEIS must use this more recent time period, not decades of old data when HHFTs were not in use.

2.2 Freight Trains are Not Proxies for Oil Trains

The DEIS engages in an apples to oranges comparison that inaccurately minimizes the risk posed by HHFTs. In calculating the frequency of derailments, the DEIS assumes all varieties of freight trains are “proxies” for HHFTs. It states, “This analysis assumes that freight cars are proxies for CBR tank cars and that the distribution of derailed cars in a unit train would be analogous to those of a manifest train (i.e., one with a variety of cargo in freight cars).”⁸

PHMSA conducted a risk analysis of the transportation of crude oil by rail as part of conducting an analysis of the impact of their proposed regulatory changes to tank cars. It casts serious doubt on the validity of the assumption that all varieties of freight trains are proxies for HHFTs. It observed:

In general, PHMSA and FRA found that several factors give rise to higher expected damages and probability of a catastrophic event. First, the volumes of crude oil and ethanol carried by rail are relatively large when compared to rail shipments of other flammable liquids. In particular, the volume of crude oil shipped by rail has been increasing rapidly during the past several years. Second, the crude oil originating in the Bakken oil fields is volatile which increases the risks while it is in transportation.⁹ Finally, crude oil and ethanol are shipped in HHFTs, compounding the risk when an accident does occur.

Due to these recent changes, PHMSA and FRA have concluded that the **historical train accident record alone cannot determine the probability of a catastrophic event.**¹⁰

PHMSA further explained the reasons why all varieties of freight trains cannot be used as a “proxy” for HHFTs in calculating the risk of derailment and catastrophic events. It stated:

There is reason to believe that derailments of HHFTs **will continue to involve more cars than derailments of other types of trains.** There are many **unique features to the operation of unit trains to differentiate their risk.** The trains are longer, heavier in total, more challenging to control, and can produce considerably higher buff and draft forces which affect train stability. In addition, these trains can be more challenging to slow down or stop, can be more prone to derailments when put in emergency braking, and the loaded tank cars are stiffer

⁸ DEIS, Appendix E, p. 13.

⁹ See section 2.6 below which further elaborates on this issue.

¹⁰ USDOT-PHMSA Draft Regulatory Impact Analysis PHMSA-2012-0082, p. 20, emphasis added.

and do not react well to track warp which when combined with high buff/draft forces can increase the risk of derailments.¹¹

The DEIS acknowledges that its risk analysis is premised upon the assumption that freight trains of all types can be used as “proxies” for HHFTs. This is clearly not the case. Any risk analysis premised upon this invalid assumption must be rejected.

2.3 The DEIS Risk Analysis is Inconsistent with Real World Experience

To justify turning a blind eye to the real word experience of HHFT derailments, the DEIS states that it relies on its statistical analysis of all types of freight train derailments because “there are not enough data on CBR train derailments alone.”¹² This statement is incorrect. There is an accident history specific to HHFT derailments and a credible technical analysis must assess that history. The following is a comparison of the DEIS statistical analysis to the real world experience of HHFT derailments with respect to:

1. The frequency and number of cars involved in derailments;
2. Failure rate of cars involved in a derailment; and
3. The volume of the spills.

The DEIS limits its analysis of derailment frequency to the expected occurrence of derailments occurring on the rail route within Washington. However, the frequency of derailments of HHFTs in North America must be considered as this information is necessary to provide a full disclosure of risks.

2.3.1 Frequency and Number of Cars Involved in HHFT Derailments

According to the DEIS:

- A derailment resulting in a spill of any size is expected to occur once every 12.1 years;
- A derailment resulting in a spill of one car or less is expected to occur every 27 years;
- A derailment resulting in a spill of three cars or less is expected to occur every 121 years; and
- A derailment resulting in a spill of 28 cars or less is expected to occur every 21,959 years.¹³

In reality, the following has been the experience with HHFTs in the nine years between October 2006 and September 2015:¹⁴

¹¹ USDOT-PHMSA Draft Regulatory Impact Analysis PHMSA-2012-0082, p. 24, emphasis added.

¹² DEIS, Appendix E, p. 11.

¹³ DEIS, p. 4-28-29.

- 24 derailments resulting in a spill of any size (2.66 per year average);
- 22 derailments resulting in a spill of at least one car (2.44 per year average);
- 13 derailments resulting in a spill of at least three cars (1.44 per year average); and
- 3 derailments resulting in a spill of at least 28 cars (.33 per year average).

The derailments of these HHFTs are detailed as follows:

Table 1 HHFT Derailments 2006-2015

	Location	Date	Railroad	tc derailed	tc release	Fire	Product	Speed	Released gallons
1	Bon Homme County, SD	9/19/2015	BNSF	7	3	Y	Ethanol	10	49,748
2	Heimdal, ND	5/6/2015	BNSF	6	5	Y	Crude oil	24	98,090
3	Gogama, Ontario	3/7/2015	CN	39	36	Y	Crude oil	43	500,000
4	Galena, IL	3/5/2015	BNSF	21	10	Y	Crude oil	23	110,543
5	Mount Carbon, WV	2/16/2015	CSX	27	20	Y	Crude oil	33	378,034
6	Gogoma, Ontario	2/14/2015	CN	29	19	Y	Crude oil	38	264,172
7	LaSalle, CO	5/9/2014	UP	6	1	N	Crude oil	9	7,932
8	Lynchburg, VA	4/30/2014	CSX	17	1	Y	Crude oil	23	29,416
9	Vandergrift, PA	2/13/2014	NS	21	4	N	Crude oil	31	4,310
10	New Augusta, MS	1/31/2014	IC/CN	15	7	N	Crude oil	47	50,450
11	Plaster Rock, NB	1/7/2014	CN	6	2	Y	Crude/ethanol	47	60,759
12	Casselton, ND	12/30/2013	BNSF	20	18	Y	Crude oil	42	436,437
13	Aliceville, AL	11/8/2013	AGC	26	25	Y	Crude oil	39	630,000
14	Lac Megantic, Quebec	7/6/2013	MMA	63	59	Y	Crude oil	65	1,580,000
15	White River, Ontario	4/3/2013	CP	7	2	Y	Crude oil	35	26,600
16	Parkers Prairie, MN	3/27/2013	CP	14	3	N	Crude oil	40	30,000
17	Plevna, MT	8/5/2012	BNSF	17	12	Y	Ethanol	23	245,336
18	Columbus, OH	7/11/2012	NS	3	3	Y	Ethanol	25	54,748
19	Tiskilwa, IL	10/7/2011	IIRR	10	9	Y	Ethanol	37	162,000
20	Arcadia, OH	2/6/2011	NS	31	31	Y	Ethanol	46	834,840
21	Cherry Valley, IL	6/19/2011	CN	19	15	Y	Ethanol	36	323,963
22	Luther, OK	8/22/2008	BNSF	8	5	Y	Crude oil	19	80,746
23	Painesville, OH	10/10/2007	CSX	7	4	Y	Ethanol	48	55,200
24	New Brighton, PA	10/20/2006	NS	23	20	Y	Ethanol	37	485,278
	Totals			442	314				6,498,602

The DEIS estimates that in 50% of all derailments, 4-5 or fewer cars are derailed; in 95% of all derailments, 23 or fewer cars derail.¹⁵ It also states that the average number of cars involved in a derailment is 8.¹⁶ Based on the 24 HHFT derailments listed in Table 1, in 50% of all derailments, 17 or fewer cars are derailed; in 95% of all derailments, 39 or fewer cars derailed; and the average number of cars involved was 18.5.

¹⁴ Note that PHMSA used 2006 through 2013 for its preliminary analysis of HHFT derailment, USDOT-PHMSA Draft Regulatory Impact Analysis PHMSA-2012-0082, p. 25.

¹⁵ DEIS, p. 4-28.

¹⁶ DEIS, Appendix E, p. 12.

The following table compares the DEIS conclusion with respect to the frequency of these types of derailments to the real world experience:

Table 2 DEIS Spill Frequency Inaccuracies

Size of spill	DEIS	Real World
Any size	1 per 12.1 years	2.66 per year
At least one car	1 per 27 years	2.44 per year
At least three cars	1 per 121 years	1.44 per year
At least 28 cars	1 per 21,959 years	1 per 5 years

The variation between the DEIS’s prediction of derailment frequency and that seen in the real world is directly attributable to a decision to use outdated data sets and the incorrect assumption that freight trains of all types can serve as a proxy for HHFTs. The analysis set forth in the DEIS is not remotely credible and must be reconsidered.

2.3.2 Car Failure Rate

The DEIS states that of cars carrying hazardous materials involved in derailments, between 9.2% and 16.7% release their cargo.¹⁷ The DEIS estimates that in a derailment involving 23 derailed cars, only 2.1 to 3.8 will spill their cargo.¹⁸ The DEIS estimates that in a derailment involving 37 derailed cars, only 3.4 to 6.18 will spill their cargo.¹⁹ Again, this analysis is based on the data that includes freight trains of all types rather than the actual experience with HHFTs.

In reality, the actual HHFT derailments listed in Table 1 show that when 39 cars derailed, 36 spilled their cargo; when 29 cars derailed, 19 spilled their cargo; when 27 cars derailed, 20 spilled their cargo; when 26 cars derailed, 25 spilled their cargo; and when 23 cars derailed, 20 spilled their cargo. **The actual release rate in these HHFT derailments was 71% compared to the DEIS claimed release rate of 9.2-16.7%.**

The DEIS underestimates the failure rate of tank cars involved in HHFT derailments. Again, this gross underestimation and variation from real world experience with HHFTs fails to meet SEPA's disclosure requirements.

2.3.3 Spill Volume

The DEIS estimates the spill volume from a derailment to be:

- Small spill .1 car (100bbl/4,200 gals.);

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*, p. 13.

- Median spill 1 car (700 bbl/29,400 gals.);
- Large spill (“Analogous to Maximum Most Probable Discharge”) 3 cars (2,200 bbl/92,400 gals.);
- Effective worst case discharge 28 cars (20,000 bbl/840,000 gals.); and
- Theoretical worst case discharge 120 cars (85,680 bbl/3,598,560 gals.).²⁰

The DEIS characterizes an accident involving 28 cars discharging oil as an effective worst case scenario with a recurrence frequency of once every 21,959 years.²¹ However, in the last 5 years there have been three accidents larger than this: Lac-Megantic-59 cars breached; Arcadia, Ohio-31 cars breached and Gogama, Ontario-36 cars breached. PHMSA used a spill volume of 37,619 bbl/1,579,998 gals. as its “higher consequence event.”²²

The DEIS analysis finding of a median spill volume of 700 bbl/29,400 gals. must be considered in light of what is actually occurring in the real world and consistent with the finding of the PHMSA. The PHMSA, for the time period between 2006 and 2013, identified 40 mainline derailments that resulted in the release of 3,344,081 gallons of crude oil and ethanol for an average of approximately 1,990 bbl/83,602 gals. released per mainline track derailment; more than 250% over the median identified in the DEIS.²³

Some of the variance between the DEIS and the PHMSA findings are due to inaccuracies. The DEIS recites a West Virginia derailment and indicates 26 cars derailed, 14 cars caught fire and an “unknown” quantity of oil spilled.²⁴ Actually, according to accident reports for this event, 27 cars derailed, 20 cars breached and 10,391 bbl/436,422 gals. of oil spilled. The DEIS also recites an accident in Aliceville in which it states 25 cars derailed and 23 breached.²⁵ Accident reports indicate that 26 cars derailed and 25 breached. The DEIS recites the infamous Lac-Megantic derailment stating 5 cars spilled²⁶ more than 869 bbl/36,498 gals. of oil; when, according to accident reports, 59 cars spilled over 37,619 bbl/1,580,000 gals. of oil.

The DEIS states that “for recent events in which oil spilled...the highest [volume] was 18,295 bbl.”²⁷ In fact, a HHFT derailment in Arcadia, Ohio spilled 19,877 bbl/834,840 gals. of ethanol on February 6, 2011 and the Lac-Megantic spill was over 37,619 bbl/1,580,000 gals. Perhaps the DEIS excludes these because the Arcadia HHFT spilled ethanol versus oil and excluded Lac-Megantic because it was in Canada. If this is the case, it casts doubt on the credibility of the DEIS. The following table illustrates the factual inaccuracies of the DEIS:

²⁰ DEIS, Appendix E, p. 14.

²¹ *Id.*

²² USDOT-PHMSA Draft Regulatory Impact Analysis PHMSA-2012-0082, p. 51.

²³ USDOT-PHMSA Draft Regulatory Impact Analysis PHMSA-2012-0082, p. 25.

²⁴ DEIS, Appendix E at p. 33.

²⁵ *Id.*, p. 34.

²⁶ *Id.*, p. 35.

²⁷ *Id.*, p. 36.

Table 3 DEIS Rail Accident Spill Amount Inaccuracies

Event	DEIS	Actual Experience
Mount Carbon, WV	14 cars Unknown amount	20 cars 378,034 gals.
Aliceville, AL	23 cars	25 cars
Lac-Megantic	5 cars 36,498 gals.	59 cars 1,580,000 gals.
Highest volume event	18,295 bbl/768,390 gals.	37,619 bbl/1,580,000 gals.

2.4 The Statistical Data Relied Upon May Not Fully Reflect the Mainline Derailment Risks

The statistical data relied upon in the DEIS is based upon carriers self-reporting of spills and may not fully reflect the number and severity of those incidents. The PHMSA acknowledged that its own data may underreport spills. It stated:

The PHMSA hazardous material incident report database often contains inaccuracies. The database presents information on releases of hazardous material in transportation and relies on the person in possession of the hazardous material at the time of the incident to report on the incident. Often the amount of product released from a particular tank car is unclear or reported differently in the description of events than in the appropriate incident report fields.

Additionally, the PHMSA incident reports often do not reflect the full extent of damages including property damage, cleanup and remediation costs because it may be months before full damage figures can be reported. By regulation the filer has a maximum of thirty days from the time of the incident to file a report... When we compared the incident report information from the PHMSA hazardous material incident report Database with data obtained through more thorough investigations, we discovered that the quantity of product lost and number of cars releasing product were misreported in a number of cases.²⁸

The risk analysis contained in the DEIS does not address the skewing of the calculation of risk resulting from underreporting of spills by responsible parties. It also should reflect the fact that FRA data often does not reflect the full extent of the damages caused by derailments.

²⁸ USDOT-PHMSA Draft Regulatory Impact Analysis PHMSA-2012-0082, p. 26.

2.5 The DEIS Lacks Any Analysis of Train Speed or Track Condition

The speed at which a train is operating is also a major factor in the risk and consequences of derailment. The DEIS notes the national speed restrictions that apply to HHFTs,²⁹ but it does not include any analysis of the impact of train speed on the frequency or consequence of derailments. PHMSA, in its rulemaking to improve the crashworthiness of tank cars transporting crude oil, considered the relationship of train speed to tank car damage and mandated train speed restrictions and improved train braking requirements. PHMSA noted that the laws of physics predict that a faster moving train at the time of a collision or derailment would result in greater damage to tank cars and mandated speed restrictions for crude oil trains transporting DOT 111 tank cars. However, many of the catastrophic crude oil and ethanol train accidents between 2006 and 2015 were operating at speeds below maximum speeds established by PHMSA in the recent rulemaking; in fact, 17 of 24 serious accidents happened at speeds of 40 mph or less and 11 of those accidents occurred at speeds of 35 mph or less.

The DEIS does not address how the severity of crude oil train accident consequences will be influenced by train operating speed along routes in Washington generally or the City of Vancouver specifically. A crude oil train derailment at only 33 mph in Mount Carbon, West Virginia on February 16, 2015 resulted in the failure of 20 of 27 derailed tank cars and the release of 378,034 gallons of crude oil. However, PHMSA's final rule will allow crude oil trains to travel at 50 mph, with speed reduced to 40 mph in high-threat urban areas and the Federal Railroad Administration Emergency Order 30 restricts these trains to only 40 mph in certain highly populated areas. To analyze the risk to communities along the route expected to be used, the DEIS must, in addition to considering geographic factors, consider the speed at which HHFTs will be traveling.

The DEIS does not contain any information describing the BNSF track condition within communities generally, and in Vancouver specifically. It does include some discussion of the Port's rail.³⁰ But this should not be misconstrued to be an analysis of the BNSF rail which constitutes the vast majority of the line the HHFTs will travel on. Broken rails account for the largest number of mainline derailments.³¹ Because track condition is a major contributing factor to derailments, the DEIS should include this information in its analysis of risk.

²⁹ DEIS, p. 4-9.

³⁰ DEIS, Appendix E, p. 49-50.

³¹ DEIS, Appendix E, p. 44.

2.6 Risk of Fire and Explosion

The DEIS contains no analysis of the likelihood of fire or explosion³² resulting from derailments even though Governor Inslee declared that, “Public safety is of paramount concern to our residents, citizens, and local governments.”³³ A fire occurred in 20 of the 24 derailments of HHFTs occurring between October 2006 and September 2015,³⁴ which is a rate of 83.3%. The DEIS cannot fail to address this extraordinary risk by simply claiming there is “insufficient data.”³⁵

This is a particular concern given the nature of the product being handled with this proposal. “The properties of Bakken shale oil are highly variable, even within the same oil field. In general, however, Bakken crude oil is much more volatile than other types of crude. Its higher volatility may have important safety implications.”³⁶ A recent report from the Transportation Safety Board of Canada³⁷ shows that Bakken oil produces flammable vapors at temperatures as low as minus 31°F, which is similar to gasoline.

Bakken crude is highly flammable and easily ignited at normal temperatures by heat, static discharges, sparks or flames (flash point less than -35°C and auto-ignition temperature of approximately 250°C). Vapors may form explosive mixtures with air, and vapors may travel to source of ignition and flash back. Vapors may spread along ground and collect in confined areas such as sewers and tanks. The Upper Explosive Limit is estimated at (8 percent v/v): 8 (estimated). Lower Explosive Limit (4 percent v/v): 0.8 (estimated). If burned, carbon monoxide, sulfur oxides, nitrogen oxides and smoke particulates may be created.³⁸

The highly flammable nature of the product emphasizes the need to honestly assess the likelihood of fire and explosion should an accident occur. This omission must be corrected.

2.7 Conflicts of Interest

The risk analysis presented in the DEIS is fatally flawed. The analysis was prepared by MainLine Management, Inc. Three of the four individuals who prepared the analysis are former

³² DEIS, p. 4-25.

³³ Washington State 2014 Marine and Rail Oil Transportation Study, Dept. of Ecology, March 1, 2015, p. 19.

³⁴ See Table 1 of these comments.

³⁵ DEIS, p. 4-25.

³⁶ Congressional Research Service, “U.S. Rail Transportation of Crude Oil: Background and Issues for Congress,” December 4, 2014.

³⁷ Transportation Safety Board of Canada. 2014. *Runaway and Main-Track Derailment: Montreal, Maine & Atlantic Railway Freight Train MMA-002 Mile 0.23, Sherbrooke Subdivision, Lac-Mégantic, Quebec, 6 July 2013.*

Transportation Safety Board of Canada Railway Investigation Report R13D0054, p. 191.

³⁸ NWAC (Northwest Area Committee), Emerging Risks Task Force Report (2013), pg. 14.

BNSF employees and list BNSF as one of their clients.³⁹ BNSF stands to financially benefit from the increase in the shipment of crude oil to the facility. WAC 463-50-030 governs the selection of independent consultants. It prohibits the retention of consultants who have a significant conflict of interest with regard to the applicant or other parties involved or potentially involved in the adjudicative proceeding.

2.8 Risk Analysis, Summary

SEPA requires accurate disclosure of probable, significant adverse impacts, particularly in those situations where the fundamental right to a healthful environment is in jeopardy. The DEIS risk analysis fails to comply with SEPA. The Governor's "paramount concern" of public safety cannot be adequately informed by a DEIS that is so substantially flawed.

3. New Tank Cars: EIS Risk Assessment is Based Upon Unenforceable Mitigation

The DEIS states that all the tank cars used to transport crude oil to the terminal would be required to meet USDOT DOT 117 standards.⁴⁰ This statement raises questions as to whether it can be enforced and whether it is practical. First, how would this requirement be enforced? Railroads have a common carrier obligation to transport all goods offered for transportation, including hazardous materials. This obligation is a common law doctrine, codified in the Interstate Commerce Act and recognized by the U.S. Supreme Court in the early 1900s.⁴¹ The Interstate Commerce Commission Termination Act of 1995 (ICCTA) maintains the common carrier obligations of railroads and requires railroads to "provide the transportation or service on reasonable request."⁴² This obligation ensures that railroads do not unreasonably discriminate between shippers. Thus, railroads may not refuse shipment on the basis of inconvenience or lack of profitability. The Common Carrier doctrine requires BNSF to accept a shipper's cargo so long as it is in a car that meets USDOT standards. Under the HHFT regulations recently adopted by PHMSA, shippers will be allowed to use retrofitted DOT 111 cars until as late as May 1, 2023 and retrofitted CPC 1232 cars until as late as May 1, 2025.⁴³ The DEIS does not explain how the applicant could enforce a requirement that tank cars meet the DOT 117 standard.

The practicality of the requirement to use DOT 117 tank cars is questionable given the limited supply of such cars. The final USDOT rule identifying the DOT 117 as the standard for HHFTs was only recently adopted on May 1, 2015. The DEIS does not address when a sufficient supply of these tank cars will be available to fulfill a requirement that only those cars can be used to transport crude oil to the facility. A report prepared for the Greenbrier Companies by

³⁹ "Washington regulator unaware of oil train consultant's connections," Bob Davis, *The Oregonian*, December 18, 2015.

⁴⁰ DEIS, p. 4-116.

⁴¹ *Pa. R.R. Co. v. Puritan Coal Mining Co.*, 237 U.S. 121, 133 (1914).

⁴² 49 USC § 11101(a).

⁴³ Final Rule, Docket No. PHMSA-2012-0082 (HM-251); DEIS, p. 4-7.

Cambridge Systematics indicates that the existing fleet could be replaced in less than five years with new cars that meet current standards for safety.⁴⁴ According to manufacturer National Steel Car N.A. Inc., as of the second quarter 2015, there was a backlog of 46,375 orders for new tank cars and the application of the new DOT 117 standard could take longer than scheduled.⁴⁵ The DEIS needs to address the timing of the availability of a sufficient supply of DOT 117 tank cars to support the assumption that the facility will be able to only accept those cars as of the beginning of its operation. If the proposal is to allow retrofitted DOT 111 or CPC 1232 tank cars rather than new DOT 117 tank cars, this should be made clear.

The DEIS does not contain any analysis of the degree to which risk is reduced by the use of the DOT 117. Current pressure tank cars already constructed to the DOT 117 minimum standards have punctured and failed in accidents. The CPC 1232 has failed on multiple occasions in 2015.⁴⁶ The PHMSA estimates that the DOT 117 will only provide a 21% risk reduction over the unjacketed CPC 1232 and only a 10% risk reduction over the jacketed CPC 1232.⁴⁷

The DEIS proposes as a mitigation measure a requirement that all tank cars used to transport crude oil to the facility “meet or exceed DOT 117 (or newer) specifications.”⁴⁸ The DEIS should clearly identify what type of tank cars will be allowed to transport crude oil to the terminal (i.e. new DOT 117 versus retrofitted DOT 111 or CPC 1232); how this requirement will be enforced in view of the Common Carrier doctrine; and to what degree risk reduction would be achieved.

4. Number of Trains and Throughput of Oil is Underestimated

The DEIS understates the number of HHFTs and the amount of crude oil that could be handled at the terminal. The analysis set forth in the DEIS is premised on the assumption that there will be an “average” of 360,000 bbl/15,120,000 gal. of crude and an “average” of four HHFTs handled at the terminal per day.⁴⁹ Using the average of 360,000 bbl/15,120,000 per day and 365 days in a year, the DEIS converts the average into a maximum stating that the “maximum throughput of crude oil at the proposed facility would be 131,400,000 bbl per year.” This is both factually incorrect (an average doesn’t magically become a maximum by multiplying it by 365) and is indicative of the tenor of the DEIS to underestimate and understate the impacts of the proposal. The DEIS does acknowledge that five HHFTs could be received at

⁴⁴ “DOT-117 Tank Car Rule Debuts With Controversy,” *RailwayAge*, May 1, 2015.

⁴⁵ “North American Fleet: Trends,” October 16, 2015, National Steel Car N.A., Inc.

⁴⁶ 36 failed in Gogama, Ontario; 10 failed in Galena, MT; 20 failed in Mount Carbon, WV; 19 failed in another derailment in Gogama, Ontario.

⁴⁷ Draft Regulatory Impact Analysis PHMSA-2012-0082, p. 120.

⁴⁸ DEIS, p. 4-116.

⁴⁹ DEIS, p. ES-2; 2-1.

the terminal in a 24 hour period, but the fifth HHFT would “not complete unloading” within the 24 hour period.⁵⁰

The fact that it is both possible and likely that more than 360,000 bbl/15,120,000 gals. per day will be handled at the facility is evidenced by the terms of the lease entered into between the Port and Tesoro Savage. If the Port desires to lease an area for a second crude oil terminal, Tesoro Savage may exercise a “right of first opportunity” to lease the same area and prevent a competitor from locating at the Port. However, Tesoro Savage’s right to exercise the right of first opportunity is dependent upon it having an average throughput of 400,000 bbl/16,800,000 gals. of crude oil per day based upon a rolling twelve month period.⁵¹ Obviously, to secure this right and in order to be able to exercise it, the Port and Tesoro Savage must contemplate that it is entirely feasible that throughput of crude will be an average of 400,000 bbl/16,800,000 gals. of crude per day. The right of first opportunity is also relevant because the limitation on throughput of crude is based on the applicant’s assertion that there is currently insufficient property available to add additional train loops to handle more trains.⁵² If the right of first opportunity is exercised, the limitation would no longer exist and throughput will increase.

Since the DEIS was released, Congress lifted the ban on the export of crude oil extracted within the United States. This action opens foreign markets to the shipping of crude oil from the facility. The DEIS should address this change in the market and re-examine the assumption that the facility will only serve refineries along the west coast. SEPA prohibits the piecemealing of a project to minimize its total impacts. By ignoring the ramifications of both the right of first opportunity and the opening of international markets, total throughput is being impermissibly minimized to avoid full disclosure of total impacts.

The DEIS also overstates the number of HHFTs currently traveling through the City. It states that currently four oil trains per day (28 per week) travel the route that would be used to serve the terminal.⁵³ However, the Department of Ecology in the Marine & Rail Oil Transportation Study puts the current volume of HHFTs traveling through Vancouver at 18 HHFTs per week.⁵⁴ By overstating the current number of HHFTs traveling through the City, the DEIS underestimates the impact of the additional HHFT traffic generated by the proposal.

It is critical that the DEIS be premised upon assumptions that accurately describe the potential impacts of the proposal. The DEIS fails to consider the potential for the true maximum volume of crude oil which may be handled at the facility; it overstates the number of HHFTs currently traveling through the City; and the potential market for crude oil shipped from the

⁵⁰ *Id.*

⁵¹ See Port Ground Lease at section 8.E.

⁵² DEIS, p. 2-1-2.

⁵³ DEIS, p. ES-4.

⁵⁴ Washington State 2014 Marine and Rail Oil Transportation Study, Dept. of Ecology, March 1, 2015, p. 42.

facility has changed as a result of Congress lifting the ban on the export of crude oil to foreign markets.

5. Gap Analysis and Response Plans

5.1 Gap Analysis

The DEIS was to include an analysis of emergency responders' current capabilities; the capabilities required for responding to incidents at the facility and along the rail route; and how to close the gap between the two. EFSEC's scoping letter included a recommendation that the EIS would include⁵⁵:

- Detailed analysis of project site emergency response capabilities, including hazmat response to incidents involving crude oil transported by rail car;
- Analysis of emergency response capabilities including hazmat response to incidents involving crude oil transported along the rail route within Washington; and,
- Analysis of emergency response capabilities along cargo ship traffic lines on the Columbia River, from the project site to the confluence with the Pacific Ocean.

EFSEC staff stated that the DEIS would include "recommendations to mitigate identified impacts, including emergency plans, tactics and strategies, training, equipment, and other resources."⁵⁶

The request for proposals issued by Cardno, Inc. for a risk assessment, gap analysis and fire protection engineering assessment described the scope of work to include:

- Perform a document review and study to provide an analysis of the risks and impacts the Project represents to the citizens of Vancouver and to the VFD operations.
- Interview, coordinate, and communicate with the VFD, Tesoro Savage, Tesoro Savage's Fire Protection Engineer of Record, and other entities to develop a complete understanding of the proposed Project design and the VFD operational capabilities.
- Evaluate any Gaps between the engineering design and the VFD operational capabilities and provide recommendations to close the Gap.

⁵⁵ Scope of Draft Environmental Impact Statement, EFSEC, dated April 2, 2014.

⁵⁶ "Information Needs and DEIS Development Presentation," December 16, 2014.

- Provide an estimate of cost to quantify the value of the recommendations made to close the Gap between the engineered Project and the VFD operation capabilities.
- Determine what impacts the proposed Project and operations will have on the Fire Department’s ability to provide incident response services, identify deficiencies and needed mitigations such as training, equipment, or personnel.
- Assess risks associated with the proposed facilities and operations and the VFD’s operational capabilities to respond to an emergency.
- Evaluate the VFD’s ability to provide incident response services (i.e., spill response, firefighting, confined space rescue, etc.) to the proposed facilities and related transportation systems. This evaluation shall include existing and proposed:
 - Pre-emergency plans
 - Tactics and strategies
 - Training
 - Equipment
 - Other resources
- Evaluate the proposed fire protection systems and spill protection systems for the proposed facilities and compare to the VFD operational and response capabilities.
- Recommend measures and estimated costs to mitigate any impacts in excess of those risks that currently exist and are due to the proposed facilities or related transportation systems and which may have an effect on VFD’s ability to provide emergency services. These recommendations shall address existing and proposed:
 - Pre-emergency plans
 - Tactics and strategies
 - Training
 - Equipment
 - Other resources

The following table compares the items above to what the DEIS actually includes or fails to include:

Table 4 DEIS Failures to Address Scope of Work

Item	DEIS treatment	Location in DEIS
1. Analysis of project site emergency response capabilities	The facility fire and explosion prevention and response plan does not exist . It would be submitted	DEIS at 4.3.8.4

	<p>prior to operation.</p> <p>The applicant has submitted a construction spill prevention, control and countermeasure plan (SPCC Plan) but it hasn't been reviewed by EFSEC.</p> <p>The applicant has submitted an operations SPCC Plan but it hasn't been reviewed by EFSEC.</p> <p>The Facility Response Plan doesn't exist. The purpose of this plan is to demonstrate the "readiness" of the facility to respond to a small to "worst-case" spill scenario.</p>	<p>DEIS at 4.3.8.1</p> <p><i>Id.</i></p> <p>DEIS at 4.3.8.2</p>
2. Analysis of emergency response capabilities for rail along route within Washington	<p>Survey sent to 34 fire departments. Only 12 responded.</p> <p>Fewer than half of those responding had "at least some" training on rail incidents.</p> <p>Only one-fourth of those responding had access to spill equipment.</p> <p>All responding reported need for additional training and equipment.</p> <p>DEIS does not include any analysis of the level of additional staffing or equipment needed, or necessary planning, tactics and strategies.</p>	<p>DEIS 4.6.4.3</p> <p><i>Id.</i></p> <p><i>Id.</i></p> <p><i>Id.</i></p>
3. Analysis of emergency response	Fewer than two pages of	

<p>capabilities for vessel</p>	<p>the DEIS address this “analysis.”</p> <p>Those participating in MFSA would provide up to one engine and three people if it can be done without impacting service within jurisdiction.</p> <p>VFD does not have experience or expertise for vessel fires.</p>	<p>DEIS 4.6.5.3</p> <p>DEIS Appendix B at 9-1</p>
<p>4. Analysis of the risks and impacts the Project represents to VFD</p>	<p>“Analysis” is limited to the following:</p> <p>Facility: 1-½ pages reciting VFD’s concerns regarding staffing and training. No independent analysis.</p> <p>Rail: One-half page stating, “VFD has expressed concern about their current readiness and capability...” No independent analysis. And, “An incident anywhere on the rail line within the VFD response area would be cause for major concern and immediate response.” Again, no analysis.</p>	<p>DEIS Appendix B at 6-1-2</p> <p>DEIS Appendix B at 7-1</p> <p><i>Id.</i> at 7-5</p>
<p>5. Develop a complete understanding of the proposed Project design and the VFD operational capabilities</p>	<p>Fire Protection Assessment report identifies 40 gaps in design and operation of facility fire protection system and VFD response capabilities.</p> <p>The review of adequacy of facility fire protection system is deferred until the final design (100%) stage.</p>	<p>DEIS Appendix B</p> <p>DEIS ES-18</p>

<p>6. Evaluate any Gaps between the engineering design and the VFD operational capabilities and provide recommendations to close the Gap</p>	<p>See No. 5 above for gaps.</p> <p>“Coordinate with” first responders and “contribute support” for training and unspecified equipment.</p> <p>Provide training on facility fire protection system.</p> <p>“Provide support” for unspecified research and equipment.</p>	<p>DEIS at ES-17</p> <p><i>Id.</i></p> <p><i>Id.</i></p>
<p>7. Provide an estimate of cost to quantify the value of the recommendations made to close the Gap</p>	<p>No estimate provided.</p>	<p>N/A</p>
<p>8. Assess risks associated with the proposed facilities and operations and the VFD’s operational capabilities to respond to an emergency</p>	<p>This “assessment” consists of less than one page identifying concerns expressed by VFD. It provides no independent analysis or assessment.</p>	<p>DEIS at 4.6.3.3</p>
<p>9. Evaluate the VFD’s ability to provide incident response services (i.e., spill response, firefighting, confined space rescue, etc.) to the proposed facilities and related transportation systems. This evaluation shall include existing and proposed:</p> <ul style="list-style-type: none"> ○ Pre-emergency plans ○ Tactics and strategies ○ Training ○ Equipment ○ Other resources 	<p>For the facility, see No. 8 above.</p> <p>For rail, the DEIS has less than one page noting VFD’s response to a survey and 1-½ pages describing current staffing.</p> <p>As stated in No. 1 above there is no facility fire and explosion prevention and response plan and no facility response plan.</p> <p>The DEIS provides a generic description of incident command and mobilization but does not discuss tactics or strategies.</p>	<p>DEIS at 4.6.4.3</p> <p>DEIS at 4.6.2</p>
<p>10. Evaluate the proposed fire protection systems and spill protection systems for the</p>	<p>See No. 5 above.</p>	

proposed facilities and compare to the VFD operational and response capabilities		
<p>11. Recommend measures and estimated costs to mitigate any impacts in excess of those risks that currently exist and are due to the proposed facilities or related transportation systems and which may have an effect on VFD’s ability to provide emergency services. These recommendations shall address existing and proposed:</p> <ul style="list-style-type: none"> o Pre-emergency plans o Tactics and strategies o Training o Equipment o Other resources 	<p>The DEIS does not provide any cost estimates.</p> <p>The DEIS defers the identification of measures to prepare for and respond to spills and fires to sometime in the future.</p>	DEIS 4.9.2

The DEIS’s treatment of the capabilities, gaps and mitigation for first responder services is superficial and, as it relates to Vancouver, simply regurgitates information and concerns that VFD provided to the consultant. This is not surprising given that none of the preparers of the DEIS have training or experience in emergency management or fire suppression.⁵⁷ When the consultants questioned VFD about the training and equipment it needed to deal with the impacts of the project, VFD responded:

I completed a survey about the ability of VFD to respond to an incident. As noted I indicated in the survey we could need any number of things that were identified in the survey to support VFDs ability to respond and continue to provide service. VFD does not have experience or expertise in responding to derailments of oil trains transporting Bakken crude oil. It is looking to EFSEC to conduct an analysis of the staffing, training and equipment that would be necessary to respond to spills and fires. My observations in the survey are possibilities based on the limitations of the survey.⁵⁸

Despite the fact that VFD clearly indicated that it lacked the expertise to conduct a gap analysis and that it was looking to EFSEC to conduct this analysis, the DEIS simply relates VFD’s response to the survey and provides no meaningful analysis of the specific training, staffing or equipment needed to respond to spills and fires at the facility, along the rail route or upon vessels. The paltry treatment of this most vital concern is in and of itself cause to find the DEIS inadequate.

⁵⁷ See Chapter 7 of DEIS.

⁵⁸ Vancouver Fire Department, August 2015. emphasis added.

When it comes to identifying mitigation measures to prepare for and respond to spills and fires, the DEIS kicks the can down the road rather than identifying concrete implementable measures. It suggests that the applicant: (1) “coordinate with” first responders to “implement a plan that would facilitate” training and the purchase of unidentified additional equipment; (2) “provide support for additional research;” (3) “develop appropriate response strategies;” (4) “work with Ecology, ODEQ and others to develop response strategies...”⁵⁹ This “kick the can down the road” approach to identifying mitigation does not adequately inform EFSEC or the Council to make informed decisions or make appropriate recommendations to the Governor.

5.2 Impacts to Vancouver Fire Department

The DEIS does not adequately address the ongoing impacts of the project as they relate to the need for the training and staffing for the VFD. The DEIS acknowledged VFD’s concerns that additional ongoing planning, training and equipment would be necessary to respond to spills or fires involving trains, ships and the facility.⁶⁰ It also acknowledged VFD’s concern that these ongoing efforts would have an impact on VFD’s ability to maintain its current service levels. Having acknowledged these concerns, the DEIS does little to identify and quantify the gaps in current capability compared to the demands for service related to the proposal or identify measures to close the gap.

5.2.1 Demands Related to a Response

The VFD’s complement of sworn firefighters is 188 firefighters to staff 10 stations, over three shifts, with an average of 40 personnel on duty per day. The VFD runs about 70 calls per day or 25,500 runs a year. The VFD serves a population of approximately 255,000 people. Any train derailment scenario or fire at the marine terminal would not stop daily call volume. In order to service other emergency calls, it would not be possible to deploy all 10 stations to a single incident. In addition, not all of the responding units would arrive at once. A typical fire service response to a major hydrocarbon industrial facility like a refinery, tank farm, or marine terminal in a city the size of Vancouver would typically include: four Engine Companies, two Truck Companies, one HazMat Unit, and one Command Officer. This response would require 24 firefighters or 60% of the on duty complement of 40 firefighters. This would leave 16 firefighters to cover the rest of the City and staff the other uncommitted stations. A recall of off duty firefighters would not result in a rapid turnout. Many of the City’s firefighters live several hours from their assigned stations. The response would be layered and most likely would require mutual aid. The mutual aid capacity of other departments is not identified in the DEIS. Most fire districts in Clark County are rural districts staffed by volunteers who do not have training in

⁵⁹ DEIS, p. 4-118-119.

⁶⁰ DEIS, p. ES-14-15.

hazmat or industrial fires. Additionally, the mutual aid agreement with Portland excludes assistance for hazardous materials incidents.⁶¹ Portland's ability to respond is further restricted by congestion and bridge lifts on the century old I-5 bridge crossing the Columbia River.

With respect to equipment, the DEIS does not provide any analysis or description of the equipment needed or where it should be located. In particular, there is no mention of the amount or type of foam concentrate required or the application devices needed. The DEIS notes the location of BNSF "HAZMAT specialized equipment."⁶² However, this equipment is not located in Vancouver, the closest locations being in Seattle and the Tri-Cities. With respect to foam, the Fire Protection Assessment Report⁶³ indicates that there is a total of 18,365 gallons of foam concentrate available. While this is an impressive inventory, the quantity of foam concentrate available does not necessarily translate to an immediate deployment and operability at the fire scene. The foam concentrate needs to be transported to the scene and turned into foam solution using fire pumps and foam eductors. There are numerous logistical factors involved in a large scale foam operation. Of the 18,365 gallons of foam concentrate available in the foam cache, only 1,600 gallons (or 8.7% of the foam cache) is immediately mobile and could likely arrive at the terminal quickly; i.e. within 20-30 minutes. Of the 6,365 gallons (34.6%) of the foam cache readily available and owned by fire departments, 4,765 gallons are stored on pallets or PODs. Transporting a POD requires a flatbed type chain truck to trans-load the POD to the vehicle so it can be driven to the scene. 12,000 gallons of the 18,365 gallons of the foam concentrate available is stored in tanks at the Portland Airport Boeing site and would require transfer to totes or tankers to be useful.

The DEIS does not provide any analysis of the impacts to demands for emergency services resulting from a spill or fire or suggest methods to mitigate these impacts.

5.2.2 Training

The DEIS suggests that the applicant "coordinate with" first responders "to implement a plan that would facilitate" training "using grants awarded by PHMSA."⁶⁴ VFD is very concerned by the superficial nature of this analysis. The need for training is ongoing and must be sustainable throughout the 25 year life of the facility. A reliance on competitive grant funding is not responsible. A recent example of the unpredictable nature of grant funding is the 50% reduction in coordinated prevention grants experienced by Clark County this month. These grants are funded from oil sales to support preventative environmental protection efforts across

⁶¹ DEIS, p. 3.15-5.

⁶² DEIS, p. 4-23.

⁶³ DEIS, Appendix B, table 5.3.

⁶⁴ DEIS, p. 4-116.

the state.⁶⁵ The training programs cited in the DEIS that are being funded by PHMSA grants are designed to train firefighters how to deal with unit trains hauling crude and ethanol. The scope of these curriculums will not address the need for live fire training for a crude oil terminal. These training curriculums are focused on tank cars.

The DEIS lacks any analysis of the impacts of training on service levels. To ensure consistent service delivery for fire suppression, every firefighter would need to participate in advanced live fire flammable liquids training similar to training received by refinery and terminal industrial firefighters dealing with, for example, hydrocarbon running pool fires, flange fires, pipe racks, storage tanks, etc. There are a limited number of fire training facilities in the USA that have the props and environmental permits to conduct this type of training, *e.g.* Texas A&M's TEEEX, Refinery Terminal Fire Company, LSU, etc. Attending this training would require travel outside of the state of Washington. Firefighters would also need to receive training on containing spills and fighting HHFT fires. Training and refresher training is expensive, requires travel, overtime and backfill of positions. In addition to training, the facility would require periodic inspections and response planning. With respect to identifying a sustainable source of funding to provide the necessary training, the DEIS concludes "**It is not clear how this financing would be provided to VFD.**"⁶⁶ These impacts of the proposal should be addressed in the DEIS and a sustainable method of funding needs to be identified.

5.2.3 Marine Fires

The DEIS references the system to respond to shipboard fires developed by the Marine Fire Safety Association (MFSA). However, it does not provide details of what that system does and does not include. MFSA's Lower Columbia Marine Fire Safety Plan has not been updated in twenty-four years.

A fire on a vessel is the responsibility of the captain/master of the ship. Local fire departments that are part of F-PAAC can offer assistance and may provide mutual aid to other locations, but are under no obligation to do so if the response will adversely impact their regular service. The departments that are part of F-PAAC are only obligated to provide one engine and three people, if they can. The Fire Plan indicates that it will cover marine fire incidents; however, a number of the local fire departments limit their response to attacking a fire in a deep draft vessel tied to a dock. Most will not respond to a vessel in transit, anchored or moored.

The DEIS notes that VFD has a quick-response vessel that could be deployed to a vessel fire. However, this vessel has limited firefighting capabilities. The quick-response vessel does

⁶⁵ "County environmental services feel pinch after grant cut in half," Katie Gillespie, *The Columbian*, January 19, 2015.

⁶⁶ DEIS, Appendix B, p. 9-1.

have the ability to spray 3000 gpm of water, but it does not have the quantities of foam necessary to fight a crude oil fire onboard a ship. The ability of spray to reach the fire could be a factor depending on the size (height) of the ship and the size of the fire, which may limit the ability to get close enough to the ship. In addition, the spray from a fireboat may still not reach the location of the fire if it is within the ship. It most likely would be deployed to keep other vessels a safe distance from a ship on fire; provide waterside rescue; and protect exposures that could be threatened. The quick-response vessel is not staffed. The crew cross staffs an engine at Fire Station No. 1. If there are no operators and deckhands on duty, it could take an hour to call back staffing for the boat. A boat crew consists of three people, a captain, pilot and deckhand.

The DEIS does a poor job identifying who will respond to an oil spill that is burning. The current private responders for oil spills do not fight fires or control a spill of burning oil. In addition, because most fire agencies limit their response to a deep draft vessel at dock, they do not respond to fires below the high water mark of the river. If a burning oil spill were to occur, there would not be a private fire response under the current plan for the burning oil spill and most F-PAAC members limit their response and have no obligation to provide fire suppression for a burning spill on the river.

5.2.4 At Grade Crossings

There are 27 at-grade rail crossings within Vancouver along the route to the facility. Thirteen of the 27 at-grade crossings provide the only access for ingress or egress for the area they serve. These crossings are the only access to homes for thousands of residents. The DEIS estimates that delay caused to motorists by “gate downtime” during a HHFT crossing would be “just over 5 minutes” and that the “average gate downtime per crossing per day is between 2.3 and 4 hours” in each segment of the route and between 21 and 41 minutes at each crossing.⁶⁷ A delay of 5 minutes to an emergency call is significant. The standard for a response time to priority 1 and 2 calls is 7 minutes and 59 seconds. Adding 5 minutes to that response time is a significant and unavoidable impact of the proposal. In addition, an accident or derailment resulting in a train blocking a crossing could result in prolonged inaccessibility to residential and industrial areas. On December 14, 2015, a BNSF freight train collided with a vehicle near a public at-grade crossing. The freight train blocked the only access for police, fire and emergency responders and the only roads for egress to 450 residents living south of the railroad tracks for three hours. In addition, a grade-separated crossing which serves a large commercial, industrial (Columbia Business Center) and residential area (Columbia Shores) where thousands of people reside, work, recreate and use hospitality services is restricted in height and is only a single lane and single direction access. This restricted crossing is one of only two crossings serving this area.

⁶⁷ DEIS, p. 3.14-14-15 and p. ES-39.

In identifying potential mitigation measures, the DEIS states that “BNSF, UTC, WSDOT, and affected jurisdictions should coordinate to identify the need for, and feasibility of, constructing grade-separated railroad crossings...”⁶⁸ The DEIS fails to indicate how these entities would be required to provide mitigation for the applicant’s proposal. The DEIS properly characterizes the increase in vehicle delay at crossings as being “a major impact to emergency and public services” which are “significant unavoidable adverse impacts.”⁶⁹

5.2.5 Water Supply at the Facility

The DEIS notes that there needs to be clarification on whether the fire flow capacity for the facility is adequate.⁷⁰ The comparable California standards would require a fire flow of 3,000 gpm.⁷¹ The DEIS notes that the water supply system reduces down to a 12 inch main producing a “flow bottleneck.”⁷² The available fire flow is 2,000 gpm at the railcar unloading area; 2,500 gpm at the storage area; and 2,000 gpm at the marine terminal.⁷³ These flows are too low to operate the foam sprinkler system at these areas.⁷⁴ The DEIS states that the City provided a letter indicating that the system is reliable and capable of 3,500 gpm. What the City actually said was “it is estimated that at least 3,500 gpm of water for fire flow purposes is currently available.” The City made comments to a pre-application on the proposal indicating “looping the water main thru (sic) the areas may be required depending on the flow needed” and “size of pipe depends on the fire flow required by the Fire Marshal.”⁷⁵ The City has made suggestions to the Port that it consider providing funding for a project to loop this system for years.

The applicant proposes to provide one auxiliary pump to each of the areas to augment fire flow. However, as the DEIS notes, “this is highly risky since if a pump fails to start for some reason, or is down for maintenance, there is no fire protection through the onsite fire system.”⁷⁶ Further, the DEIS notes that “the applicant has no plans for a backup power system” and “some emergency power must be provided”.⁷⁷ Diesel fire pumps can be problematic if they are not inspected, maintained, and started on a regular basis. Oil refineries typically have redundant fire pumps within the facility that are supplied by alternative energy sources. For example, an area in the facility would include two fire pumps; one diesel and one electric. This approach significantly decreases the potential for a major fire loss due to a single pump failure.

⁶⁸ DEIS, p. ES-39.

⁶⁹ DEIS, p. ES-41, 3.15-15.

⁷⁰ DEIS, Appendix B, p. 2-2.

⁷¹ *Id.*

⁷² DEIS, Appendix B, p. 2-3.

⁷³ DEIS, Appendix B, p. 3-5.

⁷⁴ DEIS, Appendix B, p. 3-5.

⁷⁵ City letter to BergerABAM dated August 20, 2013.

⁷⁶ DEIS, Appendix B. p. 3-5.

⁷⁷ DEIS, Appendix B, p. 3-5.

The City agrees that the water supply system weaknesses “represent areas of concern.” What the City does not agree with is the suggestion that further review of these matters be delayed until the 100% (final) design stage as suggested by the DEIS.⁷⁸

5.2.6 Facility Fire System

A review by the Vancouver Fire Marshal’s office produced the following comments:

1. It has not been demonstrated that the emergency egress requirements mandated by the Fire and Building Codes have been adequately addressed for the unloading building.
2. It has not been demonstrated that statistically predictable failures have been addressed including flood zone construction, tank uplift protection, and operator presence fail-safe control requirements for oil transfer operations. In addition, seismic factors including liquefaction and tank fluid inertia must be considered in a complete evaluation.
3. The fire code referenced NFPA standards require signage and placarding which have not yet been addressed at this stage of planning.
4. Provide details of emergency fail-safes, emergency operation of valves, and emergency shut down.
5. A schedule of ongoing inspection, testing, and maintenance of all fixed fire suppression systems has not been identified or confirmed to meet minimum standards mandated by the State of Washington by the adoption of the International Fire Code.
6. A schedule of ongoing inspection, testing, and maintenance of all non-City owned fire hydrants and water mains has not been identified or confirmed to meet minimum standards mandated by the State of Washington by the adoption of the International Fire Code.
7. The details of needed City of Vancouver and Port of Vancouver water infrastructure improvements, identified as “potential weak points,” have not been clearly identified in order to meet the potential fire flow demands for this project.

5.3 Local Emergency Management

Emergency response efforts commence at the local level upon notification to first responders. In the event of a spill or potential spill incident involving storage, transfer, or the

⁷⁸ DEIS, p. 4-117.

transportation of hazardous materials, the first notification is generally to a local emergency dispatcher. The Clark Regional Emergency Services Agency (CRESA) is the regional public safety agency that provides 9-1-1 call taking and dispatch and emergency management coordination in Clark County. The DEIS fails to address the impacts of the proposal upon CRESA and its ability to provide emergency management services in the event of spills or fires.⁷⁹ There are three areas of concern. Those relate to notification, evacuation and sheltering.

5.3.1 Notification

The Emergency Community Notification System (ECNS) currently in use by CRESA to provide information and instruction to the public is a basic system that allows for area identification and single messaging. Additional Integrated Public Alert and Warning System (IPAWS) functions such as Emergency Alert System (EAS) and Wireless Emergency Alerts (WEA) must be performed separately. Comprehensive systems can include the ability to identify key facilities (schools, hospitals, assisted living facilities, etc.), message sharing and layering, plume modeling multiple platform (phone, text, internet) messaging as well as integrating IPAWS functionality. Vancouver is the location for the state school for the deaf and the state school for the blind. In the event of a large spill or fire, CRESA's ability to provide emergency notification is limited by its current system. It would cost CRESA approximately \$180,000 to purchase and implement, and \$120,000 per year to operate, a comprehensive community alert and notification system.

5.3.2 Evacuation

The BNSF mainline as it transects Vancouver is located along the north shore of the Columbia River. State Highway 14 also parallels the north shore of the river to the north of the railroad tracks.⁸⁰ This area is 4.78 square miles in size and has a population of 3,261 people. It is steeply sloped and there are only five streets (Columbia Shores, Shorewood, Lieser, Ellsworth and 164th Avenue) that allow vehicles or people to evacuate the area between the river and Highway 14. These streets are not designed or built to serve as evacuation routes. An evacuation of this area would be extremely difficult. Additionally, a derailed train that is 1.2 miles long would block several at-grade crossings and the only means of egress for residents living south of the railroad tracks. The difficulties of evacuation are exacerbated by the inability of the notification system to give differing evacuation instructions to different recipients.

Under the current City of Vancouver Comprehensive Emergency Management Plan, the Vancouver Police Department (VPD) would be responsible to provide for the coordinated evacuation of the population from a hazard area and for safe return when the hazard has passed. This plan addresses evacuation emergency activities for the authorization, direction, routing, and

⁷⁹ The DEIS devotes one paragraph to CRESA, only identifying it as a dispatch agency. DEIS, p. 3.15-5.

⁸⁰ See maps of Vancouver attached as Appendix 1.

relocation of people from their homes, schools, and places of business. In reviewing a one-mile evacuation radius, depending on the location in the City, the estimated number of citizens requiring evacuation/relocation will be 7,000 to 13,000. According to the Washington State Patrol, based on a slow moderate event, approximately 45-60 officers per 10,000 residents are needed for traffic control. Based upon the University of California Crowd Control matrix, VPD would need approximately 7 sergeants and 38 officers for an estimated 13,000 citizens needing evacuation and approximately 4 sergeants and 26 officers for an estimated 7,000 citizens needing evacuation. VPD does not have the resources to meet demands of an evacuation of this nature. In a 24 hour period, depending on the shift, VPD typically has between 10 and 24 officers on patrol for the entire City. To maintain this level of service, VPD has to rely heavily on officers working overtime. For 2016, it is estimated that VPD will use 39,251 hours in overtime to backfill staffing in patrol. This represents approximately 48% of its total overtime budget.

To adequately staff the VPD emergency services role in providing assistance with evacuations, perimeter security, and traffic control, it would be necessary to enact an emergency staffing plan requiring all available personnel to report to duty on rotating twelve hour shifts. A Mutual Aid request would also be made to area law enforcement agencies in the event of a prolonged emergency situation.

The DEIS must address the emergency management and response capabilities of CRESA and VPD and the impacts of the proposal to those agencies. Any gap in the services available and those necessitated by the proposal must be identified and mitigation measures identified.

5.3.3 Sheltering

Once the public is notified to evacuate to an assembly area, individuals must be provided with shelter. Clark County does not have sufficient sheltering capability for an evacuation resulting from an HHFT fire. The USDOT provides guidance on evacuations caused by an oil train fire. That guidance is that an area within a half-mile radius of the fire is to be evacuated.⁸¹ Maps of the area within one-half mile of the BNSF track are attached.⁸² There are points along the BNSF mainline, between I-5 and I-205, where, based on population density alone, evacuation numbers could reach 13,000 individuals. Those individuals would be advised to evacuate to assembly areas, prior to being advised of shelter locations. For planning purposes, it is assumed that the duration of a large scale evacuation would be between 24 hours and 96 hours and that 15-20% of those evacuated would need to be provided shelter by public agencies. It is assumed that the other 80% of people will find housing with family or friends. The ability to find alternate temporary housing is directly related to the economic resources individuals have. The less well-off are disproportionately affected. There are only 1,100 hotel rooms in the county and hotels run

⁸¹ U.S. Department of Transportation-PHMSA "Emergency Response Guidebook" (2012), Guide 128, p. 194.

⁸² See maps at Appendix 2.

an average occupancy rate of 30%. That means there would only be slightly over 700 rooms available. Portable tents with basic climate control cost approximately \$9,200 per unit and house eight people per unit. There are no such tents inventoried in Clark County. In the event tents were available, the largest location to provide tent shelters is the Clark County Fairgrounds, which is only large enough to accommodate approximately 50% of the demand. The maximum demand for sheltering occurs during the 48 hours following an event. After that, the evacuation zone may be reduced, assuming the risk has been reduced and displaced individuals have found other housing resources.

In addition to the general population, sheltering those with special needs adds a layer of complexity to rapid emergency evacuation. The special needs population may include those with mobility issues, sight or hearing issues, children, and those who require constant medical assistance. Also included in this population would be inmates from the Clark County Jail, the Jail Work Center and the juvenile detention facility. Among the challenges are the need to provide medical support, as evacuees often leave in a hurry and may not have medications; segregation for those under legal supervision; as well as shelters that meet federal ADA compliance requirements.

Seattle's Fire Chief Alan Vickery stated: "No fire department in the state could immediately handle a Bakken oil train derailment and fire involving multiple cars. The primary objective is to evacuate the immediate area, protect exposures and let the fire burn itself out. This presents challenges in the urban environment."⁸³ The DEIS does not provide any analysis of the probable impacts that the proposal is likely to have on emergency management. This is the first step in responding to an event at the facility or along the rail route. The DEIS must include an analysis of the impacts to emergency management and identify appropriate mitigation measures.

5.4 Geographic Response Plans

DEIS Section 4.3 addresses accident prevention and response plans. It states that these plans "contain and minimize damage to human health and the environment."⁸⁴ With respect to response plans, the DEIS states, "[r]esponse plans are designed to detail specific response actions for a range of spill scenarios, pre-identify sensitive resources at risk of injury from oil spills, and provide prioritized lists of tactical response strategies."⁸⁵

Section 4.3.3 describes geographic response plans (GRPs) as follows:

GRPs are part of the hierarchy of plans that guide responses to oil spills in Washington, Oregon, and Idaho, and are published and maintained separately as

⁸³ Washington State 2014 Marine and Rail Oil Transportation Study, Dept. of Ecology, March 1, 2015, p. 344.

⁸⁴ DEIS, p. 4-10.

⁸⁵ DEIS, p. 4-11.

annexes to the NWACP. Each GRP is written for a specific area (for example, a river or a lake) and includes tactical response strategies tailored to a particular shore or waterway at risk of injury from oil spill. To date, existing Northwest-area GRPs have been developed in partnership with Ecology, ODEQ, USCG, and EPA. GRPs guide responders in the first 12 to 24 hours of an oil spill by providing prioritized lists of tactical response strategies including booming strategies that could minimize impacts to previously identified sensitive resources. GRPs have two main objectives: (1) to pre-identify sensitive resources at risk of injury from oil spills, and (2) to help direct response actions related to sensitive resource protection during the initial hours of a response.

This description fails to acknowledge what was pointed out in the Marine & Rail Oil Transportation Study. In that study, Ecology made the following finding with respect to GRPs:⁸⁶

GRPs have not been developed for most of the rail corridors through which crude-by-rail trains are transiting or are projected to transit. There are also gaps in GRPs for marine areas. Capacity does not exist in the state to update and field test GRPs on a regular basis.

And

In addition to gaps in plans for certain inland regions, there are also gaps in marine areas. While the goal is to maintain and update GRPs every five years, Ecology has not been able to do this on a regular basis. There have not been sufficient resources to make progress in testing GRP strategies through response equipment deployment.

The GRPs also do not address responses for submerged or sinking oils. This is a concern for diluted bitumen spills under some conditions, particularly for spills into waters that have high sediment content and are turbulent.

The failure of the DEIS to acknowledge, much less address, the inadequacies of the GRPs must cause concern for its thoroughness, rigor and objectivity.

5.5 Fire and Explosion Prevention and Response Plan

A Fire and Explosion Prevention and Response Plan for the facility does not exist. Rather, it is proposed that such a plan would be prepared “prior to the beginning of construction or operation.”⁸⁷ This plan is an important document and must be prepared as part of the review of the impacts and proposed mitigation of the project.

The DEIS states that the applicant “has begun consultation with local responders to identify gaps in existing firefighting equipment and would provide training opportunities...”.

⁸⁶ Washington State 2014 Marine and Rail Oil Transportation Study, Dept. of Ecology, March 1, 2015, p. 113.

⁸⁷ DEIS, p. 4-20.

This approach of deferring the gap analysis until sometime prior to operation stands in contrast to the detailed analysis described in the scoping letter.

The EIS should include detailed analysis of response needs, capabilities and gaps. Without this analysis the EIS will fail to adequately address the project's impacts to critical life and safety issues.

5.6 Oil Spill Response Plan (OSRP)

While the DEIS addresses an oil spill contingency plan for the terminal, it does not address the lack of a comprehensive OSRP for the HHFTs. One of the recommendations made to USDOT and PHMSA by the Department of Ecology, Department of Fish and Wildlife, and Department of Natural Resources was to strengthen the OSRP requirements for HHFTs transporting crude oil. The Departments commented that:

Federal regulations only require comprehensive response plans for spills from carriers of individual rail tank cars with individual capacities of more than 42,000 gallons. This means that trains with blocks of cars of 30 or more or unit trains consisting of 100+ rail tank cars are only required to have basic spill response plans under federal authority. Crude-by-rail tank cars (both DOT-111 and the newer CPC-1232 cars) typically contain 30,000 to 30,110 gallons. This means that none of the current crude-by-rail trains are subject to requirements for comprehensive response plans.⁸⁸

And

The current 49 CFR 130 does not provide for any type of review. Review and approval are a mandate delegated to USDOT and cannot be ignored by PHMSA and the FRA.⁸⁹

The difference between the basic and comprehensive OSRP is significant. Comprehensive plans are subject to FRA approval, and must ensure by contract or other approved means that personnel and equipment are able to handle a worst-case discharge. Former National Transportation Safety Board Chairwoman Deborah Hersman wrote in a January 2014 letter to FRA Administrator Joseph Szabo that without closely regulated response plans:

[Rail] carriers have effectively placed the burden of remediating the environmental consequences of an accident on local communities along their routes.” Chairwoman Hersman reiterated her crude-by-rail concerns at a later date by stating crude-by-rail “can be a worst-case-scenario event, and we don’t have

⁸⁸ Washington State 2014 Marine and Rail Oil Transportation Study, Dept. of Ecology, March 1, 2015, pp. 106-07.

⁸⁹ Ecology, DNR, DFW Letter to Secretary Foxx dated September 17, 2014, p. 3.

provisions in place to deal with it, either on the industry side or for the first responders.”

USDOT and PHMSA have not modified the rule to require comprehensive OSRPs for HHFTs. The lack of any requirement for comprehensive OSRPs for HHFTs increases the risks of impacts from spills during the transportation of crude oil. There is no mitigation proposed for this increased risk.

6. Socio-Economic Impacts are Not Adequately Addressed

The DEIS considers socio-economic impacts largely in isolation from the surrounding setting. The DEIS does acknowledge four oil trains per day “could reduce property value within a mile of the rail corridor by not greater than 1.5%” but concludes this “is considered to be a minor impact.”⁹⁰ As addressed in other comment and technical analysis, the 1.5% figure is too low. But, even using this percentage, property values in the area assessed are significant, totaling around \$5.7 billion. Thus, at 1.5%, \$855,000,000, the impact is of major significance.

Adding to this deficiency is the failure to account for how the proposal will discourage investment and erode City land use and shoreline planning, as further addressed in the City's land use comments. As those comments address, considerable private and public investments have been made and are planned proximate to the proposal. Investment erosion is also a concern for the City's more vulnerable populations, including poorer areas of the City located proximate to the proposal, where investment is particularly critical. Yet, the socio-economic analysis fails to account for the investment erosion within these areas.

The DEIS also fails to factor clean up costs into either the socio-economic or land use analysis. The average cost of a spill for property damage, remediation, cleanup, and damage to the environment is \$300 per gallon. An average derailment of 83,602 gallons would equate to a \$25 million socio-economic cost.⁹¹ That is a significant impact. This calculation is for an average event, not a catastrophic one, which would have entrenched, long term socio-economic repercussions for the City.

7. Lack of Disclosure as to Availability of Mitigation to Ensure the Applicant Can Fully Remediate a Worst-Case Incident

There is no disclosure of the applicant's ability to remedy probable, significant adverse impacts caused by a worst-case incident. EFSEC says a study will be conducted

⁹⁰ DEIS, p. ES-41.

⁹¹ See Dept. of Transportation, PHMSA, Draft Regulatory Impact Analysis, Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains (July 2014), pp. 25 and 30.

“prior to commencing operations.”⁹² But no such study is included now. This is not the type of analysis which may be postponed under SEPA. The Council and Governor need to know: (1) what it would take to rebuild after a worst case incident; and (2) is the applicant prepared to take on this responsibility? Any catastrophic accident will have major environmental and land use impacts. Does the proponent have the capability to fully remedy impacts resulting in injury and casualties, natural resource and property damage, emergency responder resource impacts, and infrastructure damage? The Council and Governor need this answer before making a decision on the proposal, particularly given the City's view is that the answer is presently "no."

Given the City is the fourth largest in Washington, and known damages associated with other accidents, a reasonable maximum foreseeable loss (MFL) estimate to remedy damages flowing from a catastrophic accident would be \$5-6 billion.⁹³

8. Transportation of Oil by Vessel

8.1 Vessel Traffic Risk Assessment

While a Vessel Traffic Risk Assessment (VTRA) was undertaken in 2010 for the Puget Sound, no assessment has been performed addressing the Columbia River. The VTRA “provides a powerful reusable tool to predict locations and frequencies of collisions, allisions, and groundings of modeled vessels. The model also predicts subsequent potential releases of oil (fuel or cargo including petroleum products) and other hazardous materials. This tool can assist in evaluating preventative measures such as the placement of rescue tugs, implementation of vessel traffic restrictions, and other measures to reduce risk of oil spills.”⁹⁴ The Department of Ecology recommends the preparation of a VTRA for the Columbia River to “evaluate such factors as one-way traffic, more call-in points, large vessel no-meeting requirements, speed restrictions, high-risk tug escort requirements, and tug escort requirements for ATBs. Assessments should include the effects of traffic congestion on risk.”⁹⁵

The DEIS recommends that EFSEC, the applicant vessel operators and Ecology “coordinate” to revise vessel operation requirements based on the VTRA required by ESHB

⁹² Draft EIS, ES-17-18 ("Conduct a study to identify an appropriate level of financial responsibility for the potential costs for response and cleanup of oil spills, natural resource damages, and costs to state and affected counties and cities for their response actions to reduce the risks and impacts from an oil spill. ... The study should identify any constraints related to the commercial availability and affordability of financial responsibility. Based on the study, EFSEC shall determine the appropriate level of financial responsibility and require the Applicant to demonstrate their financial responsibilities to the satisfaction of EFSEC.").

⁹³ See e.g., U.S. Dept. of Transportation, *The Transportation of Hazardous Materials: Insurance, Security, and Safety Costs* (December 2009).

⁹⁴ Washington State 2014 Marine and Rail Oil Transportation, Study, Dept. of Ecology, March 1, 2015, p. 117.

⁹⁵ *Id.*, p. 118.

1449.⁹⁶ However, the VTRA required by ESHB 1449 only covers the area “within and near the mouth of the Columbia River” and the final report is not due until June 30, 2018.⁹⁷ The DEIS must require a VTRA to cover the full extent of the Columbia River from its mouth to the proposed facility, and that the VTRA be completed prior to the permitting of the facility, so that the VTRA may inform the permitting decision.

8.2 Tug Escorts

Tug escorts can assist vessels in distress that have lost their steering or power. State law requires oil tankers of greater than 40,000 dwt entering the Puget Sound to have a tug escort. The closest existing rescue tug is located at Neah Bay which is not close enough for practical assistance to Columbia River bound vessels.⁹⁸ The DEIS suggests that the limited width of the channel in the Columbia River may not provide tug escorts sufficient room to maneuver.⁹⁹ If this is the case, then the risk and impact of vessel grounding may not be subject to mitigation. Certainly, the Columbia River is no less worthy of protection than the Puget Sound. As noted above, one of the purposes of the VTRA is to assess tug escort requirements. The DEIS must include an analysis, supported by a VTRA, of the suitability of a tug escort requirement for oil tankers transiting the Columbia River.

9. The DEIS Alternatives Analysis is Inadequate

The DEIS improperly narrows the scope of alternatives by assuming the project is a private proposal. It is not. The project would not occur without consent from the property owner, the Port of Vancouver. The Port is intimately involved with the Project. This included its initiation of the project through its original solicitation of proposals and intimate involvement in the proposal.¹⁰⁰ The Tesoro-Savage Joint Venture will own the crude uploading and marine loading facilities but must enter into a land lease agreement with the Port for an initial period of ten years. The Port will remain the fee simple property owner and key project sponsor, without which the project would not move forward. The lease is very detailed, running to 429 pages, which alone demonstrates the Port’s intimate involvement in the project.

The Port, moreover, purposefully developed the site to accommodate increased rail traffic. Its management has determined itself interested enough in the EFSEC proceedings to have requested and obtained "party" status. It has participated in those proceedings in support of the application now before EFSEC. The Port has taken an active role in defending the proposal in other litigation. In defending its decision not to complete SEPA review on its lease but to

⁹⁶ DEIS, p. 4-118.

⁹⁷ ESHB 1449, section 11.

⁹⁸ DEIS, Appendix J – Vessel Spill Risk Analysis, p. 49.

⁹⁹ *Id.*

¹⁰⁰ "In late 2012, the Port solicited proposals from companies interested in developing a crude oil terminal on its property." *Columbia Riverkeeper v. Port of Vancouver USA*, 189 Wn. App. 800, 804, 357 P.3d 710 (2015).

defer to the Council's environmental review, the Port represented to the Court of Appeals that, **"The lease does not restrict full consideration of the proposal, including other sites, by the Council or the Governor.** It simply frames the proposal for environmental review."¹⁰¹ The Port went on to explain that "the Port made SEPA review a condition of the project and preserved the no-action alternative **as well as other alternatives** that the Council and Governor may consider."¹⁰²

Consistent with the Port's position before the appellate courts, the proposal does not meet the definition of a private project, which is "any proposal primarily initiated or sponsored by an individual or entity other than an agency."¹⁰³ In assessing the "public v. private question" the courts look first to who sponsored or initiated the proposal. The classification is based on a factual assessment of the level of public involvement in the project. The above-specified facts reveal the deep Port involvement in the project.

The situation is distinct from *Opal*,¹⁰⁴ where a privately proposed landfill was not viewed as performing a government function not only because of its broad customer base, but because it lacked a longstanding relationship with county solid waste management. In *Weyerhaeuser*,¹⁰⁵ a private landfill project was considered to be a "public" project as the proposed use was primarily intended to address county waste disposal (a governmental function). It was significant to the Court that the two entities were closely intertwined in promoting the landfill and the private applicant was under a contractual duty to complete the project. In both these cases the property owner was private. Here, the Port of Vancouver owns the property, solicited proposals for the project and is jointly pursuing the project with the applicant. And, the operation of our ports is a traditional government function.

As a public project, SEPA requires the EIS to assess a reasonable range of alternatives. Yet, other than no action, no alternatives, other than cursory analysis of potential sites at Kalama and Longview, are assessed in the DEIS. This is plainly not a reasonable range of alternatives. The City of Vancouver submits that these alternatives should be fully assessed in the EIS and have not been:

1. Direct shipment of crude oil from the Bakken fields to the refineries by rail to the west coast refineries. This alternative would encompass a consideration of dispersion of train traffic off of largely one line onto the entire rail network to the west coast. Avoiding a concentration of crude oil shipments to the Vancouver site would lessen

¹⁰¹ Brief of Port of Vancouver, USA, filed with the Court of Appeals, Div. II, September 15, 2014, pp. 40-41.

¹⁰² *Id.*, p. 43.

¹⁰³ WAC 197-11-780.

¹⁰⁴ *Organization to Preserve Agricultural Lands v. Adams County*, 128 Wn.2d 869, 913 P.2d 793 (1996).

¹⁰⁵ *Weyerhaeuser v. Pierce County*, 124 Wn.2d 26, 873 P.2d 498 (1994).

the public safety risk of a serious incident. Direct shipment would also tend to avoid the rail capacity challenges discussed in the DEIS.

2. Alternative sites should be considered beyond the summary dismissal of the sites in Kalama and Longview. The DEIS acknowledges that those two sites are feasible, but devotes only 359 words to analyzing why the sites are not as desirable as the Vancouver site. More analysis must be shown. All that is mentioned is wetlands would be required to be filled and the capacity to handle unit trains.
3. The no action alternative fails to consider alternative uses for the site. It fails to note the well-documented shortage of land for industrial development in Clark County and throughout the Portland-Vancouver region. The failure to consider alternative uses for the site beyond handling high risk commodities makes the DEIS inadequate.
4. Another viable alternative would be assessing an upriver terminal location alternative which would avoid taking Bakken crude through a major population center.
5. Still another alternative worthy of serious consideration would be to remove the more volatile gases before the Bakken crude oil leaves North Dakota, which would lessen the danger to the public as the commodity moves through the fourth largest city in the state of Washington.
6. Finally, a delay alternative should be considered long enough to fully evaluate the environmental risks and provide time to implement proposed safety enhancements such as safer oil rail cars.

The DEIS avoids consideration of these alternatives by considering the project “private.” Even if that were correct, entirely independent of statutory EIS alternatives analysis requirements, SEPA requires a comprehensive consideration of alternatives before taking actions on a project such as this. “Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources”¹⁰⁶ is a mandate of the state legislature. There are deep and unresolved conflicts at all levels of government as to how to address and plan for the transport of Bakken crude. Those conflicts are far from being resolved. They include the safety of oil rail cars, the safety of at-grade crossings, and the volatility of the commodity itself. This is precisely the type of project for which it makes sense to consider alternatives. Otherwise, irrevocable decisions, which will impact major population centers, will be made without any information on ways to more safely accomplish the movement of Bakken crude.

¹⁰⁶ RCW 43.21C.030(2)(e).

There is a third basis under SEPA for requiring a rigorous alternatives analysis. SEPA contemplates this exact type of scenario, where a use is novel enough such that planning was never completed for it. "Alternative sites may be evaluated if other locations for the type of proposed use have not been included or considered in existing planning or zoning documents."¹⁰⁷ Given the comparatively recent emergence of Bakken crude transit and the demand for transport terminals, no detailed planning or zoning assessment to inform this precise use has been prepared.

Finally, EFSEC, as the agency charged with permitting the proposal, must consider the appropriate location of a particular proposal in its review. The assessment of where a high risk project should be located is completed through the adjudication process. If a project is proposed within an area which is not appropriate for its location, EFSEC must deny it. Consistent with this charge, the Port of Vancouver confirmed in litigation that it had not in any way limited EFSEC's ability to consider alternatives.

Considering alternatives here is particularly important given the extreme risks associated with bringing large quantities of highly volatile substances through the fourth largest city in the state. These risks are not remote considerations, as illustrated by the spate of recent train derailments carrying Bakken crude, including the 2013 Lac-Mégantic disaster, which took out an entire city center, including 44 buildings¹⁰⁸ destroyed with additional buildings requiring demolition due to the damage sustained. The disaster resulted in 47 deaths,¹⁰⁹ with more than 27 children orphaned.¹¹⁰

SEPA's primary objective is to ensure government action is fully informed.¹¹¹ That cannot happen if no real alternatives are considered. "Reasonable alternatives shall include actions that could feasibly attain or approximate a proposal's objectives, but at a lower environmental cost or decreased level of environmental degradation."¹¹²

One of the central proposal risks is it is centered in the fourth largest city in the state. As such, the first priority of an EIS in addressing such a proposal should be how can those citizens be protected? Other alternatives, as described above, should have been evaluated. That did not happen.

¹⁰⁷ WAC 197-11-440(5)(d).

¹⁰⁸ <http://www.cbc.ca/news/canada/montreal/lac-m%C3%A9gantic-disaster-by-the-numbers-catalogue-of-a-tragedy-1.2934592>.

¹⁰⁹ <http://www.radio-canada.ca/nouvelles/societe/2013/08/01/002-lac-megantic-sq-enquete-bureau-coroner.shtml>.

¹¹⁰ <https://ca.news.yahoo.com/lac-m-gantic-health-authorities-143657358.html>.

¹¹¹ *Norway Hill Preservation and Protection Ass'n v. King County Council*, 87 Wn. 2d 267, 272, 552 P. 2d 674, 677 (1976).

¹¹² WAC 197-11-440(5)(b).

The document instead summarily concludes, "[n]o alternatives were found to clearly show a lower environmental cost or decreased level of environmental degradation than the Proposed Action," and thus the DEIS evaluates only the project and a cursory no action alternative.¹¹³ With regard to an upriver option, the DEIS assesses barging from just one upriver location (Kennewick/Pasco) but summarily concludes based on proposal footprints, there is no point in further considering this approach. Twelve other ports were identified, with "Kalama or Longview" found feasible, but due to wetlands at Kalama and the need for a new marine terminal at the Port of Longview, alternative ports were dismissed from further consideration. Yet, the Port of Vancouver, located in the midst of a population of 170,000, is not dismissed from further consideration given the risks are simply too great. This approach to alternatives is entirely superficial, is inconsistent with EFSEC's duty to consider locational issues, and fails to comply with SEPA.

10. Lack of Clarity on the Mitigation Measures

The DEIS analysis is based on assumptions that a number of mitigation measures will be implemented. However, there is no clarity on what mitigation will in fact be implemented. The DEIS states impacts identified assumed all measures intended to reduce impacts identified "by the Applicant" in the "Preliminary Draft EIS and ASC would be fully implemented."¹¹⁴ However, the public has not been provided with the Preliminary DEIS, which the Council previously determined was inadequate.

The DEIS goes on to assert "[p]otential mitigation measures ... are presented in Section 4.8."¹¹⁵ Section 4.8 simply lists laws relevant to remediation and liability. It is section 4.9 which identifies mitigation measures. That section is then broken into three sections, one requiring legislative action (a speculative measure), the second identifying "measures for the applicant to implement," and a third listing measures identified by others.¹¹⁶ From this, it is impossible to tell: (1) what mitigation will be part of the proposal; and (2) which mitigation measures the DEIS bases its risk assessment on. This is crucial, as the significance assessment is what informs EFSEC what it should consider and address in its decision making.

There are also concerns regarding this specific site due to seismic issues and it is not at all clear what mitigation the DEIS analysis is based upon. The potential for seismic disruption "is particularly high in Washington,"¹¹⁷ and "[a] massive earthquake could result in liquefaction and ground deformation" at the site.¹¹⁸ Given this risk, project structures must be designed to

¹¹³ DEIS, ES-5, last para.

¹¹⁴ DEIS, p. ES-9, ¶ 2.

¹¹⁵ DEIS, p. ES-9, ¶ 2.

¹¹⁶ DEIS, pp. 4-116 - 4-118, ¶ 4.9.

¹¹⁷ DEIS, p. ES-13, ¶ 7.1.2.

¹¹⁸ DEIS, p. 4-26, ¶ 3.

adequately address this risk. Yet, with regard to seismic hazards, the DEIS is ambiguous as to precisely what mitigation is included to address what have been positively identified as probable, significant adverse impacts. The Executive Summary identifies secondary containment for the transfer pipelines, but then states mitigation measures in Section 3.1.5 would be implemented to reduce risks from seismically induced soil liquefaction. A comparison between what is proposed in Section 3.1.5, and what the DEIS states is necessary, demonstrates the ambiguity in what is being proposed as mitigation.

Table 5 DEIS Mitigation, Required Clarification

Impact Identified at DEIS, pgs. ES-12 - ES-13	Mitigation Described, DEIS, Section 3.1.5 (pg. 3.1- 30)	Clarification Required by SEPA
<p>Storage Area: "No ground improvement is proposed for soils underlying the secondary containment berm. The stone columns under the foundations supporting the storage tanks do not extend to the berm. Therefore, the potential exists for liquefaction and ground deformation under the secondary containment berm."</p>	<p>"Install stone column ground improvements beneath the entire secondary containment berm in the storage area (Area 300) to ensure berm stability in the event of earthquake induced liquefaction. ... Designing the berm to withstand ground motion/shaking is appropriate but needs to be combined with an assessment of potential liquefaction beneath the berm, and the requirement to extend the ground improvements deeper into the ground."</p>	<p>The DEIS identifies significant seismic hazards unless the stone columns extend to the berm. The DEIS should clearly identify this mitigation in Section 3.1.5.</p>
<p>Dock and Adjacent Transfer Pipeline within Marine Terminal: Earthquake of 8.9 magnitude "could result in 7 to 14 feet of lateral spreading at the dock and at the proposed transfer pipeline near the shoreline. Additionally:</p> <ul style="list-style-type: none"> • Some ... stone columns .. may not reach stable foundation soils • Ground improvement consisting of deep soil mixed panels supported by 	<p>"Reassess the required depth of penetration of stone columns in the marine terminal (Area 400) and the western portion of the transfer pipelines (Area 500) near the Columbia River shoreline along the transfer pipeline and at the dock to secure the stone columns in either the nonliquefiable dense sand unit ... to reduce the risk of damage.... If the depth to the nonliquefiable dense sand unit is greater than the currently proposed depth, the installation depth</p>	<p><i>See above comment.</i> Confirm identified mitigation as extending stone columns to reach stable foundation soils. The DEIS is unclear.</p>

<p>jet grout columns does not have a well-established performance record.</p> <ul style="list-style-type: none"> • Potential sliding of portions of the shoreline embankment ... is not mitigated by these improvements and, if this sliding occurs, it could deform the dock or displace a moored vessel." 	<p>should be increased accordingly."</p>	
<p>Transfer Pipelines. "[E]xisting data indicate that the depth to stable nonliquefiable soils ranges from 33 to 51 feet below ground surface (bgs). The current ground improvement design includes stone columns with depths of between 5 and 16 feet bgs, which would not reach underlying stable soils."</p>	<p>"Confirm that the design of the transfer pipelines (Area 500) has sufficient strength and flexibility to withstand earthquake generated ground deformations that could impact the dock and moored vessels during seismic events."</p>	<p><i>See above comment.</i> Confirm stone columns will extend to nonliquefiable soils.</p>

SEPA requires clarity as to the mitigation being relied upon to inform a significance assessment. Of course, even if the necessary clarification is provided, the probable, significant adverse impacts associated with facility location within the heart of the fourth largest city in the state cannot be mitigated. The DEIS fails to disclose this to the Council and Governor. This is a failure of disclosure as well as a failure to satisfy SEPA's requirement that it be "written" in plain language that is readily understandable.¹¹⁹

Environmental impact statements shall be readable reports, which allow the reader to understand the most significant and vital information concerning the proposed action, alternatives, and impacts, without turning to other documents....¹²⁰

¹¹⁹ WAC 197-11-425(1) and (2) .

¹²⁰ WAC 197-11-425(1).

This "plain language" requirements means that an EIS, in assessing impacts, must accurately disclose what mitigation is being relied upon or assumed in accounting for risks. And, those significant risks must be plainly identified. That did not happen here. Throughout the entirety of the document, instead of clearly identifying actual risks and what is necessary to address them, including identifying a reasonable range of alternatives to avoid those impacts, the DEIS is designed to downplay proposal risks and leave flexibility as to what may or may not happen in terms of mitigation.

11. Probable Significant Adverse Land Use Impacts are Not Adequately Disclosed

11.1 SEPA Requires a Land Use Consistency Assessment

The DEIS does not adequately address proposal consistency with City land use planning. The improperly narrow approach may have been informed by the Council's land use consistency determination process,¹²¹ although that process is distinct from SEPA.

SEPA requires an independent assessment of proposal impacts on land use planning which is entirely independent of a Council decision on whether to preempt a local regulation or policy. Under SEPA, it is not only site specific zoning which is considered, but proposal impacts on, and compatibility with, surrounding land and shoreline uses and local planning for the area. In other words, a proposal is not viewed in isolation from the location in which it is placed. The DEIS does not do what SEPA requires. The DEIS acknowledges:

In some communities along the rail route existing land use within the rail corridor is not as compatible with rail operations as is industrial land use. In these areas, due to historical development patterns or restrictive topography, residential and commercial land uses are often located immediately adjacent to the railroad right-of-way. This pattern can be seen along the rail corridor east of downtown Vancouver and in many of the small towns along the Columbia River.¹²²

The DEIS then indicates the projected four additional HHFTs per day could negatively affect existing land uses located along the rail corridor due to increased rail traffic and noise, but concludes the impact would be minor compared to the impacts from existing rail traffic. It further states noise-reduction measures by those developing within the vicinity of the rail are expected to provide noise attenuation. In short, this section states there are incompatible uses present but reasons the only issue is noise, which can be addressed by non-specific noise-reduction features property owners can incorporate into new construction. Yet, in contrast, at

¹²¹ DEIS, p. 3.10-13 (“EFSEC did not, however, address matters outside of the narrow scope of an RCW 80.50.090 land use hearing....”). When the Council issued Council Order No. 872 on August 1, 2014, it explained, “Our land use consistency determination is a preliminary and very limited step that is proper to take now, based on the limited sort of record that is obtained through the statutory public hearing.”

¹²²DEIS, p. 3.10-15.

section 4.7.11.2, the DEIS indicates an oil spill would likely produce moderate to major impact on land and shoreline use.

This section indicates it may not be possible to restore land uses impacted by such an event. By acknowledging restoration may not be possible, the DEIS is confirming there is no mitigating measure for a major incident. This should be clearly stated.

The DEIS also states “[a] large fire and/or explosion in urbanized areas could damage or destroy residential, commercial, and industrial structures, require evacuations for extended periods of time, and produce long-term alterations in perceptions of appropriate land uses.”¹²³ This obviously is a significant land use impact. Further, if such an event were to take place within the City, the perceptions of appropriate land use would be altered.

To allow one operation to invalidate all the time and effort expended on the development and implementation of plans and zoning standards is not consistent with good planning principles. Given the industry's recent history, the likelihood of explosion and fire is unacceptably high and would have major impacts on the success of the City achieving the goals and objectives of its comprehensive plan and the zoning ordinances. There are significant, unavoidable impacts to land uses proximate to the proposal. The DEIS's assertion at 3.10.6 that this is not the case is in error.

11.2 Vancouver Comprehensive Plan

The Vancouver Comprehensive Plan 2011-2030 presents a vision for Vancouver's future over the next 20 years—a vision that can be easily understood, evaluated, and implemented. The Plan contains policy direction relating to growth and development, environmentally sensitive areas, historic places, public services, and other issues. Plan policies are implemented through subarea plans,¹²⁴ the Vancouver Municipal Code, and other local standards.

The Plan places particular emphasis on how uses relate to one another, emphasizing the need for use co-location to maximize limited municipal resources.

- Facilitate development that **minimizes adverse impacts** to adjacent areas, particularly neighborhoods.¹²⁵

¹²³ DEIS, p. 4-94, *see also* p. ES-48 (a large fire could cause moderate to major impacts "if the event occurred close to shore, leading to damage or destruction of nearby shoreline facilities and short-term disruption of land and shoreline uses."). The DEIS discounts the potential for long term disruption.

¹²⁴ Subarea Plans include the 112th Avenue Corridor Subarea Plan; Central Park Subarea Plan; Fourth Plain Subarea Plan; Fruit Valley Subarea Plan; Lower Grand Employment Subarea Plan; Riverview Gateway Subarea Plan; Section 30 Subarea Plan; and the Vancouver City Center Vision Subarea Plan (VCCV).

¹²⁵ Comprehensive Plan, Community Development Policy 9 - Compatible Uses, emphasis added.

- **Locate complementary land uses near one another to maximize opportunities for people to work or shop nearer to where they live.**¹²⁶
- Increase the ratio of jobs to residents in the City of Vancouver and the region.¹²⁷

The proposal undercuts these policies. The risk of catastrophic accidents, which threaten surrounding uses and the City's planning, are addressed in comment above. The proposal does not provide opportunities for people to work or shop nearer to where they live. To the contrary, the proposal will encourage people to avoid the area due to the increased risks, thus eroding long-term investments the City and private property owners have made to create a vibrant, urban environment with complementary uses, consistent with GMA requirements. This will erode employment opportunities within the City, a concern the DEIS does not address.

The proposal is also inconsistent with City housing objectives.¹²⁸ The proposal will significantly impact the Fruit Valley Neighborhood, an area proximate to the proposed facility, which offers a range of housing types. Also, the proposed Waterfront Development project is targeted to develop up to 3,300 residential units proximate to the facility. The proposal will undercut City objectives to promote housing development proximate to its job base for both renters and homeowners. The DEIS does not address these issues.

The proposal does not facilitate energy conservation, nor does it include any provisions for alternative energy sources or generation, as City policies call for.¹²⁹ The proposal indicates certain air quality standards will not be met. For example, Diesel Particulate Matter will exceed the Acceptable Source Impact Levels (ASIL) in the Clark County Jail Work Center area. The diesel particulate matter ASIL is 0.15 µg/m³,¹³⁰ but jumps to 0.5 and 0.76 µg/m³ at the Work Center with the proposal,¹³¹ or 3.3 and 5.1 times the ASIL. The DEIS relies on the relative transitory nature of the occupants to mitigate the impact. No science has been provided to verify that assertion and Work Center employees are not transitory. The DEIS concludes (3.2.7) there could be moderate unavoidable adverse impacts to air quality at the JWC. However, for a sensitive individual, over time, or with a single catastrophic event, impacts are likely to be significant. The proposal is not consistent with the City's efforts to protect air quality.

¹²⁶ Comprehensive Plan, Community Development Policy 10 - Complementary Uses, emphasis added.

¹²⁷ Comprehensive Plan, Economic Development Policy 1 - Jobs-Housing Balance.

¹²⁸ See e.g., Comprehensive Plan, Housing Policy 1 - Housing Options ("Provide for a range of housing types and densities for all economic segments of the population. Encourage equal and fair access to housing from renters and homeowners.").

¹²⁹ Comprehensive Plan, Environmental Policy 3 - Energy Conservation ("Promote and facilitate energy conservation and alternative energy sources and generation."); Environmental Policy 10 - Air Quality ("Protect and enhance air quality, in coordination with local and regional agencies and organizations.").

¹³⁰ DEIS, p. 3.2-18, footnote 5.

¹³¹ DEIS, subsection 3.2.4.1, p. 3.2-18.

The proposal is also not consistent with the City's other environmental protection policies, including the following:

- Protect, sustain, and provide for healthy and diverse ecosystems.¹³²
- Protect riparian areas, wetlands, and other fish and wildlife habitat. Link fish and wildlife habitat areas to form contiguous networks. Support sustainable fish and wildlife populations.¹³³
- Protect habitat for salmonids and other listed species and facilitate recovery. Encourage and support actions that protect other species from becoming listed.¹³⁴
- Enhance and protect surface water, stormwater, and groundwater quality from septic discharge, impervious surface runoff, improper waste disposal, and other potential contaminant sources. Ensure safe and adequate water supplies and promote wise use and conservation of water resources.¹³⁵

The DEIS indicates, depending on the size of the spill, the impacts to land and shoreline uses could range from less than 2 river miles from the event to beyond the mouth of the Columbia River. Impacts to land and shoreline uses from a large to very large spill along the vessel corridor could be moderate to major depending on the location and duration of the spill and response efforts, the timing of the spill, and the specific land and shoreline uses impacted. The analysis does not provide specific information on the specific characteristics of such a spill. Appendix J at page 45 state “[w]hile trajectory, fate, and effects modeling for specific spill scenarios related to Vancouver Energy vessel traffic is outside the scope of the current study...” Without the specific spill modeling, it is not possible to determine the impacts a vessel-related oil spill could have on land use downstream of the spill. This is needed, as the DEIS identifies there is a risk. However, due to the impaired risk analysis, this risk is incorrectly portrayed as "extremely unlikely."

The potential for major unanticipated events resulting from factors occurring alone or in combination as described in Section 4.1 cannot be totally eliminated. Although extremely unlikely, an unprecedented event could potentially cause one or more crude oil storage tanks and the secondary containment berm to be significantly damaged, which could result in a very large crude oil spill at the proposed Facility. Such a spill could spread inland to other Port facilities, nearby wetlands and neighborhoods and could reach the Columbia River. Impacts from such an event could result in significant adverse impacts to environmental resources and would require a major response effort.¹³⁶

¹³² Comprehensive Plan, Environmental Policy 1 - Environmental protection.

¹³³ Comprehensive Plan, Environmental Policy 6 - Habitat.

¹³⁴ Comprehensive Plan, Environmental Policy 7 - Endangered Species.

¹³⁵ Comprehensive Plan, Environmental Policy 8 - Water Quality and Quantity.

¹³⁶ DEIS, pg. 4-119, end.

The Lower Columbia River is listed as critical habitat for chum salmon, steelhead salmon, and Chinook salmon. These species, along with Coho salmon, are listed as threatened in the Columbia River. As further addressed in comment from tribal and environmental groups, the proposal presents significant risks for the Columbia River ecosystem, which would impact these species. The DEIS does not adequately disclose the proposal's risks to the riverine environment.

11.3 Vancouver City Center Vision (VCCV) Subarea Plan and Planning Districts

The VCCV subarea plan addresses the area of Vancouver west of Interstate 5, north of the Columbia River, east of the north–south main railroad line and generally south of Mill Plain Boulevard and the area north of Mill Plain Boulevard, commonly known as Uptown Village. The Guiding Principles for this subarea plan are:

- Build on the successes and experience of the Esther Short Plan.
- Promote residential development including affordable housing as key to a vital and attractive city center.
- Create and support “messy vitality,” a dynamic and rich mix of residential, cultural, civic, retail and entertainment places that will attract growth, jobs and round-the-clock activity in the VCCV area.
- Improve the Main Street Corridor (between Broadway and Washington Street) as a central spine of diverse and complementary uses that establish downtown as a regional center for commerce, culture and urban living.
- Support the Vision with strategic investments in public infrastructure – especially transportation.

The Land Use Plan Policies are:

- Encourage residential development including affordable housing as the key to city center vitality.
- Revitalize downtown uses along the Main Street Corridor (between Broadway and Washington Street) from 8th Street to Fourth Plain Boulevard and its connectors.
- Focus waterfront redevelopment on residential uses supported by significant public access, recreation, cultural, hospitality, entertainment, and limited commercial uses.
- Protect key historic buildings and established residential neighborhoods.
- Encourage key support services, such as a full-service grocery store and lifestyle retail center.
- Encourage development within the west subarea of the VCCV primarily for government services complemented by residential, entertainment and cultural uses.
- Recognize and encourage arts, cultural and institutional uses as critical to economic development in the city center.

The proposal compromises achievement of these over-arching principles and policies. Instead of being a use which is compatible with this "messy vitality" or complementary mix of urban uses, the proposal threatens this development and the extensive private and public investments made within this area.

For a mix of complementary uses to work, people must be able to access those uses. Inconsistent with City land use planning and its transportation policies, the proposal presents significant mobility issues. Additional rail traffic will result in more delays at rail crossings. This would impact the successful implementation of the zoning regulations and land use plan measures; particularly in areas whose only access requires at-grade crossings on the rail lines. Within the City, there are eight public at-grade crossings: 164th Avenue, 148th Avenue, 139th Avenue, 11th Street, Lieser Point, 17th Street, Chelsea Avenue, and Beach Drive. These are in addition to several private crossings. Impacts, including evacuation issues and emergency response delays from blocked crossings (as addressed above), are not adequately addressed.¹³⁷

Relating to vessel transportation, the DEIS states (*see* 3.10.4) as there are no proposed physical change to the River channel, impacts to land use would be negligible. However, no analysis of the impacts of additional ship traffic on the land uses along the Columbia River has been provided.

To promote the City's urban vitality, and target its planning efforts, the VCCV is divided into six districts,¹³⁸ three of which adjoin the BNSF rail lines and are within approximately 2.5 miles of the proposed oil terminal. These three districts, along with the Fruit Valley subarea which is also located proximate to the proposal, are further described below.

11.3.1 Esther Short District

The Esther Short district covers the area surrounding Esther Short Park. It is generally north of the railroad berm, west of Washington, south of Evergreen and east of Harney Street. This area is nearly fully built. The plan calls for additional development of mid-rise housing, offices and retail. At this time the City is reviewing a proposed seven-story mixed-use residential commercial project in this district.

Esther Short Park is the heart of this district. The City spent \$6 million in 2000 to redevelop this park. A mixture of buildings occupy the streets adjacent to the centrally located

¹³⁷ Other than the recently completed grade separation crossing associated with the Vancouver Waterfront project, which the City financed, there are no other grade separation projects being considered. It is unclear if the DEIS analysis considered the approximately 155 unit trains or 310 one-way train trips per week that could be added if all of the current projects under consideration were to be constructed. Also, the DEIS does not acknowledge present inadequate rail maintenance and how that will be exacerbated by the increase in rail traffic (both in number and in weight).

¹³⁸The Columbia West Renaissance, Esther Short, Central Downtown, Mill Plain Couplet, Uptown Village and Westside Government.

park, including the new \$30 million Vancouver City Hall completed in 2007 and the Vancouver Center, a mixed-use building with 262 apartments and 16,500 square feet of office and retail space completed in 2000. Also across from the park on Columbia Street are the City-owned Hilton Vancouver Washington Hotel and the Vancouver Convention Center, which were built in 2005 at a public cost of \$72.8 million.

In 2013, the Esther Short Park was a recipient of the Great Public Spaces award presented by the American Planning Association. In 2015, an estimated 150,000 people attended permitted events in the park. This does not include public use not associated with permitted events.

The DEIS does not address the threats to this area or how 150,000 people would be evacuated in the event of a catastrophic accident. However, had it done so, the DEIS would have to conclude that the proposal and the City planning for this area are not consistent.

11.3.2 Westside Government District

The Westside Government district covers the area south of Mill Plain, west of the railroad, north of the Esther Short district and west of the Central Downtown District. This area is to serve the needs of state and local governments. This is the area which contains the Clark County government campus, the county jail, the juvenile detention facility and the county courthouse. The plan recommends the City promote funding and development of a federal courthouse in the Westside Government district. The DEIS does not address proposal risks to, and incompatibilities with, these important governmental facilities, nor does it adequately address jail and detention facility evacuation issues.

11.3.3 Columbia West Renaissance District

The Columbia West Renaissance district, located south of the railroad line and along the Columbia River, calls for an extension of the city street grid to the waterfront, development of mid-rise housing, hotels, offices, convenience, and light industrial uses. It also calls for public access to the shoreline.

The proposed Vancouver Waterfront Project is based on VCCV policies. This development project was initiated in 2008. To date, the community has invested approximately \$34.1 million and the developer has invested another \$8 million. Construction will commence this year.

The proposed 7.3-acre city park will cost approximately \$27.7 million dollars and is currently under construction. It is anticipated the completed park will host over 25,000 visitors per year for events at the park and another approximately 4,000 visitors per weekend. The DEIS does not address evacuation issues, much less proposal compatibility with this intensive urban redevelopment project supported by public and private funding.

11.3.4 The Fruit Valley Subarea Plan

The Fruit Valley Subarea Plan covers the area generally along both sides of Fruit Valley Road from Fourth Plain Boulevard to the northern city limits. Substantial public investment has been made in the Fruit Valley Neighborhood consistent with the Plan policy to, "[p]reserve the livability and aesthetic character of Fruit Valley residential neighborhoods."¹³⁹ However, the DEIS does not address the impact of rail-caused delays, or the impacts to the Fruit Valley Neighborhood from the largest oil terminal on the west coast being located within 0.6 mile and having the railroad tracks supplying that facility located within 1,500 feet of this largely residential neighborhood.

The Fruit Valley Community Learning Center is a key neighborhood feature. It is an elementary school located approximately 3,400 feet from the rail line which would connect to the proposed facility.

The Learning Center was reconstructed in 2004 and serves approximately 295 children in kindergarten through fifth grade. It also is home to a child care facility run by the Southwest Washington Child Care Consortium, Head Start program for preschoolers and Family-Community Resource Center.

In addition to protecting and supporting the school use, housing is a central Plan objective. The Vancouver Housing Authority developed Plum Meadows, a housing development which includes 132 apartment units, 16 studio units and 14 senior duplex units along the east side of Fruit Valley Road. This project was initiated in 2003 and developed at a cost of \$17,853,192.¹⁴⁰

The proposal undercuts Plan policies supporting these uses and is not consistent with the land use planning for this area. Further, the DEIS does not adequately address proposal impacts on these land uses, including evacuation concerns as well as their viability, given proposal risks.

11.4 Significant Adverse Impacts on Land Use Cannot be Mitigated

Impacts to land and shoreline uses resulting from a major spill or fire/explosion at the facility or associated with rail transportation of crude oil are likely, and such events would have significant land use impacts. A catastrophic event in the City's urbanized area would have severe consequences on the current and planned use and development and risk, which cannot at present be mitigated. WAC 463-47-110 sets out policies for conditioning or denying energy facility proposals. It states the Council's overriding policy is to avoid or mitigate adverse environmental

¹³⁹ Policy FV-14 of the Fruit Valley Subarea.

¹⁴⁰ Plum Meadows Funding Memorandum provided by Steve Towell, Community Relations Program Manager, Vancouver Housing Authority.

impacts from Council decisions. In addition, the Council and Governor have independent authority to condition and deny a proposal pursuant to SEPA's over-riding mandate to protect fundamental and inalienable rights to a healthful environment, as set forth in RCW 43.21C.020 and .030.

As addressed above, the proposal would have significant impacts on urban land uses. For Vancouver, the area along the rail lines contains residences, parks, industrial and commercial development. The City has expended substantial effort planning not only for the downtown and the reconnection of the City with the Columbia River, but for all uses along the proposed rail line. The City's Comprehensive Plan is intended to address the livability of the City for future generations. Approval of this project is likely to negate the planning the City has done.

Allowing the largest crude oil terminal on the west coast does not assure safe and healthful surroundings. Crude oil by rail incidents have resulted in oil spills and fires, resulting in loss of life and destruction of property. There have been 24 such events since September 2006. There are issues with potential impacts to the various fire departments along the rail lines. These departments have indicated they do not have the personnel, training or equipment to effectively respond to a major event related to an oil spill or fire/explosion. These circumstances do not assure a safe and healthful environment.

The impacts on land use and planning have been enumerated above. The DEIS indicates there may be undesirable and unintended consequences to planned land use. One specific concern is the possibility of a major spill, fire or explosion in an urbanized area. Such an event would cause major changes in planned land uses. In describing the land and shoreline impacts of the proposed facility regarding the West Vancouver Area, the document states:

This study area includes an approximately 20-square-mile area surrounding the proposed Facility site extending from approximately Fort Vancouver on the east to Sauvie Island on the west and from Vancouver Lake on the north to Hayden Island on the south. **This area could experience long-term changes to the existing or anticipated pattern of land use and development depending on how well the proposed Facility blends in with other current and future land uses in the area.**¹⁴¹

As the DEIS indicates relating to the West Vancouver area, the construction and operation of the proposal could impact existing and anticipated patterns of land use. These long-term changes would limit rather than support land use diversity. The request is for a single use. And, as the DEIS indicates, that use would impact the land use adjoining the facility as well as along the rail lines and on the Columbia River.

¹⁴¹ DEIS, p. 3.10-1, emphasis added.

The proposal does not achieve a balance. The commodity proposed would be transported through the City of Vancouver. It arrives by rail, is placed in storage tanks and then shipped out by ocean-going vessels. A major incident would significantly impact the overall standard of living within the City.

Further, a major incident, depending on its location, could impact several buildings within the area of the railroad which are on either the National Register of Historic Places and/or the Clark County Heritage Register. Examples include the Slocum House Evergreen Hotel, US National Bank Building and the Vancouver National Bank Building. A major fire and/or explosion proximate to these buildings would impact or even destroy these valuable historic and cultural properties.

The DEIS does not adequately address avoiding or mitigating all of the potential significant adverse impacts associated with the facility, rail transportation and/or vessel transportation. The Columbia River is the major river on the west coast. There are several endangered species of fish and other wildlife dependent on this river for survival. The health and future of these species needs to be given careful consideration during the deliberation on whether to recommend approval of the project to the Governor.

As indicated previously, some of the mitigation measures call for studies to determine how to address adverse impacts. Studies are not mitigation measures when they are used to avoid the disclosure of the probable significant adverse impacts of a proposal. Other measures, as in the issue with vehicle delays associated with at-grade rail crossing, recommend various agencies work together to construct new grade-separated crossings. The DEIS does not identify how to fund the mitigation measure, and no time lines are proposed. Certainly, there are no effective mitigation measures addressing a worst-case scenario involving a derailment, spill and explosion in an urban area.

The DEIS has underestimated the probable adverse impacts, particularly relating to release scenarios. There are uncertainties with the mitigation proposed and many measures are not practicable. The most serious impacts cannot be mitigated.

12. The DEIS is Not Adequate to Inform EFSEC Deliberations. To Comply with EFSEC Requirements and SEPA, the Inadequacies Must Be Fixed Before EFSEC Deliberations Commence.

SEPA requires that EFSEC have before it a complete and adequate EIS to inform its decision making.¹⁴² This means the environmental review be adequate to inform deliberations

¹⁴² RCW 43.21C.030(2)(b) and (c); WAC 463-47-110(1)(d) ("The council shall ensure that presently unquantified environmental amenities and values will be given appropriate consideration in decision making along with economic and technical considerations.").

and requires that the final EIS be issued before EFSEC commences deliberations. EFSEC is unique in commencing this process with only a draft EIS. The City is aware of no other state agency or local jurisdiction which commences important decision making processes based on draft SEPA documents. That is likely because SEPA requires that the document be in its "final" form before action is taken.

Until the responsible official issues a ... **final** environmental impact statement, **no action concerning the proposal shall be taken by a governmental agency** that would: (a) **Have an adverse environmental impact**; or (b) **Limit the choice of reasonable alternatives.**¹⁴³

The formal adjudication process itself, not simply the decision made at its culmination, is an action which will result in environmental impacts and limit reasonable alternatives. Here, without a substantially revised document, decision making, argument, and evidence will be based on a deeply flawed document. That in turn results in flawed reasoning, adverse impacts, and a limitation on the alternatives considered.

It is analogous to presenting a picture to a jury of a crime scene in opening argument, through witness testimony, and in closing argument, and then in the jury room, seven days before rendering a verdict, giving the jury a completely different photo of the crime scene, because the picture addressed during trial was out of focus. That approach, which is exactly what is occurring here, taints the entire deliberation process.

SEPA is not about simply having a pile of paper in place seven days prior to a final action,¹⁴⁴ but about fully informing the actual process which results in the final decision. The agency action being taken here is an adjudication process on a project which, if approved, has a very high probability of causing significant adverse impacts for years to come. At this point in the process, the DEIS is a deeply flawed document and nowhere near final. As such, it would be improper to use it to inform the adjudication process. The picture the DEIS now provides is, no different than the original crime scene photo, out of focus. For a document which is to inform such a major decision making process, SEPA requires clarity.

13. Conclusion

The DEIS recognizes that a number of significant unavoidable impacts will occur as a result of the proposed Facility. Those impacts which are moderate to major include:¹⁴⁵

- Moderate impact to air quality near Facility and at Jail Work Center;

¹⁴³ WAC 197-11-070(1), emphasis added.

¹⁴⁴ WAC 197-11-070(2).

¹⁴⁵ DEIS, Table ES-2.

- Moderate to major disruption to rail service due to large earthquake;
- Moderate to major impacts to vessels from tsunami;
- Moderate impacts to wetland vegetation from erosion due to vessel wake and spread of invasive plants;
- Moderate impact from vessel-induced resuspension of contaminated bed sediments causing violations of water quality standards;
- Moderate long-term increases in contamination from small spills and in abundance and distribution of noxious and invasive weeds;
- Moderate increase in wildlife and pedestrian mortality due to increased rail traffic;
- Moderate long-term impacts to wildlife due to increase in barrier effect from rail traffic;
- Moderate to major long-term effect on nearshore fish including salmonids and eulachon species in Lower Columbia due to increased deep-draft vessel traffic;
- Moderate to major long-term changes to tidal wetlands and endangered fish habitat due to 233% increase in deep draft vessel traffic;
- Possible moderate to major impact due to injuries or fatalities caused by rail accident depending on circumstances;
- Moderate noise impacts at Jail Work Center from construction and decommissioning;
- Moderate to major noise impacts at Tidewater Barge offices from construction and decommissioning;
- 15-25% increase in additional delay caused by gate downtime at 200 at-grade crossings within Columbia River Alignment, over 5 minutes per train and 21-41 minutes delay per crossing;
- Moderate to major impact from increased rail congestion causing some rail segments to approach or exceed capacity; and
- Major impact to emergency responders in areas with at-grade crossings due to 15-25% increase in gate downtime.

These moderate to major unavoidable significant impacts from the proposal are a sufficient basis for outright denial. They do not include the impacts from crude oil spills, fires or explosions identified in table ES-3 of the DEIS. And, even with these disclosures, the DEIS frames much of its analysis to downplay probable, significant adverse impacts.

The DEIS fails to accurately address the paramount concern of public safety. The rail risk analysis is inadequate; the emergency response gap analysis is superficial and lacks any true analysis; the proposed mitigation frequently follows a kick-the-can plan of deferring identification of mitigation measures to dates in the future following EFSEC review. This flawed assessment directly conflicts with SEPA's requirement to accurately and fully disclose probable, significant impacts so as to protect the substantive, "inalienable" rights of City citizens to a healthful environment. In its permitting and SEPA lead agency role, the Council and Governor

serve not as mere officials determining whether to issue a non-discretionary permit. Rather, they are charged with determining not only types of energy to be permitted and how to mitigate such facilities, but also the appropriate locations for energy projects.

As the DEIS is presently written, it is of no use to the Council and Governor in meeting this duty and is wholly inadequate to inform their deliberations. The document must be withdrawn and revised to present an accurate assessment of actual proposal risks prior to the Council commencing its deliberations.

While the City comments are focused on SEPA's guarantee to the state's citizens of a healthful environment, the City also incorporates all SEPA comments being submitted by parties to the adjudication raising concerns over DEIS inadequacy.

DATED this 22nd day of January, 2016.

CITY ATTORNEY'S OFFICE
VANCOUVER, WASHINGTON

By: 
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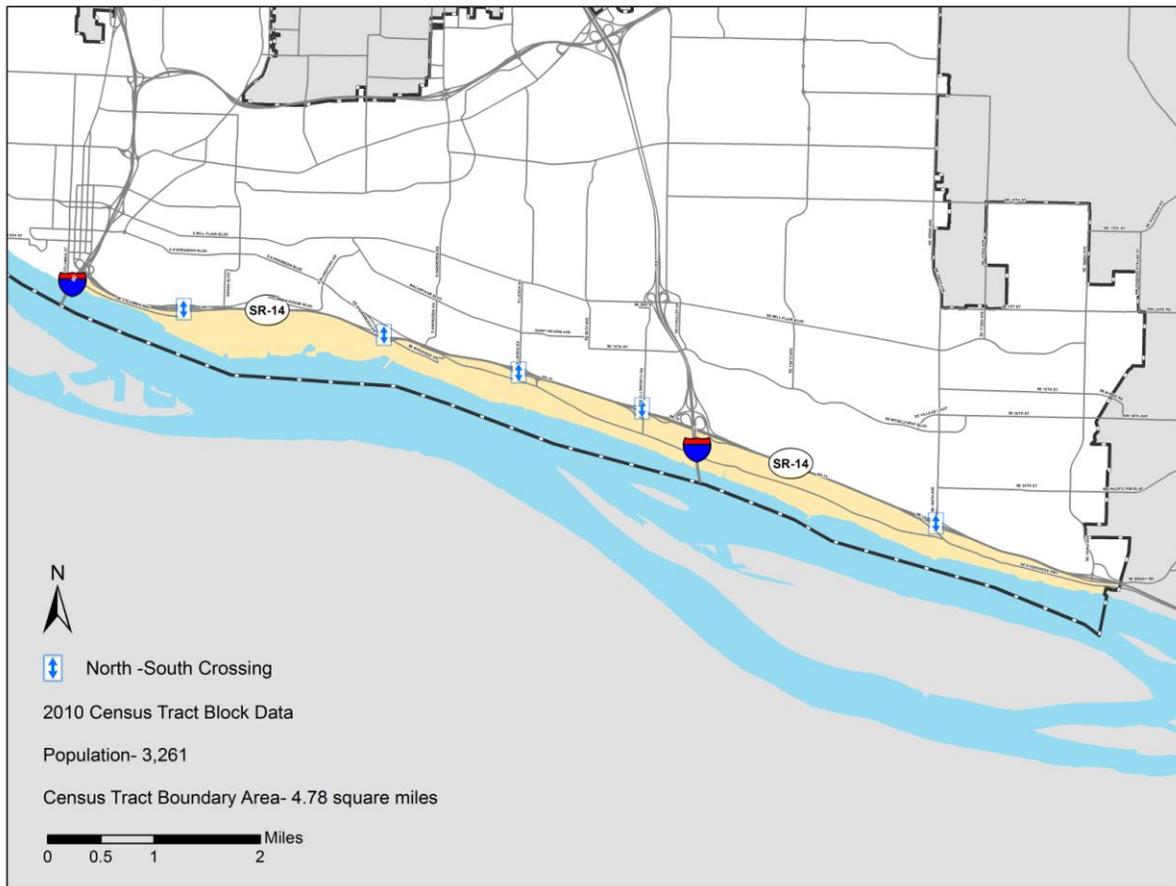
**CITY OF VANCOUVER'S
DRAFT ENVIRONMENTAL IMPACT STATEMENT COMMENTS**

APPENDICES

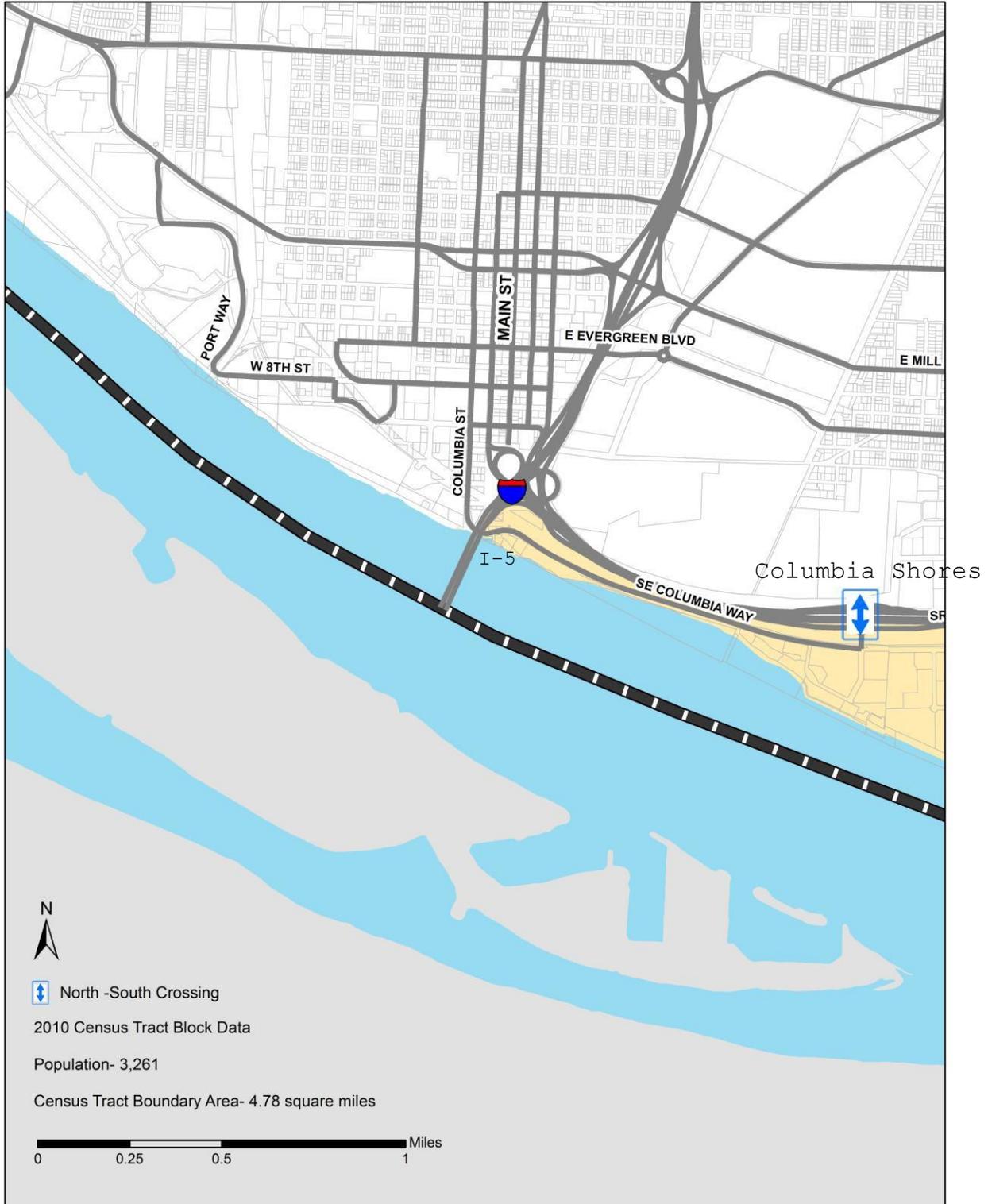
**CITY OF VANCOUVER'S
DRAFT ENVIRONMENTAL IMPACT STATEMENT COMMENTS**

**APPENDIX 1
Census Data South of SR 14**

Appendix 1(a) - Census Data South of SR 14, pg. 1



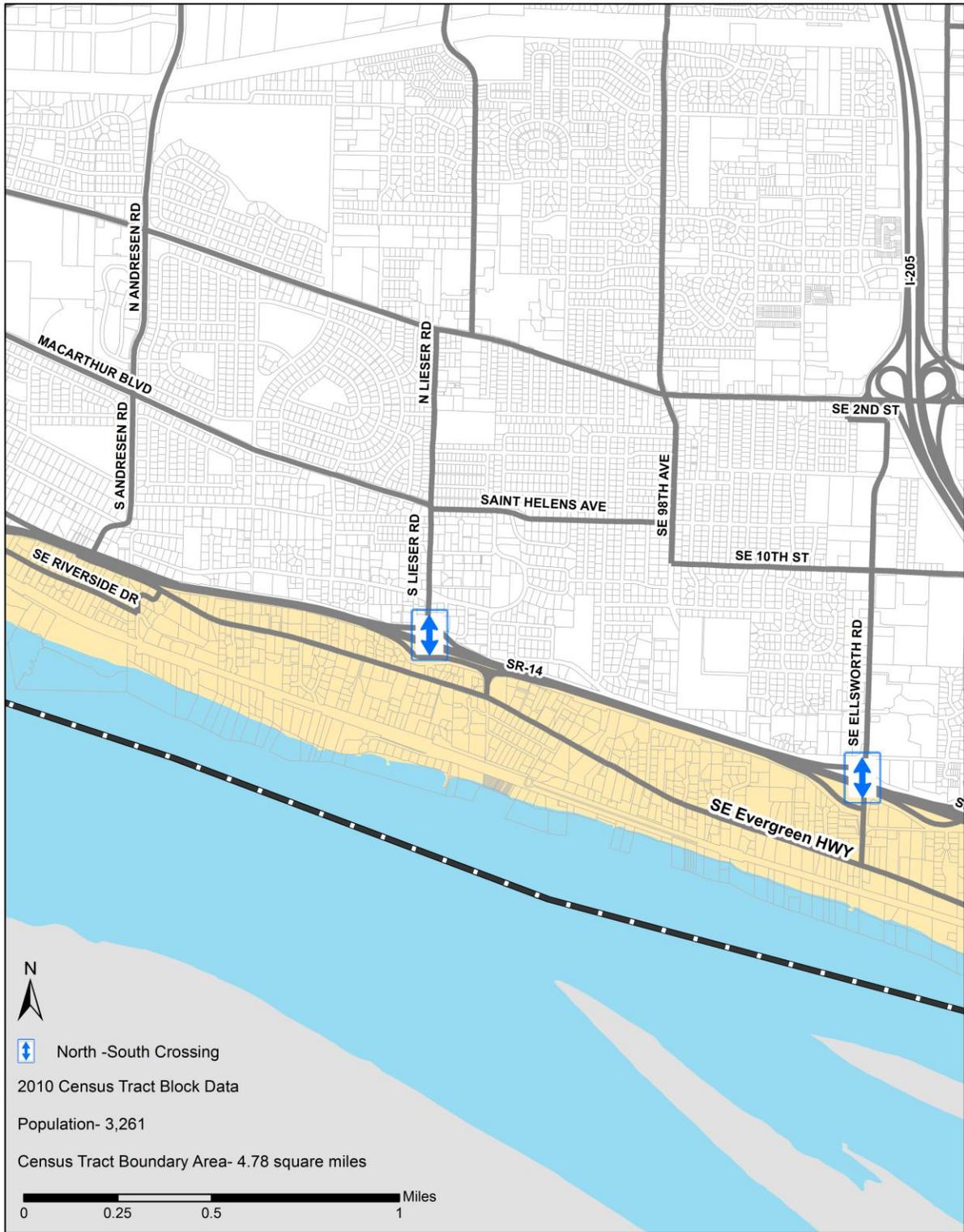
Appendix 1(b) - Census Data South of SR 14, pg. 2



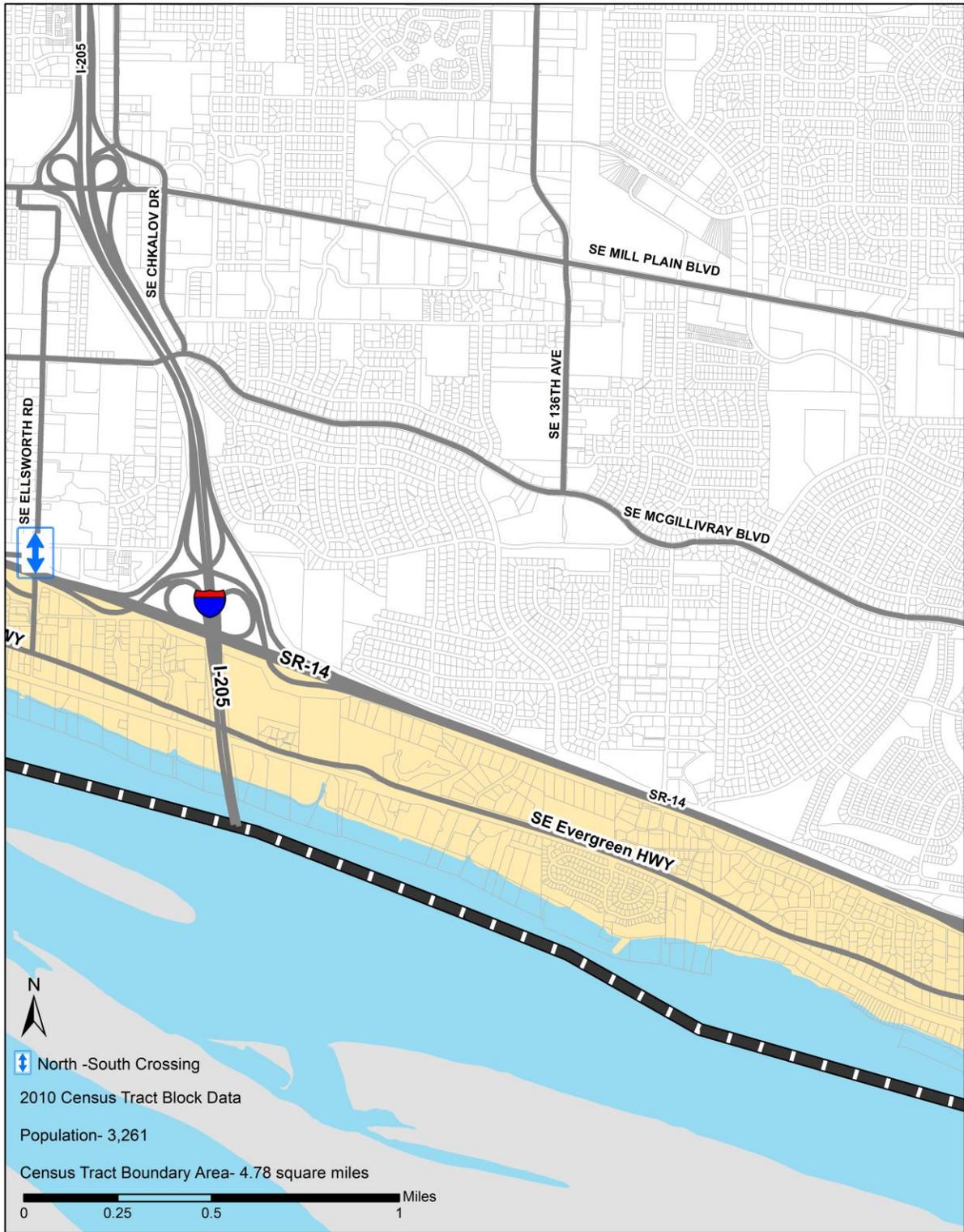
Appendix 1(c) - Census Data South of SR 14, pg. 3



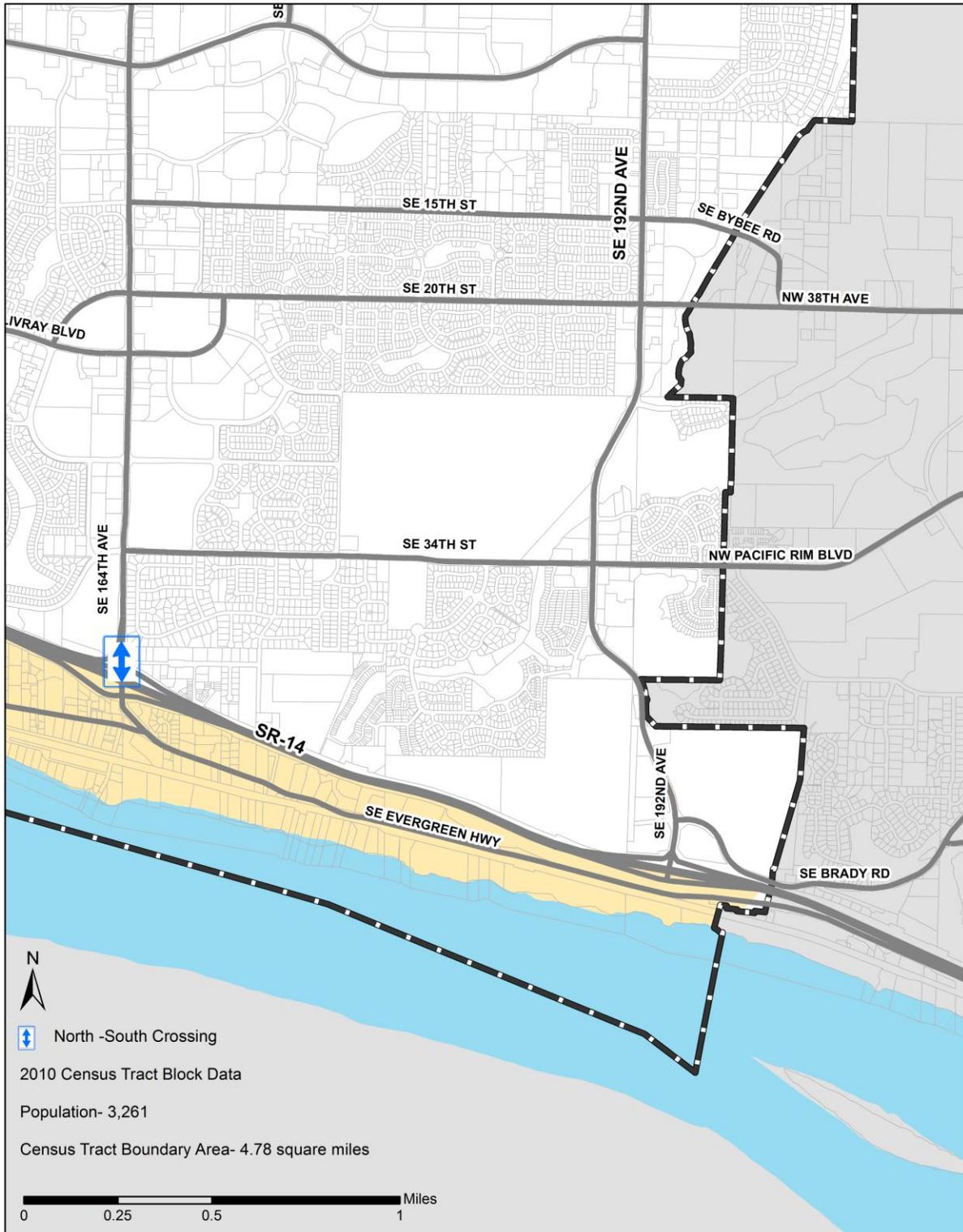
Appendix 1(d) - Census Data South of SR 14, pg. 4



Appendix 1(e) - Census Data South of SR 14, pg. 5



Appendix 1(f) - Census Data South of SR 14, pg. 6



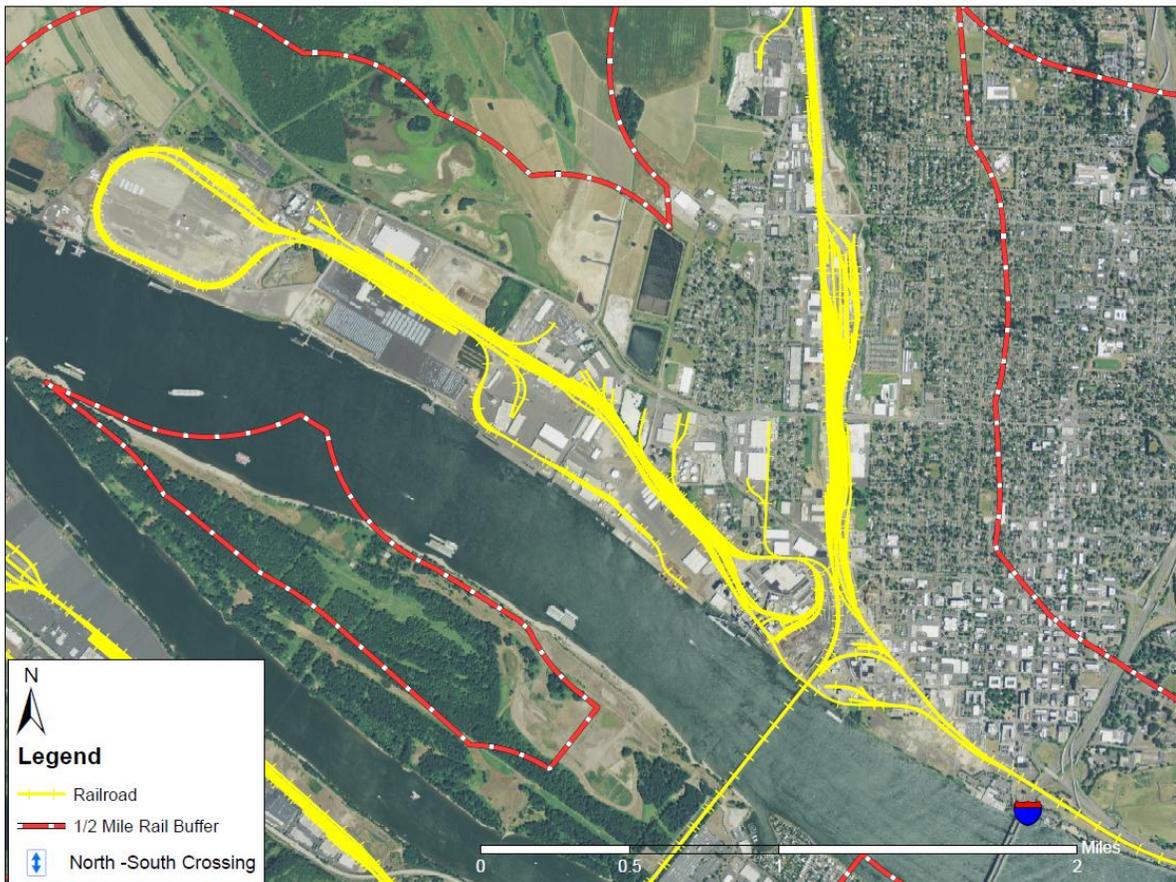
**CITY OF VANCOUVER'S
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APPENDIX 2

Aerial Photos

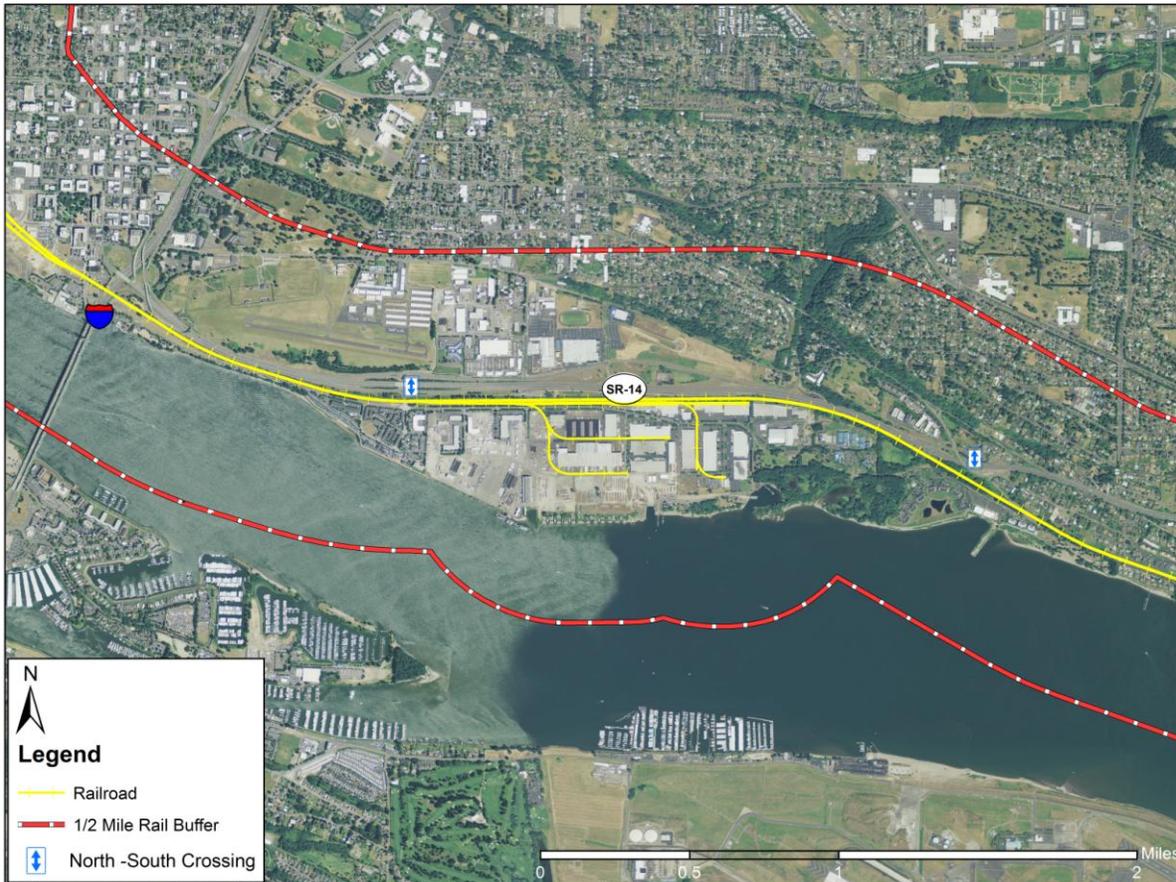
Appendix 2(a) - Photo 1

Aerial View of Rail Buffer Terminal to I-5



Appendix 2(b) - Photo 2

Aerial View of Rail Buffer I-5 to Andresen



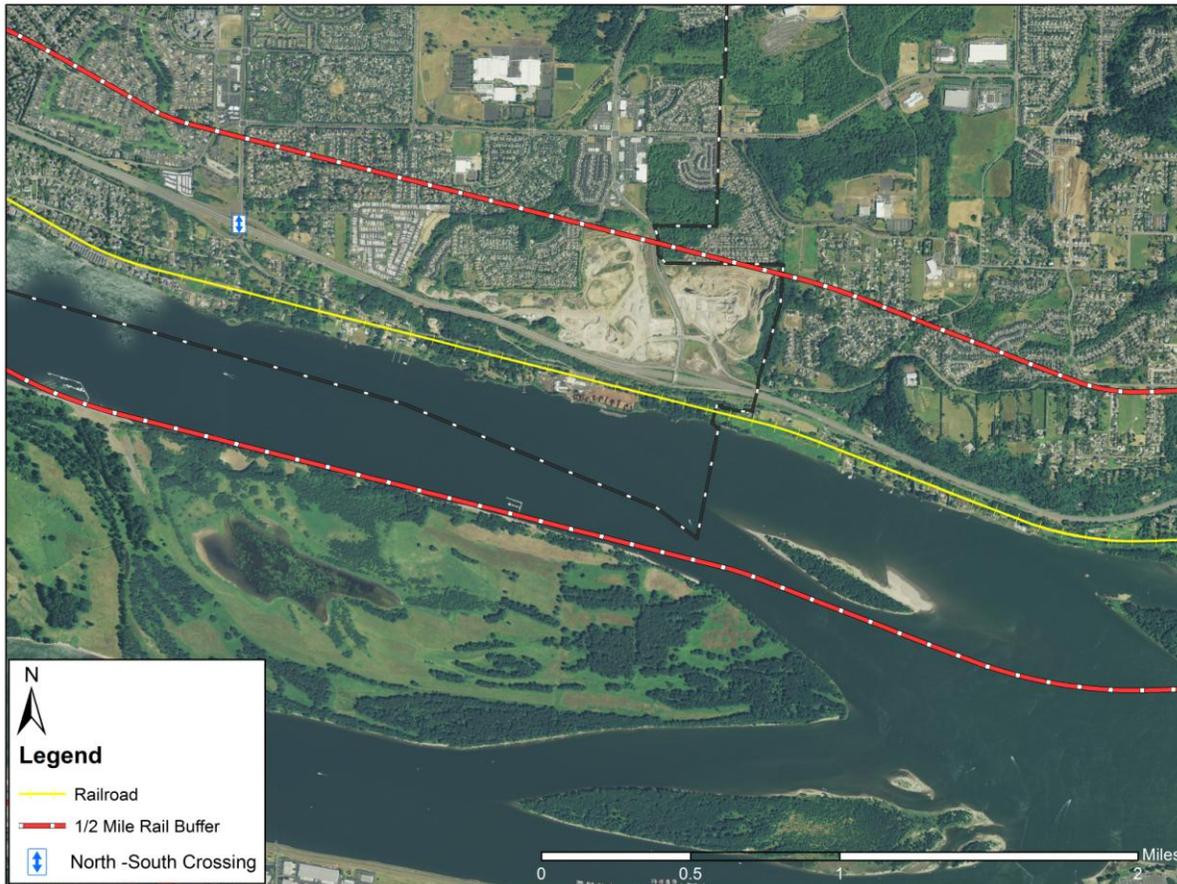
Appendix 2(c) - Photo 3

Aerial View of Rail Buffer Andresen to Rivercrest



Appendix 2(d) - Photo 4

Aerial View of Rail Buffer Rivercrest to City Limit



**CITY OF VANCOUVER'S
DRAFT ENVIRONMENTAL IMPACT STATEMENT
COMMENTS**

APPENDIX 3
Maps of City Neighborhoods

Appendix 3(a) - Map 1

City of Vancouver Boundaries and Location of Fruit Valley Subarea Plan



Appendix 3(b) - Map 2

Vancouver City Center Planning District Boundaries

