BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of: Application No. 2013-01 TESORO SAVAGE, LLC VANCOUVER ENERGY DISTRIBUTION TERMINAL	)	CASE NO. 15-001 COLUMBIA RIVERKEEPER, *ET AL.* FINAL ADJUDICATION BRIEF

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INTRODUCTION

Throughout this hearing, EFSEC has heard from dozens of witnesses called by Tesoro-Savage and project opponents, including Columbia Riverkeeper, Climate Solutions, Friends of the Columbia Gorge, Fruit Valley Neighborhood Association, Sierra Club, Spokane Riverkeeper, Stand (formerly ForestEthics), and Washington Environmental Council (collectively "CRK"). The task is for the Council to issue a recommendation to either permit the terminal, permit the terminal with conditions, or reject the terminal proposal. The Council's recommendation must be made within the bounds of the statutory standard, which requires the Council to "balance the increasing demands for energy facility location and operation in conjunction with the broad interests of the public." RCW 80.50.010. The over-arching premises for the Council are "[t] o preserve and protect the quality of the environment; to enhance the public's opportunity to enjoy the esthetic and recreational benefits of the air, water and land resources; to promote air cleanliness; … to pursue beneficial changes in the environment," and "[t]o provide abundant energy at reasonable cost." RCW 80.50.010(2) and (3). CRK asserts that the evidence, when viewed through this standard, demonstrates that the Tesoro-Savage terminal must be rejected.

There is no need for this project in Washington; the Vancouver Energy Distribution Terminal will not "provide abundant energy at reasonable cost." This project serves only Tesoro-Savage's desire for flexibility and supply to California refineries (two of which are Tesoro's own refineries) and possible export even further afield. An oil transfer operation by definition and design does not create any energy. Economic fear-mongering by Tesoro-Savage aside, there is no oil shortage in Washington or on the Pacific Coast. The decline in Alaska North Slope crude production has been gradual and began 30 years ago; well before this terminal was a glimmer in Tesoro's corporate eye. The homilies of wanting domestic oil from the "home team" or the wildly unsupported notion that the terminal would someday handle bio-fuels, both

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part of Tesoro-Savage's rebuttal presentation, cannot cover for the company's failure to show a practical need for this project. There is no evidence of benefit to Washington or its consumers from this project. Far from being a "bridge to the energy future," this terminal would lock Washington into a dirty-fuels past.

On the issues of environmental and public health risk and harm, what's clearest is that Tesoro-Savage has a large tolerance for risk when that risk is to be borne, at least in part, by others. All the parties agree there is some degree of risk in this project. And all parties agree that an oil spill in the Columbia River could be devastating. We differ in our views of how much risk we are willing to take—how willing we are to roll the dice. The company is willing to take greater risks because it is gambling with house money—and the house here is the people and environment of Washington. Even with math games to make numbers and hazards look smaller or through repeated assurances that standards are sufficient and oil spill response will be adequate, Tesoro-Savage—through its own evidence—paints a picture of a complex project, with multiple moving parts, where an accident could result in an oil spill to the Columbia River that would be harmful if not devastating to the river, the City of Vancouver, the people of the region, and tribal nations who have lived here since time immemorial. Tesoro-Savage is willing to have the people and environment of Washington shoulder risks for what is primarily Tesoro-Savage's economic benefit.

As confirmed in its oral closing argument, not even Tesoro-Savage believes that a recommendation of simple project approval is appropriate. That option, then, is off the table. The second option is a recommendation of approval with certain mandatory mitigation conditions. This is now the option favored by Tesoro-Savage with some apparent limits on what it will accept as mitigation. But no mitigation measures can entirely remove the intrinsic hazards

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presented by this project, and some desirable mitigation measures may be foreclosed due to federal preemption. Moreover, the task to craft mitigation measures that are adequate to address the innumerable and complex risk issues will necessarily involve the Council deeply in the details of design and operation of the project, far beyond the Council's role as regulator and advisor to the Governor.

A recommendation of denial is the only defensible outcome. In this call for denial, CRK joins the other parties allied in opposition to this project, each of whom called witnesses and presented evidence focused on their particular areas of concern. The opposition parties include the statutorily appointed Council for the Environment; at the conclusion of the hearing, Washington Attorney General Robert Ferguson announced that his office, through the Council for the Environment, opposed Tesoro-Savage's application—an powerful statement of opposition uncommon in EFSEC proceedings.

The opposition parties shared their limited resources to present the most complete picture possible of the risks and harms from this proposal, and there is ample evidence in the record to support a recommendation of project denial. EFSEC's statutory duties demand a balancing of risk and harms against need for the project. The evidence and arguments presented during the hearing point to unknowns, project short-cuts, math games, and tolerance of risk levels beyond what this community can bear. And there is no demonstrated need for this project in Washington. Based on all the evidence in the record, and bearing in mind the command to act on behalf of future generations, CRK urges EFSEC to issue a recommendation of denial.

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LEGAL STANDARDS

I. THE LEGISLATURE COMMANDED EFSEC TO BALANCE THE NEED FOR ENERGY IN WASHINGTON AGAINST RISKS AND HARMS TO THE ENVIRONMENT AND THE PUBLIC INTEREST.

The Washington State legislature created EFSEC in recognition of the need to "balance the increasing demands for energy facility location and operation in conjunction with the broad interests of the public." RCW 80.50.010. This balancing of energy needs in the state with the public's right to a clean, healthy, and safe environment is the heart of EFSEC's review of any proposed energy facility. The Council has repeatedly recognized the key role it plays in this balancing exercise, noting that it must determine "whether [the proposed] energy facility at [this] particular site will produce a net benefit after balancing the legislative directive to provide abundant energy at a reasonable cost with the impact to the environment and the broad interests of the public." *Desert Claim Wind Power Project*, EFSEC Order No. 843 at 23 (Nov. 16, 2009); *see also BP Cherry Point Cogeneration Project*, EFSEC Order No. 803 at 12 (Oct. 26, 2004) ("The Council has a comprehensive mandate to balance the need for abundant energy at a reasonable cost with the broad interest of the public."); *Creston Generating Station*, EFSEC Order No. 645 at 51-61 (Dec. 13, 1982) (evaluating the forecasted energy needs and potential deficits in Washington, weighing those needs against alternatives to the project, and concluding it was in the public's interest to supply the energy as no preferable alternative existed).

EFSEC was born out of Washington's 1970s-era conviction that it needed additional sources of energy, that nuclear energy would play a role in that energy growth, and that the state would encounter difficulties when selecting sites for nuclear energy facilities. Joseph L. McCarthy, *Symposium—The Location of Energy-Generating Facilities*: *Introduction—The Evolution of Washington Siting Legislation*, 47 Wash. L. Rev. 1, 2-3 (1971). Indeed, the original

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bill creating EFSEC addressed only nuclear power plants before it was broadened to all thermal power plants due to concerns that the word "nuclear" would alarm the public and recognition that similar environmental and public interest harms plagued coal and oil-fired power plants. *Id.* at 6. EFSEC's creation was premised on the need to select locations for new Washington power plants in an era when public dangers from power plants were at the forefront of citizens' minds.[1]

Today, danger from crude-by-rail shipping has rapidly grabbed the public's attention, with each recent event like the Mosier, Oregon accident and oil spill heightening awareness of this new threat. The evidence in this case demonstrated and highlighted a major difference between the power plant fears fueling EFSEC's creation and the current crude-by-rail risks; the evidence showed that crude-by-rail shipping is not needed to ensure energy security, either in Washington or outside the state.

For this case, under the applicable standard, the Council must (1) determine whether the project would provide energy at reasonable cost to Washington; (2) assess risks and harms from the proposed project; and (3) determine whether, on balance, the project is in the public interest.

A. EFSEC's Balance Must Assess the Need for the Proposed Project.

While the Council must "recognize the pressing need for increased energy facilities," RCW 80.50.010; WAC 463-14-020, the balancing inquiry demanded by the statute requires the Council to look at the issue of need for a particular facility; that is, whether the facility at this site would provide Washington with energy at a reasonable cost. WAC 463-14-020(3). The Council cannot simply assume a proposed project will provide the state with energy. *See Chehalis Generation Facility*, EFSEC Order No. 688 at 3-4 (Aug. 4, 1995) (rejecting an argument by the

[1] EFSEC has undergone changes throughout its existence with regards to its scope and, to a lesser degree, its methods, but the Council's governing statute "has undergone little substantive change." Margaret H. Hornbaker & William H. Rodgers, Jr., *The Evolution of the Energy Facility Site Evaluation Council*, 7 Hastings W.N.W. J. Envtl. L. & Pol'y 253, 268 (2001).

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applicant that EFSEC could not consider whether Washington had a need for the power plant's energy, and finding that "the Council must consider need for additional power in order to balance properly the need for a project with the broad public interest.").

B. EFSEC's Governing Statute and Regulations Mandate Broad Review of Environmental, Public Health, Recreational, Esthetic, Cultural, and Community Harms and Risks.

In general, the Energy Facilities Site Locations Act states that any actions taken by EFSEC must be able "to preserve and protect the quality of the environment; to enhance the public's opportunity to enjoy the esthetic and recreational benefits of the air, water and land resources; to promote air cleanliness; and to pursue beneficial changes in the environment." RCW 80.50.010(2). This broad charge calls on the Council to fully account for all harms and risks to the environment and human health.

To meet these overarching environmental and public interest protection mandates, EFSEC must consider specific environmental impacts, such as impacts to land, water, and air, as well as socio-economic impacts. WAC 463-30-300(5)-(8). *See also* WAC 463-60-332, -342(5), -362(3), -535(4)(e) (requiring consideration of impacts on aesthetics, habitat, wildlife, and socioeconomic factors). The Council also has an "overriding policy … to avoid or mitigate adverse environmental impacts which may result from the council's decisions." WAC 463-47-110(1)(a). Recognizing that proposed energy facilities will be permitted for decades of operation, the Council must act as a trustee of the environment not just for current Washingtonians, but also for future generations:

> The council shall use all practicable means, consistent with other considerations of state policy, to improve and coordinate plans, functions, programs, and resources to the end that the state and its citizens may:
>
> (i) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
> (ii) Assure for all people of Washington safe, healthful, productive, and

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aesthetically and culturally pleasing surroundings;

(iii) Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(iv) Preserve important historic, cultural, and natural aspects of our national heritage;

(v) Maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(vi) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(vii) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

WAC 463-47-110(1)(b). The Council must also "ensure that presently unquantified environmental amenities and values will be given appropriate consideration in decision-making along with economic and technical considerations," WAC 463-47-110(1)(d), as well as "protect state and local governmental or community interests affected by the construction or operation of the energy facility." WAC 463-64-020.

C. EFSEC Must Balance Any Need for the Project with Environmental Impacts as a Whole and Determine Whether the Proposed Project is in the Public Interest.

Finally, if EFSEC determines there is an energy need for the proposed project, and if EFSEC finds environmental and public health harms that would be caused by the project, EFSEC must weigh the need against the impacts it has identified and determine whether the proposed project is in the public interest. The Washington Supreme Court has characterized this balancing as a question of whether there is a "net benefit" to the public. *Friends of the Columbia Gorge v. EFSEC*, 178 Wn.2d 320, 330 (2013). Protection of the public's interest requires the Council to consider risks and harms to the entire state; it also requires a strict look at allowing a private project to impact the public interest, for "[p]rivate markets are not a proper forum for determination of the public interest." *Northern Tier Pipeline Company*, EFSEC Order No. 636 (Jan. 27, 1982) at 484.

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Tesoro-Savage's closing argument that compliance with a narrow part of EFSEC's governing regulations is sufficient to warrant approval of its application, without any discretionary weighing of impacts, is simply incorrect as a matter of law. Tr. Vol. 22 at 5104, lines 5-8. Although Tesoro-Savage's application must satisfy procedural requirements in WAC 463-60, and must also satisfy construction and operation standards in WAC 463-62, these requirements are prerequisites to EFSEC's ultimate discretionary balancing of the project's contribution to Washington's energy needs with its environmental, public health, and community impacts. The Council affirmed this position in 2001, in its first order on the Sumas Energy 2 Generation Facility, where the Council recommended denial of the proposal due to lack of demonstrated need and the impact of new pollutants on air quality:

> Although the Council concludes that the project meets federal and state air quality standards, this is the beginning, not the end, of our inquiry. Compliance with promulgated numerical air quality standards is a minimum requirement for allowing a power generating facility to be constructed in this state. The Council has a much broader mandate than simply deciding whether minimum standards are met; rather, the Council is charged with protecting the people's health and welfare and with siting power plants only where minimal adverse effects on the environment can be achieved.

Sumas Energy 2 Generation Facility, EFSEC Order No. 754 at 22 (Feb. 16, 2001).[2]

If fulfillment of the prerequisites in WAC 463-62 were interpreted to be sufficient for project approval, the balancing requirement in RCW 80.50.010 and WAC 463-14-020 would be rendered superfluous. WAC 463-14-020 requires that EFSEC's application decision be based on

[2] In *Sumas Energy 2*, the Council "determined, upon careful consideration of the state's need for energy at a reasonable cost and the need to minimize environmental impacts, that the environmental costs outweigh the energy benefits." Order No. 754 at 2. Sumas Energy 2 subsequently submitted a significantly revised application, which included improvements in the energy benefit for the region and offsets for its air pollution and greenhouse gas emissions. Order No. 768 (May 24, 2002). The Council recommended approval of the second revised application, but necessary Canadian permits were denied, and the site certificate agreement was terminated. Resolution No. 316 (May 9, 2006).

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the "policies and premises" in RCW 80.50.010 (the statutory mandate to "balance the increasing demands for energy facility location and operation in conjunction with the broad interests of the public"). *See Sumas Energy 2,* EFSEC Order No. 754 at 22 ("It is the totality of negative impacts and dangers that has led the Council to recommend denial.").

In its pre-hearing brief, Tesoro-Savage attempted a different regulatory framing. Tesoro-Savage argued that any balancing EFSEC attempts is limited to subject areas that are not covered by the construction and operations requirements in WAC 463-62. Tesoro-Savage reasoned that because WAC 463-62 provides that "[c]ompliance with the standards within this chapter shall satisfy, in their respective subject areas, the requirements for issuance of a site certificate for construction and operation of energy facilities," EFSEC's requisite balancing is limited to topics that are not covered in WAC 463-62. Tesoro-Savage Pre-Hearing Brief (June 20, 2016) at 23. Such a severely constrained and twisted interpretation of this regulation cannot be squared with EFSEC's regulatory obligation in WAC 463-14-020 to ensure "minimal adverse effects on the environment, ecology of the land and its wildlife, and the ecology of state waters and their aquatic life" and to "[e]nhanc[e] the public's opportunity to enjoy the esthetic and recreational benefits of the air, water and land resources" pursuant to RCW 80.50.010's balancing mandate. WAC 463-62 addresses major environmental areas including "air quality," "water quality," and "fish and wildlife." If those areas are off the table for the balancing equation, EFSEC would be unable to consider the vast majority of potential impacts in its environmental balancing. A regulatory instruction to minimize impacts on wildlife, water, air, and land resources, *see* WAC 463-14-020, simply cannot be fulfilled if EFSEC may not consider and weigh impacts to wildlife, fish, water quality, and air.

Nor does mere compliance with WAC 463-62 substitute for EFSEC's discretionary

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balancing in these areas. Tesoro-Savage Pre-Hearing Brief at 22 ("For each of the identified subject areas, these explicit standards ensure the proper balance between the need for new energy production and environmental and societal considerations."). Again, such an interpretation of the regulations would completely swallow EFSEC's overarching discretionary duty to make a project recommendation based on a weighing of energy needs and public impacts. The Council has explicitly rejected this argument; EFSEC is not a box-checking agency.

ARGUMENT

I. TESORO-SAVAGE HAS FAILED TO SHOW A NEED FOR THE TERMINAL.

Tesoro-Savage has failed to show that there is a need for this project in Washington. RCW 80.50.010; WAC 463-14-020(3). EFSEC must balance the need for the project's energy against its environmental harms and risks to determine the broad public interest; yet here, that regulatory balancing is completely lopsided—there is nothing on the need side of the scale against which EFSEC can weigh the undisputed harms, risks, and costs this terminal would bring. The terminal would serve as a conduit[3] for oil to refineries on the Pacific coast, mostly if not entirely in California, but the citizens of Washington would bear the risk of oil spills in their waterways, harmful air emissions, and a variety of severe public health impacts, including the risk of fires and explosions.

Even if Tesoro-Savage could prove it has minimized the environmental and public risks to the fullest extent possible, more fundamentally, this project does not serve EFSEC's basic purpose of ensuring Washington's energy needs are met. EFSEC's purpose is not to site national energy outlets, and the Council's duty to ensure a protected environment and public while providing for Washington's energy needs simply cannot be squared with such a project.

[3] A conduit energy facility is a "facility which receives crude that is produced in another jurisdiction, handles the crude and then sends it on to be refined…in a jurisdiction outside of this jurisdiction." Tr. Vol. 14 at 3244, lines 13-16.

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A. EFSEC's *Northern Tier* and *Sumas Energy 2* Denials

There is EFSEC precedent recommending denial of an energy conduit terminal with remarkable parallels to the application before the Council today. Over thirty years ago, the Council recommended a denial of an application to build a crude-oil pipeline (as here, an energy conduit facility as opposed to an energy production facility). *Northern Tier Pipeline Company*, EFSEC Order No. 636 (Jan. 27, 1982). The Council recommended denial of the proposed pipeline from the Washington coast to Minnesota because not only did it carry grave environmental and safety risks, but it also would not serve Washington's energy needs.

EFSEC's recommendation explained that the three alleged benefits to Washington citizens from the pipeline failed to stand up to scrutiny. On the issues of jobs and tax revenues created, the Council found that "[t]hese economic benefits, while valuable, would be limited in amount and over time, in comparison to the economic resources placed at risk through construction and operation of the proposed facility." *Id.* at 476. The Council rejected the second projected benefit of reducing oil spills in Puget Sound because evidence showed that an oil spill at Port Angeles would likely travel east into the Sound, hook-up facilities to the Puget Sound refineries never materialized, and the applicant did not present adequate information about underwater spill risks. *Id.* at 476-77. The third supposed benefit of sending oil to Eastern Washington also collapsed, as no oil refinery in that part of the state was proposed and "no supply-induced shortages of petroleum in eastern Washington have been shown." *Id.* at 477.

In *Sumas Energy 2*, EFSEC reviewed an application for a natural-gas electric generation facility in Sumas, Washington near the Canadian border. While stating that it was "acutely aware of the region's need for energy and capacity," the Council recommended denial because "the environmental costs outweigh the energy benefits" and the applicant had failed to show "that the plant would produce direct energy or economic benefits to consumers or lead to lower

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energy costs in Washington or in the region." EFSEC Order No. 754 (Feb. 16, 2001) at 1-2.

Recommending denial of the gas-burning energy plant, the Council highlighted that current supply and demand was not the touchstone for determining need. "The need and consistency issue poses a broader question of whether an energy facility at a particular site will produce a net benefit after balancing the availability and costs of energy to consumers and the impact on the environment." *Id.* at 12. The Council continued its analysis of energy need by focusing on the balance demanded by the statute. "The balancing of the state's need for energy at a reasonable cost and the need to minimize environmental impacts need not be a strict cost accounting. However, inherent in this balancing process is the expectation that an applicant can demonstrate a commitment to provide energy at a reasonable cost that will either directly or indirectly benefit consumers." *Id.* at 14.

In evaluating need, the Council focused on the impacts and benefits to the state and the specific location proposed for the project.

> Although merchant plants [a plant that sells electricity on the open market to the highest bidder] may eventually be the norm in this country, they must be built in such a way that the people in a region do not bear the costs of environmental degradation and the concomitant health risks without receiving the benefits of the generated power. The citizens of those areas of the country that are choosing not to site power generating plants locally, because of their negative environmental impacts, must not be allowed to impose on the people of the locale of the site the external and inevitable pollution costs.

Id. at 14. The question of benefit in *Sumas Energy 2* was complicated because Washington consumers participate in an electricity market that extends throughout the western United States and Canada, and some of Sumas Energy's power could, in fact, go to Washington consumers.

Ultimately, the Council held that the general possibility of benefit, as opposed to specific information, did not support an unqualified determination of need. "If an Applicant has shown no assured energy benefit to the state, then it is inequitable that the people of that state receive

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damage to their air quality and suffer the other negative environmental impacts." *Id.* at 15.

As it did in *Northern Tier* and *Sumas Energy 2*, EFSEC must consider the need for additional energy and whether a proposed project will even deliver energy to the state. "Implicit in the charge by the legislature to the Council to balance demand against the public interest, and the legislative grant of power to the Council to recommend a position of acceptance or rejection of an application, is the recognition that the demand for a particular facility, while it exists, may not be great enough to outweigh the facility's net detrimental effects on the broad interests of the public." *Northern Tier*, EFSEC Order No. 636 at 477.

B. The Proposed Terminal Will Not Provide Washington with Abundant Energy at Reasonable Cost.

> *I'm a California resident. I would certainly welcome any contributions that Washington wants to provide to California, but I think if it was a public policy proposal … to tax Washington residents, send the money to California because some of the money will come back to Washington, I don't think that would receive serious consideration. So this facility is sited in Washington, it's being reviewed by a Washington agency, so the focus is on the Washington economy and the Washington public interest.*

Mr. Ian Goodman, Tr. Vol. 14 at 3250.

> *In my testimony we define economic need for the [terminal] as the economic need for the facility to supply Washington energy consumers with abundant energy at reasonable costs. There is no economic need for the [terminal] to supply energy to Washington.*

Goodman, Tr. Vol. 14 at 3243.

The evidence at the hearing demonstrated that the terminal will not serve the energy needs of Washington—in fact, evidence of a benefit or need in the state, served by this terminal, was curiously absent. Instead, the testimony showed that the proposed terminal is a conduit energy logistics facility that would move crude oil produced outside of Washington through Washington for delivery to refineries primarily outside Washington. As such, the proposed terminal does not, and cannot, meet the statutory standard of supplying Washington energy

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consumers with abundant energy at reasonable cost. RCW 80.50.010; WAC 463-14-020.

Economic energy consultant Ian Goodman offered extensive testimony about the lack of an economic need for the proposed project's energy. Written Testimony of Ian Goodman (May 13, 2016). Mr. Goodman testified to his more than 35 years of experience in the analysis of energy systems, with a particular focus on energy economics and regulation. Goodman Test. ¶¶1-15; Tr. Vol. 14 at 3237-3238; Ex5589 (Goodman resume); Ex5590 (co-author Rowan resume). He explained why Washington has no need for the energy ultimately produced by the oil that would pass through the facility, and why the facility is also not needed to replace declining crude production from Alaska's North Slope and California or to offset foreign imports. As Mr. Goodman discussed, the proposed facility would be a conduit for oil produced elsewhere, destined primarily (if not entirely) for refineries outside of Washington. Furthermore, Washington's energy needs are already being more than fully satisfied. Mr. Goodman also addressed the lack of benefit for Washington consumers and Washington's public interest.

1. Washington's existing energy facilities meet its energy needs.

Washington is home to five oil refineries that amply supply Washington and neighboring states with energy. Goodman Test. ¶36. With a combined refining capacity of 657 thousand barrels per day, the output of Washington's refineries exceed in-state consumption. *Id.* ¶37; Ex5578 at 29 (Washington Department of Commerce, Petroleum Supply and Use in Washington State (Oct. 2013)); Tr. Vol. 14 at 3243, lines 20-24. "The capacity of Washington refineries has not significantly changed in recent years, and it is not expected to change in the future. Likewise, the overall crude supply processed by Washington refineries has remained steady at about 560 kbpd, and it is not expected to change in the future." Goodman Test. ¶40. Existing "refineries—which are operating at capacity and have continued to operate at capacity under a very wide variety of circumstances and are expected to continue operating at full capacity in the

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future—are already helping to supply Washington with sufficient energy supply, as well as sending extensive energy supplies to neighboring states." Tr. Vol. 14 at 3244, lines 1-7.

Washington's refineries currently receive different types of crude oil from four sources via seven routes. Goodman Test. ¶43; Tr. Vol. 14 at 3244, lines 22-25 to 3245, lines 1-19. Crude oil continues to be delivered from the Alaska North Slope, although that area is experiencing a long, slow production decline. Goodman Test. ¶46; Roach Rebuttal, Tr. Vol. 21 at 5049, lines 19-21. The four northern Washington refineries receive Canadian crude oil directly by pipeline. Goodman Test. ¶47. Four of five Washington refineries (Tesoro, British Petroleum, Phillips 66, and U.S. Oil) have built facilities to directly receive crude oil by rail, *id.* ¶¶48, 50-52, and Washington refineries receive a small amount of foreign, non-Canadian oil. *Id.* ¶49. "With the capability to access and process a range of crudes, Washington refineries have continued to operate at full capacity under a wide range of evolving market conditions." *Id.* ¶44.

Washington is a net exporter of its refinery output; Washington refineries are well-supplied with a variety of crude oils; and Washington's energy needs are met with existing facilities. As Mr. Goodman summarized, "Washington is already doing its 'share' and more to meet state and regional energy needs in regard to oil refining and logistics." *Id.* ¶¶55-58.

2. Little, if any, of the terminal's crude will go to refineries in Washington; the most likely destination for the oil is California.

As Tesoro-Savage witness Mr. Brad Roach admitted, Tesoro-Savage has no contracts for using the proposed terminal except for a 60,000 barrel per day commitment from Tesoro, and that crude would go where the "optimizers would choose for the placement of that barrel." Tr. Vol. 2 at 207, lines 19-23; at 208, lines 10-13; Goodman Test. ¶¶97-99. As Mr. Goodman explained, potential destinations for the crude oil are most likely California and Asia. *Id.* ¶¶105-107, 115, 119-124. Tr. Vol. 14 at 3248, lines 23-25 ("the only US Market that is sizeable and

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feasible for crude from the [terminal] is California").

The California refinery crude oil market is about three times that of Washington. Goodman Test. ¶143. Yet, California has built few, if any, crude-by-rail facilities due to wide-spread public opposition, complex environmental regulations, and the fact that sites and rail routes for crude-by-rail facilities all entail high proximity to people, water, and economic activity. Goodman Test. ¶146; Tr. Vol. 14 at 3250, lines 15-25 to 3251, lines 1-23. "California has been highly resistant to hosting CBR facilities. As a result, the [terminal] could also become a Plan B for California refineries, which will most directly benefit from the facility. So in effect, Tesoro-Savage is asking EFSEC permission for Washington to host a conduit energy logistics facility because other jurisdictions, which produce and consume the energy (notably Canada and California), are resistant to hosting the associated energy logistics." Goodman Test. ¶¶123-24.

In this regard, Council Member Moss asked Mr. Goodman, "what's the angle? … Is the angle here that this terminal would enable the growth into California markets for Bakken crude?" Tr. Vol. 14 at 3308, line 23; at 3309, lines 3-5. And Mr. Goodman's response was, basically, yes:

> So definitely one of the angles of this project is because California has been reluctant and resistant to develop crude-by-rail terminals, instead you put the crude-by-rail terminal in Washington and then you bring the crude in by ship to California refineries which are already set up with those logistics.

Tr. Vol. 14 at 3310, lines 1-7; at 3310, lines 19-21 ("So—Tesoro is interested in setting up a system where it has substantial control of the logistics all the way from North Dakota to Los Angeles."). And indeed, Mr. Roach echoed this position in his rebuttal testimony, when answering a question from Council Member Rossman about why build an oil terminal here, noting that "if we … had the ability to execute a project in California, it may be attractive." Tr. Vol. 21 at 5028, line 25 to 5029, lines 1-2. Mr. Goodman also explained how bringing in

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Canadian crude oil and exporting crude oil overseas could also be angles for the terminal. Tr. Vol. 14 at 3311, lines 5-25 to 3312, lines 1-9; at 3312, lines 10-18.[4]

It is not this Council's place to judge a regional or national need for crude oil; the focus under the Act is appropriately Washington. As the Council found in *Northern Tier*, "[w]hile the Council has attempted to inform itself on the broad question of national need for crude oil transshipment facilities, it is neither possible nor appropriate for the Council as a state agency to make a definitive determination on the national need for the facility proposed by the applicant." *Northern Tier,* EFSEC Order No. 636 at 475.

3. The proposed oil transfer terminal is not in Washington's public interest.

Simply put, the Tesoro-Savage terminal is not in Washington's public interest due to the great imbalance of costs and risks versus potential benefits. Goodman Test. ¶¶136-38. As the Council noted in *Northern Tier*, "[p]rotecting the public's interest may outweigh permitting a particular proposed facility. The Council is not limited to mitigation measures in meeting the public's legitimate concerns. The determination of whether a facility of this kind should be built and placed in operation cannot be left to the financial marketplace; private markets are not a proper forum for determination of the public interest." *Northern Tier,* EFSEC Order No. 636 at 483-84.

a. The terminal's economic benefits are small while its economic costs and risks are big.

As Mr. Goodman explained with the examples of other conduit energy facilities, Goodman Test. ¶¶185-204, the economic benefits of such projects are small[5] for the hosting

[4] California will continue to have enough crude even without this terminal. "It is possible that the Vancouver terminal will supply crude to California. It is unlikely that will have any significant impact on the economic performance of California." Tr. Vol. 14 at 3249, lines 22-25.
[5] Mr. Goodman critiqued Mr. Todd Schatzki's presentation of economic benefits as well. Tr. Vol. 14 at 3267-70.

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jurisdiction, yet the costs and risk are large.[6] This seems to be especially true where a location, like Vancouver, is essentially taking the place of an area that is reluctant to host such terminals and their attendant risks. *Id.* ¶221; *Sumas Energy 2*, EFSEC Order No. 754 at 14 ("The citizens of those areas of the country that are choosing not to site power generating plants locally, because of their negative environmental impacts, must not be allowed to impose on the people of the locale of the site the external and inevitable pollution costs."). Washington already has a large concentration of oil-related energy facilities, *id.* ¶222, and increased transportation of crude oil leads directly to increased oil spill risk, especially risk to water bodies. *Id.* ¶¶223-25.

> And again, this question of uneven distribution of risk was addressed in *Northern Tier*:
>
> Should operation or construction of the project bring about liability claims or other events requiring state participation, the State will bear the attendant financial burdens to the extent that the project is not adequately insured or bonded.

Northern Tier, EFSEC Order No. 636 at 16. During cross-examination, counsel for Tesoro-Savage posed hypotheticals to Mr. Goodman in an attempt to argue that Vancouver would benefit from this project because oil trains were already passing through and there would be more economic activity if they stopped at the terminal. Tr. Vol. 14 at 3289, lines 4-18; at 3296-99. What became clear through re-direct and Council questions was that the hypothetical presented a false choice—the number of trains through Vancouver will increase if the terminal is built. Tr. Vol. 14 at 3325-28. Moreover, the terminal introduces river and aquatic risks that would not otherwise exist and crude-by-rail in general is steeply declining, indicating that fewer, not more, oil trains should be expected through the city. *Id.* at 3300-02 (identifying marine risks,

[6] The Council in *Northern Tier* noted that "economic benefits, while valuable, would be limited in amount and over time, in comparison to the economic resources placed at risk through construction and operation of the proposed facility." EFSEC Order No. 636 at 476.

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as well as discussing crude-by-rail transportation as a rapidly declining activity).[7]

b. The terminal will not provide a benefit to Washington consumers.

Mr. Goodman also explored the relationship between this terminal, crude oil prices, and the price paid by Washington consumers for refined product, that is, the price at the pump. While noting that consumer price is dependent on many variables, Mr. Goodman concluded that since the terminal was unlikely to provide substantial crude supplies to the Washington refineries, "it is unlikely to have a significant impact on refined products pricing in Washington." Tr. Vol. 14 at 3262, lines 10-14; at 3334, lines 8-10. Indeed, as Eastern Washington gets almost all of its refined products from the east (from PADD 4), consumers there would see essentially no impact. Tr. Vol. 14 at 3261, lines 20-23.

c. The terminal's benefit to Tesoro-Savage does not satisfy the broad public interest.

What was clear from the testimony, in terms of benefit, is that Tesoro-Savage believes it will benefit from this terminal. Tesoro-Savage's witness Mr. Brad Roach explained on the first day of the hearing that Tesoro-Savage proposed this terminal because of cost savings and flexibility. Tr. Vol. 2 at 166-67. *See also* Roach Rebuttal, Tr. Vol. 21 at 4992-94 (explaining Tesoro's operation of its four refineries as a system and how this terminal would help its system). As Mr. Goodman explained, using Ex5591 (a graph of crude-by-rail data from the U.S. Energy Information Association through April 2016), cost and market fundamentals can be boiled down to the cost of supply:

> Put simply and bluntly, one of the ways you make money in the refining industry is by having cheaper crude supply than your competitors, because you can still sell your refined products at the price that's based on the high—you know, the cost of the overall supply. So if you can get cheaper crude relative to your

[7] Impacts from an oil spill can go well beyond damage to and clean-up of natural resources, including economic harm to the good name and reputation (brand) of a city, town, or place. Tr. Vol. 14 at 3322-24.

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competitors, you can make money.

Tr. Vol. 14 at 3272, lines 5-11.

At the risk of repetition, again, *Northern Tier* addressed a similar situation, where a proposed project would benefit the company, but not the state or consumers:

> To the extent that Northern Tier would be able to offer a competitive tariff for transportation charges, monetary benefits realized from transportation price savings would flow largely to producers of petroleum rather than to consumers of petroleum products. Producers normally charge a delivered price for petroleum sold and retain the balance of that price, after subtraction of transportation and other expenses.

EFSEC Order 636 at 13.

Indeed, it is not even clear that there will be benefits to refiners other than Tesoro, as most refiners would prefer to receive oil directly to their refineries, not through a middle-man terminal. Tr. Vol. 14 at 3306, lines 11-14 ("it would be both lower cost and preferred by refiners to bring crude trains directly to an unloading facility at the refinery"); *id.* at 3306, lines 24-25 to 3307, lines 1-6. As the oil market continues to change, and as shipping crude oil by rail becomes less common, *see* Ex0375, showing a 22% decline in national crude-by-rail trains in the last year, even Tesoro's need looks less and less plausible.

C. Mr. Roach's Initial and Rebuttal Testimony Highlighted the Importance of the Terminal To Tesoro, But Not To the Broader Public Interest.

Mr. Brad Roach submitted written testimony, testified as the very first witness of the hearing, and testified in rebuttal on the last day of witness appearances at the hearing. His testimony initially focused on benefit to Tesoro-Savage, as well as the fact that California refinery needs drive the entire oil picture of PADD 5, and his own calculations. Tr. Vol. 2 at 173; at 206, lines 23-25 to 207, lines 1-4 ("We—with California—not to diminish Washington at all or any other states in the PADD, when California is two-thirds of the PADD, typically their projection, and as is indicative of the economic activity of the rest of the PADD and the

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interrelated nature of the PADD 5 economy, we tend to apply that type of thing across the rest of the PADD in our—in the models that we use."). Tr. Vol. 2 at 200, line 18-19 (Washington consumes 10% of total amount of fuel produced by west coast refineries).

The graphs displayed during Mr. Roach's oral testimony actually showed remarkably consistent oil stock levels in PADD 5 over the last 10 years, Ex0271, and a Washington energy use graph showed a decline in energy use in the state. Ex0131. Mr. Roach also admitted that this project was not going to be an "overriding factor" that determines consumer prices at the gasoline pump. Tr. Vol. 2 at 196, lines 5-16.

Mr. Roach's rebuttal testimony put greater emphasis on the decline in Alaska North Slope crude. Mr. Goodman had testified that "to the extent to which there's decline in Alaska crude production, it is small relative to the size of the [terminal] and it's also a gradual decline." Tr. Vol. 14 at 3246, lines19-22. Mr. Roach painted a more dire picture, although in response to cross-examination and Council questions, he admitted that the decline had begun around 1985 and that he was unaware of what plans there were to replace Alaska North Slope crude before the Bakken oil boom appeared on the scene. Tr. Vol. 21 at 5049-50. Despite this new testimony, it is clear that Alaska North Slope output was declining long before the Bakken boom and any notion of crude oil unit trains as the saviors of refineries. And as Mr. Goodman testified, there is no void in the slate of crude oils available to refineries in Washington and California. Moreover, in Washington, 4 of the 5 refineries have crude-by-rail facilities and directly receive crude oil unit trains already; and 4 of 5 refineries get oil directly from Canada from the Kinder Morgan TransMountain spur pipeline and have done so for decades.

Despite the burnished nature of Mr. Roach's rebuttal testimony, much of it, especially the colloquy between Mr. Roach and Council Member Rossman, confirmed that Tesoro-Savage

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would sell crude oil to the highest bidders and that west coast refiners buy crude oil at the lowest price for the type of crude they want—that is, Tesoro-Savage would be part of the global crude oil market. "All I know to say is it's a market-driven phenomena." Tr. Vol. 21 at 5043, lines 5-6; Tr. Vol. 21 at 5029-35.

This question of whether Washington and its consumers would benefit from Tesoro-Savage acting in a broader market of which Washington is a part echoes the concerns addressed by the Council in *Sumas Energy 2*—"[t]he Council is thus faced with making a determination regarding the energy value of the proposed plant with only speculative evidence concerning any potential benefits to consumers in terms of energy costs and availability." EFSEC Order No. 754 at 16. Even the fact that Tesoro, which has a Washington refinery, has committed to 60,000 barrels per day of crude for some period of time[8] doesn't guarantee that a Washington refinery will receive the crude; "this could be the XYJ terminal, and we would still look at those rates and decide whether that would be economic or not." Tr. Vol. 21 at 5035, lines 5-8.

Tesoro-Savage has failed to provide the Council with more than hand-waving gestures in the direction of energy need. It remains unknown to what extent Tesoro will actually use crude from the terminal in any Tesoro refineries. Goodman Test. ¶99 (no apparent physical commitment that Tesoro actually utilize crude from the terminal). There is also no evidence to what extent, if any, crude from the terminal would go to its Washington refinery in Anacortes. It is much more likely that this crude, if it goes anywhere in the Tesoro system, will go to California. 74% of Tesoro's West Coast refining capacity of 738 kbpd is in California (380 kbpd in Los Angeles and 166 kbpd at Martinez). That leaves only 16% of Tesoro's capacity in Washington (120 kbpd at Anacortes) and 10% in Alaska (72 kbpd at Kenai). Roach Test. ¶¶14-

[8] Mr. Roach presumed this commitment came in the form of a contract, but he did not know the details or length of time of the contract. Tr. Vol. 21 at 5045.

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15; Tr. Vol. 21 at 4992. And Mr. Roach again confirmed that there was resistance to siting crude-by-rail terminals in California: "[t]here's a lot of pushback from the public sentiment … and then just regulatory issues from the state." Tr. Vol. 21 at 5029, lines 6-10.

II. TESORO-SAVAGE'S PROPOSED CRUDE-BY-RAIL TERMINAL CARRIES SIGNIFICANT ENVIRONMENTAL, PUBLIC HEALTH, AND COMMUNITY RISKS THAT CANNOT BE FULLY MITIGATED OR MINIMIZED.

The evidence presented at the adjudication demonstrated that Tesoro-Savage's crude-by-rail shipping terminal is not in the "broad interests of the public." RCW 80.50.010. The witnesses established that EFSEC cannot "ensur[e] through available and reasonable methods that the location and operation of such facilities will produce minimal adverse effects on the environment, ecology of the land and its wildlife, and the ecology of state waters and their aquatic life; [e]nhanc[e] the public's opportunity to enjoy the esthetic and recreational benefits of the air, water and land resources; and [p]rovid[e] abundant power at reasonable cost." WAC 463-14-020. CRK, the tribal nations and CRITFC, the cities of Vancouver, Spokane, and Washougal, Columbia Waterfront LLC, Washington Department of Natural Resources, Clark County, and the statutorily appointed Counsel for the Environment presented evidence at the adjudication that showed that EFSEC should recommend denial of the application for site certification.

A. The Seismic Risks at the Terminal Site Are Severe, and the Proposed Mitigation Measures Cut Corners.

> *[W]e should not be citing potentially dangerous facilities in lands that are geologically unstable or otherwise geologically hazardous. I think that that is a basic rule. I know that such facilities exist and decades ago we built those kind of facilities without the kind of understanding that we have of geologic hazards that we have today, and those have become legacies that are expensive for us to maintain and they pose a risk to us societally as well.*

Dr. Joseph Wartman, Tr. Vol. 13 at 2994-95.

The Port of Vancouver, like all of the western portion of Washington and Oregon, is a

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seismically active region. Dr. Joseph Wartman, a professor in the Department of Civil and Environmental Engineering at the University of Washington, offered testimony about the anticipated geologic hazards of constructing the proposed crude-by-rail shipping terminal with a 50-year project lifetime;[9] Dr. Wartman also critiqued the seismic ground improvements planned for the site.

Dr. Wartman testified that the proposed project is located in a seismically active region with a high likelihood of a large earthquake during the life of the terminal. Tr. Vol. 13 at 2977-78. Dr. Wartman explained that the anticipated horizontal ground shaking during a subduction zone earthquake exceeds the threshold to trigger soil liquefaction, Tr. Vol. 13 at 2978, lines 6-22, making liquefaction the major concern for this site in an earthquake. *Id.* at line 25. Liquefaction "effects are usually quite pronounced at [ports] because of their setting along rivers and the nature of the geologic processes that have deposited soil at these locations." Tr. Vol. 13 at 2981, lines 5-8. Liquefaction can cause the ground to settle differentially (vertical movement); it can cause horizontal movement, or lateral spreading; and it can lead to landslides and collapses of river banks. Tr. Vol. 13 at 2981-82.

Ports in this region must pay particular attention to seismic risks. "There's two prerequisites for soil liquefaction. One is saturation of the ground surface and that occurs at ports because of the proximity to water, and the second is the density of the grounds and that has to – again, has a lot to do with the fact that these are soil deposits along river systems. So ports are highly susceptible to soil liquefaction." Tr. Vol. 13 at 2983, lines 3-9.

Given these risks at the site, Dr. Wartman identified four site-specific areas of concern

[9] While Tesoro-Savage's application portrays the terminal as a 20-year project, these types of industrial facilities are usually treated as having lifetimes of 50 years or longer. Mr. Matthew Shanahan, Tr. Vol. 5 at 1210.

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about Tesoro-Savage's proposed seismic mitigation plan: (1) the lack of ground improvements in Area 200, particularly under the rail track; (2) the lack of ground improvement under the secondary containment berm in Area 300; (3) the failure of proposed ground improvement in Area 400 to fully extend through the liquefiable soil layer; (4) and a similar concern in Area 500. Tr. Vol. 13 at 2985-86. Dr. Wartman disagreed with testimony from Mr. Mark Rohrbach (Tr. Vol. 5 at 1149) that anchoring the stone columns to a non-liquefiable layer was unnecessary. Wartman, Tr. Vol. 13 at 2988-89 ("In Area 400, which is perhaps the most dangerous part of the facility because there's an extended depth of liquefiable soils and it's located on the river bank where the terrain is most susceptible to landsliding into the Columbia River, ground improvement doesn't appear to extend fully through the liquefiable soils."). Dr. Wartman also explained that the lack of ground improvements under the rail tracks in Area 200 could lead to movement of rail cars and overturning of rail cars. He compared the ground improvements he observed after the 2003 Tecomán, Mexico earthquake to ground improvements proposed here and especially noted that in Mexico, the stone columns that were successful were fully anchored. Tr. Vol. 13 at 2991, lines 5-14.

Dr. Wartman had also critiqued the failure to do modern numerical modeling at the site, Written Testimony of Dr. Joseph Wartman (May 13, 2016) ¶30. Prior to the start of the adjudication, Tesoro-Savage committed to pursuing this type of modeling, as Dr. Wartman suggested. *See* Ex0362 (June 2016 letter from Tesoro-Savage to EFSEC staff). Dr. Wartman also addressed landslides into the Columbia River Gorge from a large earthquake and the effect of landslides on the rail line. Tr. Vol. 13 at 2983-84.[10]

[10] CRK also references the testimony of the Washington Department of Natural Resources witness Mr. Timothy Walsh on landslide risks. Tr. Vol. 14 at 3339-57; *id.* at 3357, lines 19-25 ("this gets now past the hazard part and to the risk part and that is the consequences. So because

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Counsel for Tesoro-Savage attempted to diminish the importance of Dr. Wartman's positions by asking whether "removal of risk" was a published design standard.[11] Tr. Vol. 13 at 3000. Dr. Wartman clarified that what he was talking about was not merely meeting a standard or reducing hazards; his opinion focused on risk—the probability of a hazard times the consequence of that hazard—what would actually happen if the event takes place. Tr. Vol. 13 at 3010. Looking at risk, then, it is clear that even if Tesoro-Savage's ground design is improved, there are no measures that would completely mitigate the geologic risks associated with the proposed facility. Wartman Test. ¶30.

1. The testimony from Tesoro-Savage witnesses downplayed the risks inherent in the project site.

Ultimately, the testimony from Dr. Wartman, compared to that from Tesoro-Savage witnesses Mr. Rohrbach and Mr. Shanahan, illustrated a difference in comfort levels with acceptance of risk. Mr. Rohrbach's position can be summed up as overstated confidence in his statements, so much so that he was willing to question the U.S. Geological Survey's estimate of a 15% chance of a Great Cascadia subduction earthquake of a Magnitude 8 or greater within the next fifty years. Tr. Vol. 5 at 1133-34. Mr. Shanahan was more circumspect, stating that "I think that everyone can agree that the Cascadia subduction zone can generate a magnitude 9 earthquake, and the geologic data indicates that." Tr. Vol. 5 at 1191, lines 5-7. As Dr. Wartman explained, the 15 percent estimate is widely accepted as the best current available science. Tr. Vol. 13 at 3007.

Unlike Mr. Rohrbach, Mr. Shanahan divorced himself from any responsibility for project

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the tracks are close to the river, derailments have significant potential for having an impact on the river, and if the impact is from a volatile or potentially toxic crude oil, that could have significant impacts to the salmon population of the river").

[11] This focus on simply meeting standards, as opposed to fully minimizing risks, became a theme for Tesoro-Savage, a theme that this Council has previously rejected. *See Sumas Energy 2*, EFSEC Order No. 754 at 22.

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design and was forthright about the limits of his investigation. "In Area 200, we gave them things like guess estimates of the seismic settlement that they could expect and that they would design for. We didn't recommend ground improvements. We listed it as an option, as something that could be used." Tr. Vol. 5 at 1188, lines 14-18. Mr. Shanahan acknowledged that there would be "significant settlements" under the rail tracks, *id.* at 1193, line 9, likely greater than 12 inches. *Id.* lines 5-7. When pressed by Council Member Moss, Mr. Shanahan simply stated that it was not his job to determine acceptable levels of settlement, just to provide criteria for what would occur and that he was told that settlement under Area 200 would be okay. Tr. Vol. 5 at 1207-09. Similarly, Mr. Shanahan did not investigate the seismic design of the dock, not because it wouldn't be affected by an earthquake, but because the protective standard doesn't apply to a non-public pier. Tr. Vol. 5 at 1195.

These attitudes toward risk—either indifference or over-weaning confidence—make a certain amount of selfish sense because Tesoro-Savage does not bear the risk in this situation. Tesoro-Savage is gambling with house money, and the house is the people and environment of Washington. Indeed, Mr. Rohrbach gave a description of damage he expected from a large subduction zone earthquake, Tr. Vol. 5 at 1182-83, implying that in a sea of devastation, the Tesoro-Savage facility would be "one of the few dock areas that was still serviceable." Tr. Vol. 5 at 1183, lines 14-15. If this was an attempt to create a public interest for the terminal, it failed. Following a massive earthquake, no matter the state of the project site, there would be no immediate need for an oil transfer terminal; the project does not actually create any energy; and the risk of oil pollution from the site would be significant.

2. The oil tanks are designed to a lower, less protective standard.

Dr. Wartman also addressed the fact that the proposed oil storage tanks are designed to Risk Category 2, as opposed to Risk Category 3, as would be proper under ASCE 7-10, a

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regulatory standard that requires Risk Category 3 when a project involves hazardous fuels that would pose a risk to the public if released. Tr. Vol. 13 at 2993-94. Mr. Russ Gibbs confirmed this via his telephonic testimony. Tr. Vol. 16 at 3843, at 3845, lines 17-21 ("Right. The tanks are currently designed as stated to the ASCE Group 2, and if you change it to a 3, it would have a potential impact to the thickness of the shell readings, the shell thicknesses."); *see also* Ex0001 at 7652 (oil tank design documents). The practical consequence of moving from Category 2 to Category 3 is that Category 3 designs are 25% more robust. "What that would translate to is that if you have larger seismic demands, you would have to have a more robust structural system to remain safe in a designed earthquake." Tr. Vol. 13 at 3013, lines 15-18. Tesoro-Savage's willingness to suggest a lower design standard, even if the tanks design shows "conservatism," Corpron, Tr. Vol. 21 at 4889-90,[12] is another example of its unacceptable acceptance of risk.

B. An Oil Spill in the Columbia River Would Be Harmful and Difficult to Clean Up

> *[I]in the Bakken case, if you've got 10 percent mechanical recovery, 50 percent evaporation, that leaves 40 percent of the oil traveling down the river unrecovered and heading out to the Pacific Ocean. In the case of the heavier oil, you've got 10 percent mechanical recovery potentially and you've got 22 percent evaporation. That leaves 68 percent of the oil unrecovered and traveling down river.*

Ms. Susan Harvey, Pre-Recorded Tr. at 21.

Ms. Susan Harvey, an oil spill planning and response expert with 30 years of experience, including managing oil wells in Prudhoe Bay and heading the spill response contingency planning office for the State of Alaska, Ex5517 (resume), spoke of her concerns about oil spill risk on the Columbia River and initially stressed the need for an escort tug for oil tankers, a measure that Tesoro-Savage has now committed to.[13] Ms. Harvey also critiqued the estimates of

[12] Mr. Corpron was clear that the entire facility was designed to Risk Category 2, not Risk Category 3. Tr. Vol. 21 at 4894.

[13] Due to an unavoidable conflict with the Alaska salmon fishing season, Ms. Harvey, who is

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spill response time and readiness, and she explained that increasing the oil spill umbrella plan on the Columbia River from 300,000 barrels to 600,000 barrels will be no small matter. And Ms. Harvey testified about the disconnect between the decision to continue loading even when conditions on the river don't allow pre-booming. Pre-booming is vital because it controls the speed of the spill response. Harvey Pre-Recorded Tr. at 16 ("if routine pre-booming can't be accomplished during loading operations, that's going to make spill response using boom, which is the tool that you use to contain oil, also challenging at other points in the river where there's fast currents"). And that disconnect continues, as Mr. Jared Larrabee, General Manager for the terminal, would not commit to not loading when Tesoro-Savage could not pre-boom. Tr. Vol. 21 at 5071-72.

Most importantly, Ms. Harvey testified about the amount of oil that could be left in the river, uncollected, even accounting for evaporation (which itself is a problem for spill responders if the spill is light Bakken crude). Oil may wash up on shore, it may submerge, it may sink, and it may wash down the river, but using Tesoro-Savage's own numbers, 40-68% of the spilled oil could remain unrecovered.

With regards to oil spill containment, Ms. Harvey testified that the currents in the Columbia River can inhibit or prevent effective booming. Harvey Pre-Recorded Tr. at 16. Moreover, Ms. Harvey testified that if a spill occurs in the river, using Tesoro-Savage's own numbers from the January 2016 table-top exercise, Ex5509 (Vancouver Energy, Spill Response Exercise Report, January 12, 2016), between 40% and 68% of the spilled oil would be left after mechanical recovery and evaporation, depending on the type of oil that is spilled, and that

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also a commercial salmon fisherman, pre-recorded her testimony on May 24, 2016, before Tesoro-Savage submitted its amended application to the Council on May 27, 2016. Due to that timing, Ms. Harvey did not know about the new measures Tesoro-Savage added to its application when she testified.

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remaining oil could sink, wash ashore, or travel downstream out to the Pacific. *Id*. at 22-23.[14] As an example, Ms. Harvey testified that at currents of two knots, oil would travel an average of 2.3 miles an hour, or 55 miles a day. *Id*. at 19. She discussed how spills of diluted bitumen, one of the types of crude anticipated to be handled at the terminal, would create heightened challenges for cleanup (including its tendency to adhere to surfaces and submerge or sink), yet Tesoro-Savage did not provide for any response strategy for this heavy oil in its application. *Id*. at 25-28. Bakken crude, another type of crude that will certainly be handled at the terminal, has high levels of polycyclic aromatic hydrocarbons, which tend to dissolve in the water column and which are extremely toxic to aquatic life. *Id*. at 31.

Ms. Harvey testified that one of the most significant concerns she has with Tesoro-Savage's oil spill response planning is that neither they nor anyone else have yet prepared a response plan for a 600,000 barrel oil spill in the Columbia River, the amount Tesoro-Savage would like to be able to legally transport on the river in a single tanker. This amount of oil is double the 300,000 barrels currently provided for by the Marine Fire & Safety Association's umbrella response plan. *Id*. at 12.

In response to Council questions, Ms. Harvey (via telephone) further explained that the amount of an oil spill could range from one-quarter to one-twentieth of a vessel, or even the entire vessel in the event of a catastrophic accident. Tr. Vol. 15 at 3575-76. Ms. Harvey testified that even in the event of only a partial tanker spill, the spill size could exceed the million gallon catastrophic standard for Washington state. *Id*. at 3576. Finally, in response to a question from Council Member Rossman, Ms. Harvey elaborated that in addition to the immediate impacts to the Columbia River's water column and its shoreline, an oil spill would have adverse

[14] *See* Tr. Vol. 8 at 1849 (testimony of Dr. Elliot Taylor conceding target of 10% recovery came from oil spill response planning documents).

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impacts on birds, fish, and other wildlife, and would also cause economic harm to people who use the river for a variety of resource and recreational uses. *Id*. at 3577-79.

1. Tesoro-Savage witnesses attempted to minimize possibility of oil spills.

Mr. Dennis O'Mara modeled vessel accidents and oil spill risk for Tesoro-Savage. Tr. Vol. 6 at 1339-59. As he himself described, to calculate risk, you must look at probability times consequences, and those consequences are the fate and effect of spilled oil on the river environment. Ex0120 (Quantitative Vessel Traffic Risk Assessment, January 2016) at 3. Yet Mr. O'Mara performed no such risk assessment. Tr. Vol. 6 at 1365. Instead, his version of consequences simply estimated the amount of oil that would be spilled, as if volume alone told enough about how oil impacts the river, fish, and people. Tr. Vol. 6 at 1366 (report did not evaluate risk acceptance).

Mr. O'Mara conceded that he was unaware of the prior Mobil Oil spill on the Columbia River at the time he modeled oil spill probabilities on the Columbia River. *Id*. at 1357. Mr. O'Mara agreed on cross-examination that prior oil spills in the river could be useful to learn how oil behaves and is transported on a particular river. *Id*. at 1361. Mr. O'Mara also admitted he never added up his modeled estimates of risk from a marine incident, grounding, collision at the dock, and cargo loading, all of which are accidents that could occur as a result of the operation of proposed project. *Id*. For example, although his study found the most frequent oil spill risk from cargo loading would occur on average 1.2 times every 10 years, that information was presented separately from oil spills risks do to grounding. Tr. Vol. 6 at 1363-65. This failure to "add up" the risks served to minimize the severity of the oil spill risks associated with this project.

Finally, Mr. O'Mara recognized two facts which cast doubt on the accuracy of his entire model. First, Mr. O'Mara conceded that the Automatic Identification System (AIS) data which he used identified vessels that are 300 gross tons or larger. *Id*. at 1362. As a result, some smaller

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vessels were not accounted for in his historical data set. *Id*.

Second, Mr. O'Mara testified that his two modeling methods for assessing oil spill risk showed similar results to verify each other, even though the two methods produced vastly divergent results. For example, he reported a predicted spill of 0-50 barrels every 7 years in one method, and every 1,300 years in the other method. *Id*. at 1363. In his written testimony, he provided a table comparing the two methods, which showed wildly different results for all but two of the modeled spill volume ranges. O'Mara Test. ¶27. Council Member Moss expressed consternation over these divergences in the predicted number of years between spills:

> Mr. MOSS: And let me explain that when I see differences of, say, 75,000 to 78 billion, I have a hard time thinking of that as being similar in any way, shape or form. Do you think it's similar in some fashion? Tell me on what basis you make that judgment.
> THE WITNESS: No, that's -- yeah, that's very different. We're talking about 10,000 barrel spills, right?
> MR. MOSS: 10,000 to 30,000. But what about 590 to 1.5 million? Is that similar?
> THE WITNESS: Nope.
> MR. MOSS: Okay. So where do we get to similar? Eight to 160, that would be similar?
> THE WITNESS: That is.
> MR. MOSS: And what is the criterion or criteria that you use to reach that determination?
> . . .
> THE WITNESS: Simply, as I described before, when you get to a range of order of magnitude of ten, we typically look at things that way. So if you're two orders of magnitude away, you're pretty close. I admit that the differences between these two assessments are -- there are some differences. . . .

Tr. Vol. 6 at 1372-73. Such consistently wide-ranging disparity between the models raises questions regarding the accuracy of either.

Even with all these flaws, Mr. O'Mara's model estimated a marine vessel oil spill of up to 5000 barrels once every 8 years. *Id*. at 1363-64; *see also* Ex120 (Quantitative Vessel Traffic Risk Assessment, January 2016) at 112. Given the 50 year lifetime of this project, that is simply

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too much oil in the river too many times.

2. Oil spill contingency plans do not keep oil out of the river.

Mr. Eric Haugstad, the Director of Contingency Planning and Emergency Response with Tesoro Companies, testified about the project's preliminary oil spill contingency plan, the oil spill prevention control and countermeasures plan, vessel response plans, and pre-booming protocol, among other things. Tr. Vol. 6 at 1386-1426. A key fact underlying much of Mr. Haugstad's assertions about prebooming during loading was river current speeds. Yet Mr. Haugstads' written and live testimony, as well as Tesoro-Savage exhibits relevant to his testimony, shift between a variety of different river current values, undercutting the reliability of his assurances regarding protection of the river during loading of crude oil.

In his live testimony, Mr. Haugstad explained that in currents above one and a half knots, the pre-booming protocol is ineffective because the current will suck any oil around the boom and carry it downstream. Tr. Vol. 6 at 1408. His live testimony on this point contradicts his pre-filed written testimony, which instead states that conventional booms fail at between 0.75 and one knot of current. Written Testimony of Eric Haugstad (May 13, 2016) at 11. Mr. Haugstad's lack of clarity on this point is significant because Mr. Haugstad also testified at the hearing that typically the current on the Columbia River "stays right at one knot or a little below it." Tr. Vol. 6 at 1409, lines 5-6. In documents filed with EFSEC, different current speeds were used. Mr. Haugstad confirmed during his testimony that Tesoro-Savage's oil spill contingency plan reported currents in the Columbia range seasonally from 1 to 6 knots, yet an average of 2 knots were used for planning purposes. *Id*. at 1431. He also admitted that for the table-top exercise for responding to a spill, the company dropped the current speed down to a much more favorable 0.8 to 0.9 knots. *Id*. at 1432.

As for the ability to pre-boom, if Mr. Haugstad's testimony that river currents are "at one

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knot or a little below" is accurate, and if Mr. Haugstad's written testimony about the current threshold for booming failure is the more accurate estimate, then booming would often be impossible in normal river conditions. And certainly, if the numbers used for the contingency planning or even the spill trajectory are accurate, pre-booming would occur an even smaller fraction of the time.[15]

Mr. Haugstad did testify that if it is too windy or the currents are too high to use booms, crews will use a type of boom called a "current buster" to attempt to contain any oil, *id*. at 1408, but it is unclear how much oil the current buster is able to contain. Mr. Haugstad also conceded the current buster is only effective up to five knots, and that he does not know how frequently currents rise above five knots. *Id*. at 1442-43. He further testified that no Tesoro-Savage policy has been developed which would call for cessation of oil transfer when currents reach five knots or above. *Id*. at 1443. Mr. Larrabee outright refused to agree to cessation of oil loading if conditions prevented pre-booming or reached unsafe currents or wave heights. Larrabee, Tr. Vol. 21 at 5071-72.

Finally, Mr. Haugstad addressed efforts by Tesoro-Savage to double the cargo limits for shipping crude oil on the Columbia River. As Mr. Haugstad testified, Tesoro-Savage and others rely on a pooled group of equipment owned by contractors to respond to accidents and spills on the river. This umbrella plan system is funded by all shippers. Increasing the limits of the umbrella plan to solely cover Tesoro-Savage operations would significantly raise the cost for all plan participants and users, as oil spill responders and contractors would need to accordingly increase their oil spill response equipment and personnel. *Id*. at 1434. These increases would

[15] Captain Marc Bayer testified that oil spill booms might not always be effective under certain conditions, Tr. Vol. 4 at 857, and conceded that oil transfers will continue even when booms cannot be used. *Id*.

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also significantly raise the cost of needed funding for the umbrella plan organization for all participants and users. *Id*.

3. Tesoro-Savage's witnesses presented overly optimistic predictions about oil spill recovery.

> *I tell this story to illustrate the truth of the statement I heard long ago in the Army: Plans are worthless, but planning is everything. There is a very great distinction because when you are planning for an emergency you must start with this one thing: the very definition of "emergency" is that it is unexpected, therefore it is not going to happen the way you are planning.*

President Dwight D. Eisenhower (Nov. 14, 1957)[16]

Dr. Elliot Taylor, a witness for Tesoro-Savage, testified about the behavior of various types of oil in water in the event of a spill, pre-booming protocols during oil loading, and training for oil spill response. Tr. Vol. 8 at 1786-1904.

Dr. Taylor testified that he was certain that spilled diluted bitumen, also known as dilbit, will not sink. His confidence falls well beyond the current state of the science, according to the National Academy of Sciences, beyond real-world experience from other dilbit spills, and beyond the testimony of Council for the Environment witness Mr. James Holmes, who explained that turbulence can drive oil under the surface, that tides can create turbulence, that ship wakes can further mix oil into water. Tr. Vol. 18 at 4237-38, *id.* at 4238, lines 17-20 ("But we know from the studies that we did last week, that even fairly small one-foot waves in a tank cause the oil to very quickly go all the way down to the bottom of the tank."). But even with his misplaced certainty, Dr. Taylor acknowledged that when spilled oil encounters sediment, it can become denser and submerge or even sink. Tr. Vol. 19 at 4374-75. He also discussed entrainment, the rising to the surface and sinking again of oil, that can occur following an oil spill. And evaporation, especially of lighter Bakken crude, will produce dangerous air toxins, including

[16] Quoted in Ex5515 (National Academy of Sciences, Spills of Diluted Bitumen from Pipelines (2016)).

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benzene, that could harm or prevent first responders from doing their job.

Dr. Taylor's assumption that diluted bitumen will not sink unless it has weathered for about a week or more is based on lab studies, not real world conditions. Tr. Vol. 8 at 1850-51. Dr. Taylor also admitted that extensive research about the behavior and weathering of various kinds of diluted bitumen in water is currently ongoing. *Id*. at 1853. Although Dr. Taylor was familiar with the National Academy of Sciences Report on pipeline dilbit spills (Ex5515), he remained unconcerned about its conclusions or even need for further study. Tr. Vol. 8 at 1852-54.

Dr. Taylor supplemented Mr. Haugstad's testimony with respect to weather conditions in which booming during oil loading will be impossible. In addition to current speeds, Dr. Taylor explained that wind speeds of 30 knots or more, or a chop in the water of two and a half feet or more, would also render booming ineffectual. *Id*. at 1814. Dr. Taylor agreed with Mr. Haugstad that oil loading would still proceed under weather conditions in which pre-booming is not possible. *Id*.

Moreover, some spilled oil will be naturally dispersed in the water column beneath the surface, and Dr. Taylor testified that this oil will travel downstream, along with any oil that is entrained. *Id*. at 1892. In his rebuttal testimony, Dr. Taylor clarified that standard booms do not trap or capture any oil that is submerged beneath the water surface. Tr. Vol. 19 at 4396, lines 22-24. Moreover, if oil touches a bank or shoreline, Dr. Taylor testified some oil would stick to those surfaces. Tr. Vol. 8 at 1892. The fact that pre-booming is not possible in many weather conditions, coupled with the substantial limits on pre-booming's efficacy if it does occur, raise serious concerns about Dr. Taylor's "rosy" picture he discussed in his rebuttal testimony at the end of the hearing. Tr. Vol. 19 at 4426.

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On direct examination, Dr. Taylor was optimistic about responders' ability to recover oil in the Columbia River in the event of a spill, but he agreed that there have been prior river oil spills where response was difficult or incomplete. Dr. Taylor confirmed that when a double-hulled tanker carrying Bakken oil in the Mississippi River spilled in 2014, only 2.3 out of 750 to 800 barrels of spilled oil were recovered. Tr. Vol. 8 at 1845-55. In that spill, 46% of the oil evaporated, causing safety concerns for responders and the public near the spill. *Id*. at 1847. Dr. Taylor further conceded there was a potential for polycyclic aromatic hydrocarbons to dissolve in the water column, in addition to evaporating. *Id*. In another spill of Bakken crude on the Yellowstone River, a sheen of oil was observed 73 miles downstream of the spill site in the first days after the spill. *Id*. at 1848. That spill contaminated a water treatment plant and a public water supply six miles downstream in the city of Glendive. *Id*. Dr. Taylor admitted there were spill plans in place for the Mississippi and Yellowstone River spills, but in the case of the Mississippi spill the Coast Guard responders and the vessel responders were unable to place a boom in the water quickly enough after the barge collision, and in the case of the Yellowstone spill, ice in the river prevented booming. *Id*. at 1874. These real world examples demonstrate that even the best laid plans cannot always be implemented.

C. Air Emissions From and Caused by the Terminal Will Threaten Human Health, Add Tons of Greenhouse Gases to the Air Every Year, and Should Be Treated as a Major Source of Pollution.

The Tesoro-Savage terminal would be a new and large source of air pollution in Vancouver and in the region. Not only would air pollutants be produced by the facility, but they would be induced by the facility through increased rail and vessel traffic. While the terminal will require some kind of air permit, as pointed out by witnesses on all sides of the equation, not all pollutants will be regulated by a permit, an important consideration for the Council as that means not all negative effects on air quality—some of them of significant concern for public

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health—will be addressed or mitigated. Moreover, Tesoro-Savage is engaged in an effort to label itself a "minor source" of air pollution, subjecting it to even less regulation than might otherwise be required. Regardless of the type of air permit Tesoro-Savage is ultimately required to obtain, EFSEC must make its final recommendation "based on the policies and premises set forth in RCW 80.50.010 including, but not limited to . . . [e]nhancing the public's opportunity to enjoy the esthetic and recreational benefits of the air, water and land resources." WAC 463-14-020. EFSEC's guiding statutory policy, RCW 80.50.010, similarly mandates that EFSEC's siting actions be based on certain premises, including "to enhance the public's opportunity to enjoy the esthetic and recreational benefits of the air, water and land resources; to promote air cleanliness." As a result, EFSEC has a statutory and regulatory duty to generally consider impacts to the cleanliness of the air in Washington when making its decision about whether to recommend approval of Tesoro-Savage's project.

1. Hazardous air pollutants will be emitted by this project.

> *The reason that diesel has ended up as the top priority health pollutant for our Washington Department of Ecology and is identified also by the Washington Department of Health as a top public health concern is that these particles are especially small. They are emitted in nanometer size, very, very tiny. They can be inhaled very deep into the lungs, and they tend to be -- to possess highly toxic properties.*

Dr. Elinor Fanning, Tr. Vol. 13 at 3084-85.

Dr. Elinor Fanning identified a number of hazardous air pollutants that will be part of facility operations and their very serious health effects—information largely, if not entirely, absent from Tesoro-Savage's application and hearing evidence. For example, the Tesoro-Savage terminal will emit or cause to be emitted hazardous pollutants through a) vaporization of oil constituents in the transportation process or from storage and transfer equipment; b) stationary source emissions during terminal operations; c) emissions of combustion by-products from

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mobile sources involved in oil transport; and d) chemical reactions of the emitted pollutants in the atmosphere to form secondary pollutants. Written Testimony of Dr. Elinor Fanning (May 13, 2016) ¶3. One of the most harmful pollutants is particulate matter, especially diesel particulate. But the list of air pollutants with adverse health effects is long, and it includes components of volatile organic compound ("VOC") pollutants (VOCs are also, as a group, considered criteria pollutants because they contribute to the formation of ozone, itself a human health concern); benzene, arsenic, cadmium, hexavalent chromium, formaldehyde, acetaldehyde, and acrolein. Fanning Test. ¶¶5-8.

The list of adverse health effects from these pollutants is long and varied. Several of the pollutants identified by Dr. Fanning are human carcinogens. Fanning Test. ¶8. Many health effects are respiratory in nature, both acute and long-term depending on the exposure. Particulates, especially small particles like those in diesel exhaust, can have a wide range of serious effects from respiratory to heart problems, to premature mortality. *Id.*

Moreover, Dr. Fanning made clear that these pollutants do not affect all members of the population equally. Rather, children and the elderly are much more likely to suffer harm. Local neighborhood Fruit Valley has a higher percentage of young and old individuals than average, making air pollutants of even more concern for that neighborhood than for other areas in the region or state. Fanning Test. ¶¶28, 31; *see also* Garcia, Tr. Vol. 16 at 3745-47; Ex5612 (EJSCREEN ACS Summary Report). These concerns are echoed and reinforced in the testimony of Dr. Frank James, the only medical doctor to provide testimony in the proceeding. Written Testimony of Dr. Frank James (May 13, 2016).

Dr. Fanning emphasized that diesel particulates—very small and harmful air pollutants generated by mobile source of pollution like trains, trucks, and ships—are a leading example of

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air pollutants of significant concern that have been and will be unaddressed by the project proponents. Tr. Vol. 13 at 3084-85; 3089-90. Dr. Fanning described the science on diesel exhaust particulate, explaining that the reason this air pollutant is one of the top priority health pollutants for the Washington Department of Ecology is that these particulates are extremely small, can be inhaled deep into the lungs, and tend to possess highly toxic properties. Tr. Vol. 13 at 3084-85. Mr. Eric Hansen, an air quality consultant who testified for Tesoro-Savage, did not disagree that diesel particulate is a dangerous pollutant, and even noted in his written testimony that the harmful pollutant will in fact exceed acceptable source impact levels ("ASILs") for health impacts. Written Testimony of Eric Hansen (May 13, 2016) at 7-8. Presumably, although Tesoro-Savage did not look at this population, the inmates and employees at the Clark County Jail Work Center will be at a significant risk.

Mr. Hansen pointed out that many of the hazardous air pollutant emissions that will be part of the terminal operations (or caused by the terminal operations) will be from mobile sources of pollution not be regulated by the facility's air permit. Tr. Vol. 4 at 713. But those pollutants are caused by and increased due to Terminal operations and will affect Port workers, area residents, and staff and inmates at the Jail Work Center regardless of their source. In fact, it is the very lack of regulatory oversight over many of the sources of toxic pollutants that should be of chief concern to the Council because mitigation of mobile sources is not a permit-controlled option. Consistent with Tesoro-Savage's theme of limiting Council consideration to a regulated box-checking exercise, Mr. Hansen for the most part disregarded most of these issues under a narrative of "not regulated in a permit," apparently content to ignore the serious effects of these hazardous air pollutants because they come from mobile sources. *See, e.g.*, Tr. Vol. 4 at 712 (stating that mobile sources are not included in the permit application).

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As discussed in the Legal Standards section above, the Council has already discarded this permit-driven approach to reviewing impacts in a previous hearing where Mr. Hansen himself submitted expert testimony. *See Sumas Energy 2*, Applicant's Prefiled Direct Testimony Witness #5: Eric Hansen (June 21, 2000), *available at* http://www.efsec.wa.gov/Sumas2/prefiled/eh-trev.pdf. In *Sumas Energy 2*, EFSEC Order No. 754 at 22, the Council wrote that meeting federal and state air quality standards was "the beginning, not the end of our inquiry. … The Council has a much broader mandate than simply deciding whether minimum standards are met; rather the Council is charged with protecting people's health and welfare…." In recommending denial, the Council concluded that "[t]he state has the responsibility to protect all people from undue adverse environmental impacts, whether or not they live in Washington State." *Id.* at 2. As Mr. Hansen should know, this Council's has already rejected a narrow standard-compliance-only vision, and the evidence makes clear that there are impacts far beyond those regulated in the air permit.

2. This project will significantly add to Washington's total greenhouse gas emissions.

> *[I]f you're in the business of looking at energy and environmental impacts from a proposed facility, which I think is the effort here, then you should look at greenhouse gas emissions and you should look at it from a slightly broader perspective than just focusing on the subset, the very small subset I might add, of activities that are subject to permitting under our current regulatory scheme.*

Dr. Ranajit Sahu, Tr. Vol. 15 at 3606-07.

Dr. Ranajit Sahu spoke about the estimated greenhouse gas ("GHG") emissions—emissions so large that, using Tesoro-Savages' numbers counting only emissions from the facility plus one-way crude transportation crude would account for 1-2% of the entire state GHG totals. Tr. Vol. 15 at 3603; *id.* at 3602 (noting "inexplicable" inclusion of only inbound train emissions). Adding refining emissions and burning emissions raises the GHG emissions even

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further to 7-8% and 54% of state emissions, respectively, from only one project. *Id*. at 3603 ("the numbers start to grow in terms of implications depending on how far you sort of understand and estimate greenhouse gas emissions").

When measuring its GHG emissions, Tesoro-Savage focused only on emissions coming from the facility itself. These emissions of approximately 86,000 metric tons are weighty in and of themselves, but grow by orders of magnitude when emissions caused by crude transit to and from the facility are included. *Id*. at 3601-02. In order to accurately assess the true GHG accounting for this project, EFSEC must, at a minimum, consider emissions from the facility, train emissions both to and from the oil fields, and tanker emissions to and from the oil refineries. More realistically, the emissions caused by the refineries which will burn this oil and by the consumers who will combust this oil should be included as well. EFSEC has a duty to "to enhance the public's opportunity to enjoy the esthetic and recreational benefits of the air, water and land resources; to promote air cleanliness." RCW 80.50.010. Such a broad statutory mandate to promote air cleanliness requires a realistic assessment of the true GHG emissions that will result from the construction of this terminal.[17]

Furthermore, the effects of climate change are currently spurring urgent action by the state of Washington to quickly reduce, not add to, our greenhouse gas emissions. Numerous studies predict severe impact from climate change in Washington State, including dramatic reductions in snowpack, declining river flows, increased deaths from temperatures and air pollution, increased risk of wildfires, loss of salmon and shellfish habitat, lost hydropower generation, and flooding. In 2006, Washington commissioned a study "Impacts of Climate Change on Washington's Economy," which found that the cost of climate impacts would reach

[17] Greenhouse gas emissions also impact the City of Vancouver's Shoreline Management Program. *See* Written Testimony of David Wechner (May 13, 2016) ¶81.

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$3.8 billion annually by 2020.[18] The Department of Ecology in 2009 summarized recent scientific studies specific to the Pacific Northwest as follows: "Each [of the studies] shows that without additional action to reduce carbon emissions, the severity and duration of the impacts due to climate change will be profound and will negatively affect nearly every part of Washington's economy."[19]

Washington has sought to meet the challenge of climate change with a variety of statutory and regulatory actions to reduce our reliance on fossil fuels and promote conservation and alternatives. Washington adopted greenhouse gas reduction standards via legislation adopted in 2008. *See* RCW 70.235.070(1)(a). The statute establishes that by 2020, emissions shall be reduced to 1990 levels. By 2035, greenhouse gas emissions are to be 25 percent below 1990 levels and by 2050, they are to be 50 percent below 1990 levels. The state legislature has consistently reinforced its concern for greenhouse gas impacts on Washington's climate and economy, for example: a) by taking measures to triple the number of green jobs by 2020; b) adopting a clean car standard that will reduce greenhouse gas emissions from mobile sources; c) dramatically increasing efficiency requirements for buildings; d) helping communities reduce greenhouse gas emissions by saving energy; e) requiring all state agencies to inventory and reduce emissions; f) funding planning for climate change mitigation and adaptation; g) creating tax and other financial incentives to support low-carbon alternative energy sources; h) requiring new power plants to meet an "emissions performance standard" for greenhouse gases; and i) requiring new power plants mitigate 20 percent of life-time greenhouse gas emissions from the power plant. These legislative actions have been supplemented by a number of Executive Orders promoting reduction of greenhouse gas emissions and increasing the availability of energy

[18] *Available at* http://www.ecy.wa.gov/pubs/0701010.pdf.
[19] *Available at* http://www.ecy.wa.gov/pubs/0901006.pdf.

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alternatives.[20] In addition, the citizens of Washington passed I-937, mandating 15 percent of all electricity energy to come from renewable energy and energy efficient sources by 2020.

In short, Washington has made firm and clear commitments to address the causes of climate change, and has committed to promote alternatives to projects that generate greenhouse gas emissions and mitigate those that cannot be avoided. The proposal to construct a crude oil shipping terminal with massive direct and indirect greenhouse gas emissions needs to be evaluated in light of those statutory and regulatory commitments, as well as the urgent need to combat a warming climate.

3. The proposed terminal is likely a major source for VOCs.

> *Even within the terminal, there are activities that are not covered by our stationary source permitting regulations, all the transportation-related support activities are not, but they exist to support the terminal. They are -- their emissions are real. … We just choose to -- for a variety of other reasons that have nothing to do with impacts, we choose to focus on a subset of sources to put them under our permitting umbrella. That's what happens. So by definition we have many more activities here that are not permitted, that are emission-causing and that's the key point.*

Dr. Ranajit Sahu, Tr. Vol. 15 at 3607.

In addition to its decidedly narrow and incomplete approach to consideration of air pollutants generally, the facility also (incorrectly) decided that it was a "minor" source of air pollutants because it does not tip the scale for greenhouse gases. After reaching this conclusion, Tesoro-Savage went no further. But, as Dr. Ranajit Sahu's analysis and testimony demonstrates, there are considerable questions surrounding whether Tesoro-Savage has adequately applied the best science and analysis to its estimate of volatile organic compound ("VOC") emissions from the facility, in turn calling into doubt its status as a so-called "minor" source.[21] Even if the

[20] The laws and executive orders are *available at* www.ecy.wa.gov/climatechange/laws.htm.
[21] During the hearing, attorneys for the Port implied that Dr. Sahu's expertise had been questioned by courts in other contexts. Should the Port again raise this point in final briefing, the

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facility were allowed to obtain only a minor source permit as a so-called "synthetic minor,"[22] federal law will require that assumptions and estimates underlying that claim be fully enforceable through clear, monitored, reportable, and enforceable air permit requirements. The testimony shows, however, that Tesoro-Savage cannot even keep its air pollutant assumptions, and practices on which they are based, straight and consistent during just the five weeks of the hearing. The evidence demonstrates that Tesoro-Savage cannot actually implement protections that would be a necessary part of a synthetic minor permit were a minor permit to be issued.

Whether a facility is a major source of pollutants under the Clean Air Act affects important considerations at issue here. First, the major source air permit application requirements are significantly more rigorous in terms of initial modeling, information, and analysis. For example, ozone effects in the region and even elsewhere in the state and haze

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Council should reject it. Dr. Sahu did testify in *Northwest Environmental Defense Center v. Cascade Kelly Holdings LLC*, No. 3:14-cv-01059-SI (D. Oregon) in the fall of 2015. The federal district court employed a legal theory of deference to decisions made by a state agency—a theory not applicable here as that case challenged an existing permit; the court did not reject Dr. Sahu's work. *See Nw. Envtl. Def. Ctr. v. Cascade Kelly Holdings*, 155 F.Supp.3d 1100, 1125 (D. Or. 2015).

Moreover, recent enforcement actions by EPA in New York against a similar oil transloading terminal underscore Dr. Sahu's testimony and concerns regarding the calculation of VOC emissions during marine vessel loading of crude oil. *See* Notice of Violation in the Matter of Global Companies Albany Terminal LLC, by EPA Region 2, CAA 02-2016-1310, *available at* http://www.politico.com/states/f/?id=00000156-9585-df7e-af77-9d85a0df0000.

[22] A "synthetic minor" is a concept recognized by EPA under the Clean Air Act but only within very strict confines. A facility must first engage in a potential-to-emit analysis where the facility assesses its maximum potential-to-emit any criteria or hazardous air pollutant. 40 C.F.R. sec. 52.21(b)(4). If the facility is a major source because the potential-to-emit exceeds the applicable threshold, the company may still obtain a "synthetic minor source" permit by considering physical or operation limitations but only if those limitations are practically enforceable, meaning that they are technically accurate and demonstrably effective limitations that are the subject of an enforceable permit, and that permit includes monitoring, recordkeeping, and reporting requirements sufficient for the government and the public to determine compliance. *See generally Nat'l Mining Ass'n v. U.S. Envtl. Prot. Ag.*, 59 F.3d 1351, 1363 (D.C. Cir. 1995) and *In re Peabody Western Coal Co.*, 12 E.A.D. 22 (Envtl. Appeals Bd. 2005), 2005 WL 428833 at *7, 10. None of those steps have occurred or been demonstrated here.

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effects to area national parks and wildernesses would be a required part of analysis. Sahu, Tr. Vol. 15 at 3591. Second, the air permit requirements themselves would be more rigorous in that they require a full Best Achievable Control Technology ("BACT") analysis by Tesoro-Savage with the permitting entity, and then would impose BACT from the available options (which may include options not reviewed by Tesoro-Savage). 42 U.S.C. § 7479(1). While Tesoro-Savage claims it is using "BACT" for greenhouse gas emissions, there has been no proper BACT analysis for the facility generally and certainly not for VOCs. Written Testimony of Dr. Ranajit Sahu (May 13, 2016) ¶83; Tr. Vol. 15 at 3609, 3611-12 (Tesoro-Savage has approached BACT "backwards" in its analysis.).

To properly determine major versus minor source status, a facility must calculate its potential to emit air pollutants, Tr. Vol. 15 at 3590, 3592-93; 42 U.S.C. § 7475(a) and 40 C.F.R. 52.21(a)(2)(iii) and (iv)(b), defined as the maximum design potential-to-emit. 40 C.F.R. § 52.21(b)(4). If Tesoro-Savage will emit more than 100 tons annually of any criteria pollutant—here VOCs—then it must proceed through the major source permitting process. 42 U.S.C. §§ 7475 and 7479. Dr. Sahu identified two major sources of VOC pollutants from the facility where he opined that the applicant had not properly calculated or accounted for potential emissions (those that would in fact be regulated, omitting things like mobile sources): 1) emissions from the oil storage tanks themselves; and 2) emissions from the loading of marine vessels.

a. Oil storage tanks

Tesoro-Savage has miscalculated VOC emissions from the Terminal's six oil storage tanks through three errors. First, Tesoro-Savage used the outdated TANKS software program which has not been supported by EPA for several years and which may be particularly unsuited for the heated tanks. Sahu Test. ¶¶75-76; Tr. Vol. 15 at 3626-27.

Second, compounding the first error, was the failure to consider and apply the results of

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numerous studies from the last 10 to 15 years that show significant underestimation of tank emissions by the AP-42 calculations (the calculations that are embedded in the TANKS software.) Sahu Test. ¶¶77-80; Tr. Vol. 15 at 3597, 3599; Ex5524 (Presentation by the Texas Commission on Environmental Quality (TCEQ) relating to the Differential Absorption Lidar (DIAL) Project). In order to properly account for and consider what those studies have consistently demonstrated, Dr. Sahu multiplied Tesoro-Savage's air permit tank calculations by a factor of five (three being the most conservative with studies showing underestimates can be as high as a factor of fifteen). Sahu Test. ¶81; Tr. Vol. 15 at 3597. This change alone would result in VOC emissions of over 115 tons per year.

Third, Tesoro-Savage performed its potential-to-emit calculations using a true vapor pressure ("tvp") for Bakken Crude oil of 11 psi. This assumption affected two important components of Tesoro-Savage's air emissions. First, it affected VOC potential-to-emit calculations. In a proper potential-to-emit calculation, the higher end of Bakken crude vapor pressures should be used to calculate potential-to-emit. Bakken crude vapor pressures often exceed 11 tvp psi. Sahu Test. ¶¶47-50; Ex5521 (API Staff Analysis of Crude Oil Samples Submitted to PHMSA May 19, 2014), Ex5522 (ConocoPhillips, Safety Data Sheet for Bakken Crude Oil Sweet), Ex5523 (A Survey of Bakken Crude Oil Characteristics Assembled for the U.S. Department of Transportation, submitted by the American Fuel & Petrochemical Manufacturers, May 2014); Tr. Vol. 15 at 3624-25. Even using something less than the highest Bakken crudes vapor pressure will increase the VOC potential-to-emit.

Tesoro-Savage brushes off the tanks emission issue by claiming it will avoid having to capture and treat vapors for its storage tanks by controlling vapor pressure of the crudes it will accept. Corpron, Tr. Vol. 3 at 581; Corpron, Tr. Vol. 4 at 671-73. This position allows cost and

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design savings for the company; vapor pressure in excess of 11 tvp requires a costlier tank design that will capture and treat VOC emissions (and a major permit application would require BACT analysis). Corpron, Tr. Vol. 4 at 671-73; Sahu, Tr. Vol. 15 at 3613-15. During the hearing, it became clear that Tesoro-Savage does not intend to implement enforceable permit mechanisms to ensure it will not exceed the 11 tvp in its storage tanks. Mr. David Corpron testified that Tesoro-Savage would require customers of the terminal, through contract, to limit shipments to crude oil with tvp 11 psi or less. Tr. Vol. 4 at 671. He further claimed that Tesoro-Savage would test every train upon its arrival at the Vancouver terminal "cumulatively" for vapor pressure. *Id*. at 679. However, in response to questions about what would happen if a test demonstrated tvp higher than 11, he stated that the offending tank car (or train) would be unloaded into the storage tanks anyway and then the customer would be notified that the car/train did not meet the 11 tvp requirement. *Id*. at 680. Mr. Corpron admitted that this meant that Tesoro-Savage could be in violation of requirements to limit tvp in the storage tanks and that they would notify the state if that happened. *Id*. at 681.

Dr. Sahu's testimony made clear the difficulties for Tesoro-Savage in actually complying with the 11 tvp requirements. As Dr. Sahu explained, testing for Reid vapor pressure—the more common and desirable process as it is standardized—is not simple; precise requirements must be met for vapor and liquid ratios in the sample and care taken with the sample in obtaining and transporting it to a certified lab. Tr. Vol. 15 at 3616-17 and 3658-60. He testified that he had not seen any evidence of a lab on site at the terminal and therefore testing and analysis would not be instantaneous, Tr. Vol. 15 at 3618, 3619, lines 7-11; if Tesoro-Savage were actually going to maintain compliance and keep crude in excess of 11 tvp out of its tanks, then a train would need to sit and wait to be unloaded for at least several hours while samples are taken from a car in the

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train, transported to a certified lab, tested, and the results are transmitted back to the terminal. Tr. Vol. 15 at 3618. Dr. Sahu also noted that without assurances that every single car in a unit train (which exceed 100 cars) were loaded at the same facility in the Bakken from the same tank with no additions or deletions to the train en route, testing just a single car, or even some small subset of cars, may not yield accurate vapor pressure results for all the cars in the train. Tr. Vol. 15 at 3619-20 and 3622-23.

On rebuttal, Mr. Corpron explained that oil will be unloaded from all trains regardless of the vapor pressure of that oil because the pressure sampling is conducted from the unloading pipe as the oil is being unloaded into the storage tanks. Tr. Vol. 21 at 4876. He confirmed that while the facility awaits vapor pressure test results (which will take at least a few hours assuming the certified lab is nearby, traffic cooperates, and the lab can test the sample almost immediately), those cars/trains will be unloaded into the storage tanks, possibly causing exceedances of the pressure cap in the storage tanks. *Id*. at 4878. This means that entire train loads of crudes with true vapor pressure in excess of 11 psi may end up in the storage tanks.[23]

Tesoro-Savage has no real plan for how to comply with its blithe assurances that it would keep crude true vapor pressure to 11 psi or less, and has no real concern over whether and to what extent it would comply with its Clean Air Act permit requirements for storage tanks without vapor capture and treatment. The best plan Tesoro-Savage has allows only after the fact review and apologies; the VOC emissions will have long since been added to the region's air.

b. Marine vessel loading

Dr. Sahu also identified marine vessel loading as a potential source of VOC emissions and one that Tesoro-Savage, through Mr. Hansen and Captain Bayer, admits was purposely

[23] Each tank car holds about 30,000 gallons of crude oil which translates to over 300,000 gallons per train.

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omitted from any potential to emit calculation. As Dr. Sahu pointed out, EPA guidance provides for oil-loading air emission calculations based upon certain parameters. If the facility can demonstrate certain very specific parameters are met—precisely-measured and controlled pressure requirements during the entire loading process as well as vessel testing—then the facility can assume 100% VOC emission capture at vessel loading.[24] Sahu Test. ¶¶61-66 and Tr. Vol. 15 at 3631-33.

Nothing in the permit application or testimony from the facility shows that the vessels will conform to the precise negative pressure requirements necessary to assume 100% VOC emissions capture at vessel loading; indeed, Captain Bayer's testimony is that it cannot due to other safety considerations. That leaves the 97% emission capture option provided in EPA guidance, assuming that the facility ultimately has detailed, precise, enforceable permit requirements regarding vessel tightness testing and requirements. Sahu Test. ¶66 and Tr. Vol. 15 at 3636. As Dr. Sahu demonstrated, if 97% instead of 100% is assumed, on vessel loading emissions alone—that is, without regard to the serious errors in tank emission estimates discussed above—the Tesoro-Savage terminal will exceed 100 tons per year of VOC emissions requiring a major source application, modeling, analysis, BACT analysis, and ultimately a major source Prevention of Significant Deterioration Clean Air Act Permit. Sahu Test. ¶¶67-70 and Tr. Vol. 15 at 3596.

Finally, as Dr. Sahu explained in his testimony before the Council, 100 tons of VOCs annually is an extremely small fraction of the expected crude oil throughput of the facility—that

[24] Note that "sniffers" are not one of the options recognized as sufficient for these calculations by EPA. *See* Sahu Test. ¶65 (chart from EPA guidance). Sniffers can be an important and necessary tool for worker safety and for regular fugitive emission tests, but they are not utilized to determine vessel loading emissions for regulatory compliance or considered for potential to emit calculations. Tr. Vol. 15 at 3639-40.

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is, it does not take much of the crude product escaping as vapor to result in 100 tons per year of VOC emissions. Tr. Vol. 15 at 3637-38 and 3644-46. As Dr. Sahu testified, the margin of error is extremely small and given the many potential flaws with Tesoro-Savage's assumptions and their inability to precisely control their compliance, its assertion that it can maintain "synthetic minor" status when it takes only a fraction of a fraction of throughput escaping as vapor emissions is highly unlikely. Tesoro-Savage will plainly be a major source of VOC air pollution emissions as defined in the Clean Air Act and applicable regulations.

D. This Project Poses Unacceptable Environmental Justice Risks to the Neighborhood and Port Workers.

> *We just want to be heard finally. We want somebody to take our concerns into consideration very seriously and understand the ramifications that could and most likely would occur if this project were to go through and be complete. We are not expendable.*

Ms. Linda Garcia, Fruit Valley Neighborhood Ass'n, Tr. Vol. 16 at 3768.

> *We saw the amount of volume that was discussed. We have a very good understanding of what is done at the port in the amount of – there's a high potential for accidents in the maritime industry in the type of work we do. Eventually there will be a spill, we feel. … There's a current wind energy storage in this loop track. It wouldn't be just an oil terminal. We would be also inside of this loop track. … Our membership doesn't want to work around oil cars, doesn't want to work around an oil terminal.*

Mr. Jared Smith, President, ILWU Local 4, Tr. Vol. 15 at 3565-66.

This facility will pose significant unaddressed risks to communities and individuals that are already shouldering more of a burden than is just. The Council heard from Linda Garcia, a long-time Fruit Valley neighborhood resident and representative of the Fruit Valley Neighborhood Association where Ms. Garcia works as a volunteer to improve the lives and conditions of her neighbors and neighborhood. Tr. Vol. 16 at 3736-38.

As Ms. Garcia pointed out, the neighborhood and the Port have had a "good rapport" for a long time, working through disagreements or issues as necessary. *Id*. at 3740. Never before

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has the neighborhood outright opposed a project at the Port, but, as she testified, this one goes too far in its potential cumulative negative effects. Fruit Valley is bordered on two sides by rail and industry. *Id*. at 3742-43. It is near significant sources of mobile source pollutants of substantial public health concern such as diesel particulates. As Dr. Fanning and even Mr. Hansen for Tesoro-Savage pointed out, Fruit Valley residents will suffer increased health effects and risks associated with hazardous air pollutants from the terminal. It is squarely within the "blast zone" for anything happening at the terminal or on the rail. Tr. Vol. 16 at 3764 and Ex3136 (half mile and one mile buffer maps).

The neighborhood fits all of the characteristics of an environmental justice concern neighborhood—places where the demographics show the neighborhood has been or is likely to be unduly burdened and possibly at a disadvantage for shielding itself from industrial pollution effects. Those characteristics, as noted by Ms. Garcia and EPA itself, include incomes below state and regional averages, percentages of children higher than state and regional averages, percentages of non-English speakers above averages, and percentages of people of color or ethnic minorities above averages. *Id*. at 3745-47 and Ex5612.

These are important considerations for the Council in a number of respects. First, Fruit Valley already bears an undue share of industrial burdens for the community. Second, they will be the Vancouver citizens most at risk from both incidents at the terminal and the increased probability of rail incidents, as their exposure is not "linear" (that is, not like residents that live along a stretch of linear track). They are the community that will bear the brunt of increased air pollution; it is unlikely this increase will be borne by other neighborhoods, and certainly not to the same degree. Finally, Fruit Valley citizens are living proof against Mr. Todd Schatzki's unpersuasive arguments about letting the market tell you whether there is an adverse economic

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impact from the terminal proposal. Tr. Vol. 5 at 1079-81. Many people in Fruit Valley cannot simply pick up and move; the value of their homes may decrease, making a sale and purchase elsewhere more difficult. And even if values do not decrease substantially, people often live in less-expensive neighborhoods because that is what they can afford. Simply "moving somewhere else" is a much more limited, often nonexistent, option for residents of Fruit Valley given income and potential transportation constraints. The reality is that all people affected by the terminal are not equal players in a vast market of many possibilities.

In fact, Mr. Schatzki created an unusual model to downplay economic impacts of the terminal by tracking home sales and purchases. His simplistic model failed to consider the reasons people would not sell homes, either for high-end reasons of valuing a Columbia River view highly or low-end reasons of economic inability to sell a home and buy another one. Mr. Ernie Niemi, a natural resource damage economist, explained that Mr. Schatzki's failure to look at economic risks from oil spills was incorrect, and discussed passive use costs of healthy, thriving salmon populations of $2.2 - $3.6 billion. Tr. Vol. 15 at 3525-28.

Mr. Niemi also corrected Mr. Shatzki's oil-spills-can-cause-economic-benefits opinion, describing the crises caused by an oil spill and the economic costs that flow and yet are often unaccounted for. Tr. Vol. 15 at 3529-30; *id.* at 3531 ("Eventually the economy might be able to adjust to some of that by finding workers from outside and pulling them in, but that's, at best, a process that takes a while, employer and employees incur costs to do that and in some cases we see that the economy just sort of breaks and it never gets fixed.").

Similarly, Mr. Schatzki utterly failed to consider the actual cultural and environmental justice implications of his nonchalant assertion that fishermen and fishing people can fish elsewhere if there is an oil spill or accident. Written Testimony of Todd Schatzki (May 13,

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2016) ¶82; Tr. Vol. 5 at 1074-75. Mr. Shatzki failed to recognize even the most fundamental aspects of recreational and commercial fishing—that there are seasons, geographic limits, fisheries management, and the behavior of other fishermen that would affect a fisherman's ability to simply move to a new location after a fishery closure. Tr. Vol. 5 at 1074-76. Moreover, as was made clear by the testimony of many tribal members and representatives, tribal fishing is entirely place-based both in terms of treaty rights and also in terms of family histories and traditions, family and tribal identity, and cultural meaning. Mr. Schatzki admitted he did not consider tribal treaty rights to fishing access when making his conclusions. Tr. Vol. 5 at 1076-77. In this way, Mr. Shatzki completely ignored the fishing and cultural needs of the Tribal Nations who have lived on the banks of the Columbia River since time immemorial and cannot (and will not) just move to another fishing spot. *Id*. These environmental justice implications must be considered as well.

Tesoro-Savage's witnesses were similarly cavalier with the concerns of, and impact on, workers that are already employed at the Port and will continue to work in and around the facility's rail area, ILWU Local 4. An existing business at the Port will continue to store large wind turbine components <u>inside</u> the rail loop that will serve the oil terminal. Jared Smith, Tr. Vol. 15 at 3566. These workers will be in proximity to loaded trains, train unloading, the storage tanks, and the pipeline that leads to the marine loading area. *Id.*at 3566-67. The workers will not benefit from the terminal; their jobs will instead take on a new complication and a large new risk, Tr. Vol. 15 at 3565-66, for which Tesoro-Savage appears unwilling to accept any responsibility.

Tesoro-Savage's at-terminal risk witness, Mr. Kelly Thomas, produced a hyper-specialized model with limited inputs to look at risk from an accident at the facility, but only risk at the facility caused by the site itself, excluding earthquake risk. Tr. Vol. 6 at 1283-84. He set

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his risk tolerance at 1 death in a million for off-site populations, but set it notably lower for on-site workers—to 1 death in 10,000—because workers at the site understand the risk. Tr. Vol. 19 at 4509-10.[25] Mr. Thomas did not consider the ILWU Local 4 workers, and Mr. Larrabee refused to commit to supplying the union workers with protective gear and clothing when asked about mitigation measures at the end of the hearing. Tr. Vol. 21 at 5076-77. In fact, Mr. Thomas bluntly stated that even Tesoro-Savages's own workers may not be protected if the company doesn't want to spend the money because the benefits to the company may not outweigh the costs and the workers "accept higher risk" when they take the job. Tr. Vol. 19 at 4510, 4520; *see also* Corpron, Tr. Vol. 21 at 4883-85 (testifying that Tesoro-Savage would have to weigh the costs and benefits of burying pipelines on the north and east boundaries of the Clark County Jail Work Center before deciding whether to take this action, even though it would significantly reduce the risk to the 200 people at the Center). Obviously, Local 4 has made no such bargain. The suggestion that workers who need and want jobs freely accept hazardous risks without protective gear and clothing is utterly divorced from the reality of working people and choices that are often not choices at all.

The proposed oil terminal will be an outsized burden on certain members of the community who will reap few, if any, of the benefits but shoulder, once again, most of the risk. And those members also happen to be people whose "choices" whether in the housing or job market are constrained and whose voices have traditionally not been heard. The Council should, as Ms. Garcia implored, listen to those voices now and reject the undue and unfair burdens on behalf of the local community and the workers of Local 4.

[25] CRK incorporates reference the critique of Mr. Thomas's testimony presented by intervenor Clark County.

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E. Public Health Impacts of the Terminal Are Unaddressed.

> *[T]he primary impacts I and many other doctors are concerned about include (1) locomotive diesel exhaust, (2) noise from rail transportation, (3) risks of train derailment and either small or catastrophic oil spills, and (4) harm from increased rail traffic. I'm also concerned about the cumulative impacts of the several oil and coal transportation projects that have already been approved or are pending.*

Dr. Frank James, Written Testimony pg. 3.

Dr. Frank James was the only medical doctor to offer testimony about the broad range of public health impacts from the terminal. His written testimony focused on the anticipated public health impacts caused by diesel exhaust emissions from trains, equipment, and vessels; explosions, fires, and oil spills caused by train derailments; emergency response time impacts caused by traffic delays; and noise pollution from facility construction and operations, including train noise. Dr. James testified that a study called a "Health Impact Assessment" should be conducted for the populations living near the proposed facility in order to obtain data on how the facility would specifically impact their health in that particular place, based on the various forms of pollution caused by the facility. James Test. ¶¶8-9. As Dr. James pointed out, there are some risks that cannot be adequately mitigated, such as the risk of a fire or explosion along the rail route or at the facility. In the event of such a fire or explosion, responders, employees, and members of the public could be injured or killed, and such injuries and deaths would only increase if a rail accident occurs in an urban area. James Supplemental Test. ¶11.

Remarkably, Dr. James's testimony was entirely unrebutted by Tesoro-Savage except for his testimony about noise pollution. On the issue of noise, Dr. James explained that noise pollution can cause increased risk of cardiovascular disease, including increased blood pressure, arrhythmia, stroke, and ischemic heart disease; cognitive impairment in children; and sleep disturbance and resultant fatigue causing an increased rate of work time accidents. James Test.

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¶10. Some of the expected increases in noise pollution from the proposed facility's construction and operation will be significant, yet Tesoro-Savage has proposed no mitigation measures for noise pollution, aside from limiting its construction to daytime hours (which it is required to do by the Vancouver Municipal Code in any event). *Id*. ¶22.

Ms. Kristen Wallace, a witness for Tesoro-Savage, modeled predicted noise increases caused by project construction and project operations, and the impacts these increases would have on nearby people at the Clark County Jail Work Center, the Tidewater Office Building, and the Fruit Valley Neighborhood. Ms. Wallace predicted "minimal" construction noise impacts to these areas, but only because the increases would be within local and state noise regulations, construction would be temporary, and construction would be limited to daytime hours. Written Testimony of Kristen Wallace (May 13, 2016) ¶16. Yet the May 2016 revised application predicts at least a nine decibel increase in noise for the Tidewater office building and at least a seven decibel increase for the Jail Work Center during construction, almost doubling ambient noise. Ex0001 (May 2016 App.) at 4-7, 4-8, 4-10. The decibel ranges experienced by these two areas due to various kinds of construction equipment are expected to be from 55-90, depending on the type of equipment and the distance from the area. *Id*. at 4-10. For perspective, 96-110 decibels is the loudness of a train horn at 100 feet. 49 C.F.R. 229.129(a). The people living and working in these areas are unlikely to perceive this construction noise pollution as "minimal," even if they are within certain state and local guidelines. Moreover, Ms. Wallace did not model any noise impacts on people living along the rail route in Washington, and it was her testimony that additional train horn blasts caused by the project do not count as a new significant noise impact because there are already train blasts along the rail route and near the facility. Wallace Test. ¶51. Again, additional horn blasts are unlikely to be considered a negligible impact to the

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people whose work, conversations, recreation, or sleep is interrupted every time a horn sounds.

F. It Is Undisputed that Rail Risks Are Caused By This Project.

> *The Tesoro-Savage project would involve a sudden upsurge of huge volumes of a uniquely dangerous form of oil being transported into and through the region, in 3-million-gallon unit trains … at high speeds through both heavily populated and environmentally sensitive areas where such risks have never been experienced nor prepared for.*

Dr. Fred Millar, Written Testimony pg. 29.

CRK incorporates by reference the City of Vancouver's arguments and evidence regarding rail risks and only highlights a few additional points here. The most important fact for this Council to consider regarding risks associated with transport of crude oil to the terminal by rail is that even Dr. Christopher Barkan, Tesoro-Savage's expert witness on this issue, admitted that his model shows oil unit trains coming to this proposed terminal derailing every 1.5 to 2.4 years. Barkan Written Test. at 9; Tr. Vol. 20 at 4744-47. Moreover, Dr. Barkan's estimate for oil spills of any size coming from derailments is once every 6.4 years for DOT-117 tank cars and a spill as large as 30,000 gallons from DOT-117s once every 23 years. Barkan Test. at 6; Tr. Vol. 20 at 4601. The supplemental testimony supplied by Dr. Barkan in answer to Council Member Rossman's questions about using the higher end of his derailment range (Tr. Vol. 20 at 4744-51) confirms that the higher accident rate can be propagated through the table to adjust other estimates, including the oil spill estimates. Sworn Supplemental Testimony of Chris Barkan (Aug. 22, 2016) at ¶6; Tr. Vol. 20 at 4748, lines 12-19 ("MR. ROSSMAN: So am I right that if that figure were propagated through the rest of the table, we would see a higher rate of return for any spill and then also a higher rate of return for all the spills of particular volumes at a higher rate of return for those volumes at given locations? THE WITNESS: Yeah. If we do it more often, it's going to reduce the return rate or return period."). For example, using the higher end of Dr. Barkan's derailment range would lead to estimate of a spill of 30,000 gallons once

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every 14 years, somewhere along the 385-mile route. Dr. Barkan claimed that "the probability of a spill at a particular location is quite remote," Tr. Vol. 20 at 4603, lines 2-3, but his probability of a significant oil spill somewhere along the route is much more frequent.

Moreover, these figures are not as conservative as claimed by Dr. Barkan. These conclusions came after Dr. Barkan developed and used a model based on confidential industry data that is structured to show as little risk as possible by (1) assessing rail transportation risks only from the Washington/Idaho border to the Port of Vancouver, Tr. Vol. 20 at 4571; (2) using data from 2005-2009, a period of time that does not include the significant and sharp increase in crude oil unit trains that occurred, *id.* at 4676; (3) largely ignoring the smaller yet far more frequent incidents by separating out and piece mealing the risk analysis into individual tank car categories, *id.*; (4) including all freight trains (as opposed to oil unit trains that the federal agency in charge of these matters, the Pipeline and Hazardous Materials Safety Administration ("PHMSA"), has stated appear more often in derailments than other types of trains and that oil unit trains' risk must be differentiated), *id.* at 4675, lines 16-17;[26] (5) failing to acknowledge that some DOT-117s tank cars will in fact be retrofits with thinner steel—a factor that Dr. Barkan noted is important in terms of the chances that the tank car will breach and spill oil, *id.* at 4589, lines 21-24; (6) not including the effect of braking in his model, *id.* at 4676; (7) looking only at Tesoro-Savage's additional four trains a day, not a cumulative number of trains, *id.* at 4681; and (8) looking only at in-bound trains, cutting in half the train journeys through the state, *id.* at 4769-70. Even with all the favorable assumptions made, and even with a failure to calibrate or compare the model to the real world incidents that have been happening throughout the country, Dr. Barkan shows that crude oil trains will derail in Washington and that they will often spill

[26] *See* 80 Fed. Reg. 26,644 (May 8, 2015) (final PHMSA rule adopting new tank car standards).

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their contents when they do.

Dr. Barkan's estimates must be considered in light of the testimony of Mr. Robert Chipkevich and Mr. Michael Hildebrand, who were called as witnesses by the City of Vancouver. Both gentleman came with real world experience and expertise in addressing and analyzing hazardous material rail accidents and spills, as opposed to more academic exercises in modeling. Mr. Chipkevich described 24 derailments of unit trains with releases between the years 2006 and 2015, plus the Mosier derailment which occurred this year. Chipkevich Test. at 12; Tr. Vol. 10 at 2363-64; *id*. at 2365-66; *see also* Ex3125 (June 23, 2016, Federal Railroad Administration, Preliminary Factual Findings Report, Derailment, Mosier, OR).

Dr. Fred Millar, who submitted written testimony on behalf of CRK, also pointed out how derailments will likely continue, with breaches and releases, even under the new federal regulations, because the evidence of incidents cited by Mr. Chipkevich makes clear that crude oil unit train derailments and releases occur even under the regulated conditions. The derailments, as was shown in Mosier, occur at speeds below the posted speed limits; they involve even the newer "better" jacketed CPC-1232 rail cars; and the guidance is essentially still to let the fires burn. Millar Test. at 8, lines 13-14; at 19, lines 9-16; at 12-13. Relatedly, the alleged vast improvement between types of tank car doesn't seem so significant when one considers the actual numbers. For example, the speed at which an oil tank car punctures is vital to understanding oil spills and fires. Unjacketed CPC-1232 tanks cars punctured at 8.5 miles per hour, *id*. at 19, lines 5-7, compared to DOT-117's, which punctured at 12.3 miles per hour. Barkan, Tr. Vol. 20 at 4717, lines 5-12. While those numbers show a 69% improvement in puncture speed, considering that most train derailments occur at speed well over either number shows that the improvement may not have much real world impact. Tr. at 4714; Ex5547

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(DOT/PHMSA draft regulatory impact analysis 2014) at 118 (Table TC32).

Mr. Hildebrand and other experts also all testified to the inability to effectively fight a tank car oil fire in its initial stages. Mr. Hildebrand cautioned that usually the only safe strategy with the resources and expertise available is to allow the fire to burn down, managing other tank cars to try and keep them cool to avoid additional breach, fire, and spillage, until the fire burns down and stabilizes at the "equilibrium" stage (which can take between 8 and 12 hours). Hildebrand Test. at 15-17; Tr. Vol. 11 at 2512-17, 2521, lines 15-18. In other words, environmental damage and significant threats to public and emergency responder safety is a given when even three tank cars breach and burn, and yet this type of damage was precisely what Dr. Barkan did not address in his study. Tr. Vol. 20 at 4690, lines 6-9 ("Q. But there's nothing about the effects of that spilled oil, which it's environmental or human or anything like that? A. No, that was not an objective of our study.").

The most recent accident, of course, occurred in Mosier, where this region saw (and continues to see with groundwater contamination, *see* Ex5629 (State of Oregon DEQ Memo re Mosier Spill (July 8, 2016)), the reality of even a small to moderate size incident with fire, spills, evacuations, and a town's water treatment and supply disrupted for several days. As noted by the City of Vancouver in closing arguments, Mosier is an incident where every witness testified that somehow, we were "lucky." "Lucky" because the wind wasn't blowing; "lucky" because it was early summer as opposed to dry fire season; "lucky" because ½ mile either way on the track and the potential for serious injury to life would have been substantially increased; "lucky" because Mosier's volunteer force and local volunteer mutual aid firefighters were available that day; "lucky" because the tank cars ruptured on an area of track that was not right next to the river, as much of the track in the Columbia Gorge is. The list could go on. Luck, however, is for

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gambling. It is not a reasonable or responsible risk management strategy.

And finally, with rail risk, CRK urges the Council to pay particular heed to the testimony of CRITFC representatives and tribal fishing families. Even the Mosier incident disrupted several important days of fishing, days that can't be made up. Increased hazardous rail traffic[27] is a risk not just of spills and fires, but actual physical risks to tribal people who must fish right beside tracks and/or cross them at many locations along the route, not simply at designated in-lieu fishing sites.

G. Oil Spills Both Large and Small Would Harm Columbia River Fish and Wildlife.

An oil spill in the Columbia would have devastating effects on the rich diversity of species that inhabit the Columbia River and its shores, including impacts to endangered and threatened species. CRK relies on and adopts the arguments presented by the Yakama Nation, the Umatilla Tribe, and the Columbia River Inter-Tribal Fish Commission with regards to the project's impact on the exercise of the Tribes' treaty-protected fishing rights, the project's impact on aquatic species, and the project's impact on local estuaries. In addition, CRK highlights the testimony of Dr. Stanley Rice and Dr. Zachary Penney, both in their initial testimony and in response to the testimony of Tesoro-Savage witness Dr. Gregory Challenger.

1. Testimony of Dr. Zachary Penney

> *As some of the tribal testimony this morning described, we're very intimately connected with those fish. And so in the Nez Perce culture, we were always told that salmon would leave our native areas to go out to far off places and bring back gifts back to the people. So that was a good part of my education, to actually go see where they go and who – it isn't just the Nez Perce people they*

[27] Ms. Kaitala from BNSF testified that there were no additional trains on BNSF's rail lines serving this project, because the rail system is fluid and ever-changing. Tr. Vol. 7 at 1542-43. Dr. Barkan admitted that whatever the fluidity of rail traffic in general, four additional trains loaded with crude oil will pull into the Tesoro-Savage facility every day. Tr. Vol. 20 at 4768, lines 18-23 ("This study is the incremental risk of these four trains added—there's no estimate of the risk of the current traffic. … [O]ur report was the additional risk as a result of this potential additional traffic.").

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enrich, but residents of British Columbia and Alaska and all sorts of places.

Dr. Zachary Penney, Tr. Vol. 17 at 4021.

An oil spill in the Columbia will present an additional stressor on salmon and steelhead that already face numerous serious stressors in habitat degraded by dams and reservoirs, as well as climate change. Tr. Vol. 17 at 4027-41. Dr. Zachary Penney, a natural resources scientist who specializes in salmon and sockeye research, explained to the Council that an oil spill could be dangerous for entire populations of these fish. *Id.* at 4034. Many of these stocks are severely depleted and nearly extinct, and in recent years they have been exposed to water in the Columbia that is too warm to allow their survival. *Id.* at 4030-33. Warm water effects will only increase in the future, as climate change takes its toll and compounds the existing warm water problem caused by the reservoirs. *Id.* at 4035, 4041. Dr. Penney explained that an oil spill in the Columbia would make the fish populations even more vulnerable to death, as it would be an additional stressor in this degraded habitat. *Id.* at 4029-30. An oil spill could also interfere with the species' ability to find their way back to their spawning grounds and could make them more vulnerable to predation. *Id.* at 4051, 4060. Moreover, Dr. Penney asserted that an oil spill is dangerous for entire populations of salmonids, not just individual fish, especially because the Columbia River is a mixed stock system, where different salmon stocks swim in aggregate. *Id.* at 4034, lines 16-18.

2. Testimony of Dr. Stanley Rice

So you can see how there would be this long-term effect. Did the oil kill these animals directly? No, it didn't. But did they survive the environment, come back and reproduce? Not likely at all. And that's how oil kills.

Dr. Stanley Rice, Tr. Vol. 17 at 4095.

Dr. Stanley Rice is a world renowned biologist with extensive experience studying the effects of oil spills. In his long career as a scientist for NOAA Fisheries, Dr. Rice studied the

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effects of oil spills on organisms, publishing over 130 peer-reviewed publications. Tr. Vol. 17 at 4065-66. He was one of eleven expert biologists to testify in the Deepwater Horizon oil spill trial on behalf of the United States. *Id.* at 4066-67.

Dr. Rice's decades of experience studying the long-term effects of oil spills uniquely qualified him to educate the Council about the impacts of an oil spill to species—impacts that may occur for many years after the oil is spilled. As one example, Dr. Rice discussed the *Exxon Valdez* oil spill, where half a million or more birds were killed in the immediate aftermath, and seal and sea otter carcasses were found, yet these immediate species deaths were only the beginning of the impacts. *Id.* at 4078. Two pods of killer whales lost forty percent of their populations in a year or so after the spill, and one of these pods lost all reproductive females. *Id.* at 4078. A group of sea otters also continued to struggle for two decades after the spill, and scientists later learned these low population numbers were a result of repeated oil exposure as the otters dug for clams, sometimes breaking into an oil-soaked sediment layer. *Id.* at 4079-81. In addition, scientists observed elevated pink salmon embryo mortality for four years after the spill, resulting in an estimated loss of about two million adult fish. *Id.* at 4082.

These varied and long-lasting species effects negatively impacted humans as well. Dr. Rice testified that the village of Chenega, which relied on a limpet and chiton harvest in the intertidal zone in Prince William Sound for food, lost this traditional food source when the spill occurred. *Id.* at 4075-76. Astoundingly, Dr. Rice testified that scientists continue to find oil at the *Exxon Valdez* spill site some 26 years after the spill. *Id.* at 4073. In some beaches, when you dig a hole, "oil will seep in from the sides and begin to fill that up." *Id*. at 4073-74, lines 25, 1.

Dr. Rice disagreed with the testimony of Dr. Gregory Challenger that marine mammals largely avoid oil spills. He testified that avoidance is not always possible; for example, when

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killer whales surface in an oil spill, the whales must immediately inhale because they always exhale right before surfacing. *Id.* at 4087. Sea otters, too, often expose themselves to oil unintentionally as they dig holes, and then must preen the oil off their paws. *Id.* at 4087-88. Dr. Rice further testified that although birds are smart animals, they cannot avoid what they do not know. *Id.* at 4088.

While oil kills birds directly, oil kills fish indirectly. *Id.* at 4095. In pink salmon embryo studies, scientists found that when embryos are exposed to very low doses of polycyclic aromatic hydrocarbons ("PAH"), there are declining returns in adult fish. *Id.* at 4088-91. At an exposure of just 18 parts per billion of PAH, scientists observed a 40% decline in adult returns; at 5 parts per billion, there was a 20% decline. *Id.* Another study demonstrated that one reason for these significant delayed declines is that when embryos are exposed to oil, the fish tend to experience abnormal heart development and heartbeats, which can lead to adverse effects on swimming performance, a reduced ability to avoid predators, and a reduced efficacy at catching prey. *Id.* at 4092-94.

Finally, Dr. Rice testified that the 1984 Mobil oil spill on the Columbia was one example of how this particular waterway will tend to transport some oil downstream in the current. He reported that the spill traveled about fifty miles to the mouth of the Columbia in just 72 hours, and then continued north up the Washington coast. *Id.* at 4096. With the river's high energy, high currents, swirls, and eddies, Dr. Rice testified that it is easy for some oil to get mixed into the water column, rendering booming ineffectual. *Id.* at 4097-98.

In sum, Dr. Rice thoroughly explained why oil spilled in the Columbia will likely impact fish, birds, marine mammals, and other species as it travels downstream and out through the mouth of the river to the Pacific Ocean. Unfortunately, his testimony revealed that these effects

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will be long lasting, harming individuals as well as having population level effects for years to come. This testimony stands in stark contrast to the unrealistically optimistic testimony of Dr. Challenger.

3. Testimony of Dr. Gregory Challenger

During his initial appearance before the Council, Dr. Gregory Challenger soft-pedaled the ecological impacts of an oil spill. Tr. Vol. 8 at 1905-1073. During his rebuttal testimony, Dr. Challenger doubled-down on his assertion that oil spills caused no population impacts, despite a slew of scientific studies finding otherwise. Tr. Vol. 19 at 4435-57.

To do so, he appears to define population impacts as complete extirpation, a notion that Dr. Rice or Dr. Penney would dismiss. In his rebuttal testimony, Dr. Challenger repeatedly used this remarkably severe measure of "extirpation." Tr. Vol. 19 at 4441, lines 19-24; Tr. Vol. 19 at 4444, lines 10-24. Dr. Challenger dismissed sub-lethal effects and significant adverse consequences—like 2 million missing pink salmon spawners—that caused harm to salmon and to people and animals that rely on those salmon. *Id*. at 4452-53. Dr. Challenger's dismissal of this kind of impact should be unacceptable in the State of Washington.

In an oil spill in a river, river currents will generally carry oil downstream, possibly to "great distances," unless wind washes the oil ashore. Tr. Vol. 8 at 1909-10, 1916, line 1. When oil is carried far downstream, Dr. Challenger admitted the geographic scope "does represent a response challenge to pick it all up." *Id*. at 1916, lines 1-2. In other words, river currents make oil clean up difficult because the oil can be washed great distances away, in this case eventually out to sea.

On the issue of impacts to salmon from an oil spill, Dr. Challenger testified that oil can adversely affect fish gills and can result in fish kills. *Id*. at 1920. Juvenile fish are especially susceptible to the toxic effects of oil. *Id*. at 1922. In any given five day period of exposure for

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smolts or month long period of exposure for adult salmonids, one to two million smolts and 30,000 or 40,000 to 130,000 adult salmonids could be exposed to oil. *Id*. at 1924, 1953. This estimate only applies to salmonids and does not include all other potentially exposed fish like sturgeon, chad, and lamprey. *Id*. at 1953. In addition, at places where tributaries intersect with the Columbia or at the river mouth, where there is a lot of sediment load, oil is going to be transported down to the sediment and could expose salmon spawning nests to oil. *Id*. at 1919. Dr. Challenger specifically admitted in his rebuttal testimony that Columbia River chum spawn in the lower Columbia River. Tr. Vol. 19 at 4456, lines 5-8. As a result, chum spawning habitat could be harmed by a spill at the proposed facility.[28] During this testimony, Dr. Challenger also admitted he was aware of a recent article demonstrating adverse swimming effects on juvenile sockeye salmon after exposure to diluted bitumen. Tr. Vol. 19 at 4456, lines 15-25; *see* Ex5332 (report regarding effects of diluted bitumen exposure on juvenile sockeye salmon). He also conceded that Columbia River salmon are a critical food source for many orcas. *Id*. at 4457, lines 17-20.[29]

Dr. Challenger largely agreed with the testimony of Mr. James Holmes and Dr. Eric English (both witnesses called by the Counsel for the Environment) with respect to their estimates of economic losses from oil spills.[30] Dr. Challenger agreed with Mr. Holmes that an estimate of $171.3 million is in the range of an effective worst-case damages to the environment from a spill. *Id*. at 1935-36. Nor did Dr. Challenger take issue with Dr. English's estimate of a

[28]Columbia River chum are listed as threatened under the Endangered Species Act. 70 Fed. Reg. 37,189 (June 28, 2005).
[29] The Southern Resident Killer Whale population is listed as endangered under the Endangered Species Act, and declines in salmon populations is an explicit factor in that listing decision. 70 Fed. Reg. 69,903 (Nov. 18, 2005).
[30] CRK further relies on the arguments and evidence presented by the Counsel for the Environment on the issue of natural resource damages.

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potential $4.7 million loss in revenues from commercial fishing, not including tribal fisheries. *Id*. at 1936-37. He testified that commercial fishing closures are common after oil spills due to human health concerns. *Id*. at 1937. Dr. Challenger further stated that he has no reason to doubt Dr. English's estimate of a decline of $14.4 million in expenditures by recreational anglers in the event of this type of oil spill. *Id*. at 1939. He also agreed with Dr. English that it is possible there would be damages of about $17.8 million relating to the decline in recreational fishing. *Id*. at 1939. Dr. Challenger added that he also agreed there could be a stigma attached to eating fish from the Columbia River after an oil spill, which would also impact fisheries. *Id*. at 1940.

Finally, like many Tesoro-Savage witnesses, Dr. Challenger testified in a consequence-free bubble. "The other problem with Mr. Challenger's testimony is it focuses solely on the probability and it doesn't really examine the consequences. And I saw this as a consistent problem through several pieces of testimony. Remember, when you're doing a risk analysis, risk is spill probability times consequences." Harvey Pre-Recorded Tr. at 35. Even with a low probability of an oil spill, if the consequences are high—as they are for an oil spill in the Columbia River—the risk remains high. *Id.* And that risk, again, is an area Tesoro-Savage cannot mitigate or define away.

H. The Project Should be Denied Because It Would Harm Local Community Interests and Violate City and County Land Use Authorities.

> *Especially with a large use or one that poses a particular impact … you would look at off-site impacts. A good example might be if you were going to locate a fertilizer plant, you might look at its proximity to a school, to a nursing home, to other kinds of residential uses where emergency response, in the event of a potential accident, would be difficult or certain populations might be affected, such as an elderly population. So you are looking at off-site impacts, and that really is the nature of land use reviews.*

Mr. David Wechner, Tr. Vol. 18 at 4138.

As discussed above, the Council's mandate is to balance the broad interests of the public

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against the purported benefits of the project. RCW 80.50.010. That mandate includes consideration of the project's land use impacts, as the Council's decision must ultimately "protect state and local governmental or community interests affected by the construction or operation of the energy facility." WAC 463-64-020. Although the Council has already issued a limited ruling on consistency with Vancouver's land use map and zoning code, it noted that on- and off-site land use impacts, including "impacts to neighborhoods," remained to be adjudicated. EFSEC Order No. 872 at 14 n.105.

The testimony of Mr. David Wechner, a professional land use planner with experience working for both the City of Vancouver and Clark County, focused primarily on the dramatically increased rail traffic that the project would generate (an issue that Tesoro-Savage would rather ignore), and the negative consequences that would follow for Vancouver and the many Washingtonians who live and work near the tracks. Mr. Wechner explained in detail how the project, if constructed and operated, would nearly triple the number of trains traveling to the Port of Vancouver on a daily basis, which would conflict with many of the policies in the City of Vancouver's Comprehensive Plan. Written Testimony of David L. Wechner (May 13, 2016) ¶¶18-46. Mr. Wechner explained how the project and its rail traffic would negatively impact local neighborhoods, many of which are comprised of at-risk populations, Wechner Test. ¶¶47-70, and he explained how the project would frustrate the city's vision for future growth and efforts to develop the downtown and waterfront areas, *id.* ¶¶22, 46. The City of Vancouver confirmed these conflicts. Written Testimony of City Manager Eric Holmes (May 13, 2016) at 4-24 (impacts on downtown Vancouver and the city's strategic planning efforts); Tr. Vol. 12 at 2826-30 (same); *id*. at 2900-01 (Vancouver's continuing efforts to overcome the barrier-like effect of the railroad tracks). The city's recent code amendment permanently banning oil

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terminals within the city's industrial districts confirms this vision. Ex3137 (Vancouver Ordinance No. M-4170).

Mr. Wechner also discussed the project's inconsistency with the city's Shoreline Management Program, Wechner Test. ¶¶77-93, in part based on the project's greenhouse gas emissions, *id*. ¶81, which are clearly significant. Sahu Test. ¶¶84–93. *See also* Wechner Test. ¶¶83–93 (discussing potential impacts on sensitive downstream environments and conflicts with Vancouver's shoreline use and development regulations). And he discussed the project's many impacts on local recreational resources, impacts on several regionally significant trails, and its conflicts with the Clark County/City of Vancouver Regional Trail and Bikeway Systems Plan. Wechner Test. ¶¶71-78. *See also* Tr. Vol. 12 at 2833–38 (discussing the proposed oil-train traffic's proximity to recreational resources within the City of Vancouver). Like the project's impacts on adjacent neighborhoods, its impacts on recreational resources are directly relevant to the Council's balancing mandate. RCW 80.50.010(2) (requiring the Council to "enhance the public's opportunity to enjoy the esthetic and recreational benefits of the [State's] air, water and land resources").

1. The project should be denied because it conflicts with Vancouver's comprehensive plan and would cause unprecedented land use impacts.

The Council should reject Tesoro-Savage's suggestion that the City of Vancouver's Comprehensive Plan is irrelevant because it allegedly applies only to the adoption of development regulations, not to the approval of individual projects. *See, e.g.*, Tr. Vol. 3 at 484. That view was disproved on cross-examination of Mr. Brian Carrico. *Id*. at 486-87. It was rebutted by Mr. Wechner. Tr. Vol. 18 at 4135. And it ignores the Legislature's requirement that the Council ensure consistency with comprehensive plans. *See* RCW 36.70A.103 (providing, in part, that "[s]tate agencies shall comply with the local comprehensive plans . . . adopted pursuant

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to [Washington's Growth Management Act]"). A comprehensive plan "represents a city's or county's effort to shape its future by planning for future growth and development." Wechner Test. ¶8; Tr. Vol. 18 at 4134-35. In order for Council to serve its role as trustee for future generations, WAC 463-47-110(1)(b), and to protect local government and community interests in the siting process, WAC 463-63-020, it must consider the comprehensive plans of local jurisdictions. Finally, in its ultimate recommendation to the Governor, the Council must address whether a proposed project would violate a local government's land use plans, zoning ordinances, and other development regulations. WAC 463-28-060(3).

The Council should also reject Tesoro-Savage's suggestion that it is not proposing physical improvements to the rail corridor, and therefore the project's off-site land use impacts are somehow irrelevant to these proceedings. Tr. Vol. 3 at 478. That argument is factually and legally mistaken.

First, Tesoro-Savage is proposing physical improvements to the rail corridor, albeit at the end of the line. *See* Ex0001 at 201 (Application § 2.1.1.6; discussing additional track to be added to the rail loop at Terminal 5); *id*. at 216 (Application § 2.3.1.1; discussing proposed construction of unloading tracks). Despite Mr. Carrico's unsupported assertion that the railroad yard and rail loop at the Port of Vancouver are not part of the rail corridor, Tr. Vol. 3 at 540, lines 20-22, those elements are physically connected to the BNSF main line. They are being improved with the specific intent of increasing the number of trains that may be processed on a daily basis, which will increase rail traffic locally and spread the terminal's impacts across the entire state. *See* Tr. Vol. 18 at 4139. Finally, those elements of the Port's rail yard are, by definition, the end point—and thus part of—the larger rail corridor.

Moreover, physical improvements are not necessary to trigger review of off-site impacts.

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This is true under SEPA, the Shoreline Management Act, the Vancouver and Clark County plans and rules, and every other type of impact covered by the Council's regulations, including noise, wildlife impacts, and socio-economic impacts. WAC 463-60-252 (noise), -332 (habitat, vegetation, fish and wildlife), -535 (socio-economic impacts). And it is true of impacts on transportation systems, traffic hazards, and other impacts relating to vehicular, waterborne, and rail traffic caused by a facility under EFSEC's jurisdiction. WAC-463-60-372. *See also* Tr. Vol. 18 at 4138-39 (noting that off-site impacts are considered in the land use context). Indeed, faced with a number of counter-examples to his testimony, Mr. Carrico ultimately admitted that an increase in the intensity of rail traffic (not just physical improvements) should be considered during the land use review process. Tr. Vol. 3 at 499, lines 8-13. Here, even if Mr. Carrico did not analyze that issue, *id.* at 496, the proposed project will clearly intensify rail traffic on the BNSF main lines, Tr. Vol. 18 at 4172, and the Council should fully consider impacts flowing from that increased intensity of use in its recommendation.

Nor should the Council ignore the project's off-site impacts on the basis that the terminal is proposed to be sited on the "fringe" of the city. Tr. Vol. 3 at 456, lines 9-10. Mr. Carrico later clarified that his view on that issue relates only to the proposed terminal itself, not to the proposed increased rail traffic along the BNSF main lines nor the impacts caused by that increased traffic. *See id*. at 473-74. As Mr. Wechner explained, the increased rail traffic impacts are among the most contentious elements of the project. That the terminal itself may be on the edge of the city does nothing to alleviate the project's impacts, which will be felt in many neighborhoods, including downtown Vancouver. Wechner Test. ¶¶13, 24.

2. Neither the City's plans nor the West Vancouver Freight Access Project approved the impacts associated with the proposed terminal.

Mr. Carrico suggested that Vancouver has already addressed future rail impacts in its

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various planning documents. Carrico Test. at 15, 30-33. That view, however, quickly fell apart at the hearing when, in response to Council Member Snodgrass, Mr. Carrico admitted that those documents did not analyze specific rail volumes, impacts of increased rail traffic on the city's neighborhoods, or potential impacts associated with transporting a highly volatile product through the entire length of the City of Vancouver. Tr. Vol. 3 at 475-76. *See also* Tr. Vol. 18 at 4141. Without analyzing those project-specific impacts, the city could not have evaluated and planned for the specific impacts of the proposed terminal.

Faced with that reality, Mr. Carrico retreated to his stock position that it is impossible to have land use impacts along the rail corridor without physical improvements to the track or changes to the "type" of use. Tr. Vol. 3 at 476, lines 20-23; *id*. at 478, lines 4-6. As discussed above, he later retracted both of those arguments. *Id.* at 499, lines 8-13 (admitting that increased intensity may cause land use impacts, and may be appropriately considered during individual project review). He also opined that the project cannot cause land use impacts along the rail corridor because the tracks predate much of the city, and because developers and the city "should have considered that rail traffic is variable and there's a variety of cargoes that can be moved down that corridor." *Id.* at 477, lines 1-3. But what developers and the city "should have" done in the past does not relieve the Council of its responsibilities now—namely, to consider all impacts that bear upon the Council's broad balancing mandate, including off-site impacts associated with increased rail traffic. Moreover, as Council Member Stone noted at the hearing, much of the city's development occurred before "significant changes in rail traffic," including the changes anticipated for this project. *Id.* at 482, lines 16-21. There is simply no evidence that the city's planning documents authorized or endorsed the project in advance.

Relatedly, Tesoro-Savage has argued that the rail traffic and hazards associated with the

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proposed project were envisioned by the West Vancouver Freight Access Project ("WVFA Project") and can now be ignored. Carrico Test. ¶37. Again, Tesoro-Savage is mistaken. First, neither the number nor the length of new trains generated by the Tesoro-Savage project were approved as part of the WVFA Project. Ex0244 (WVFA anticipated to generate no more than 3.5 additional trains on a daily basis, with an average length of 96 freight cars). In contrast, the proposed oil terminal is anticipated to draw an average of 4.7 additional trains to the port on a daily basis (1,713 trains per year), for a total of 9.4 train trips to and from the Port each day. *See* Ex0001 at 740 (Application § 4.3.3.2); Tr. Vol. 18 at 4183. This represents nearly 35% more train traffic, and with longer trains, than was envisioned by the WVFA Project. As part of this increased traffic, each oil train would pass through downtown Vancouver three times before heading back to the oil fields. Wechner Test. ¶13.

Second, those additional trains would be entering the Port of Vancouver after traversing the entire length of the City of Vancouver along the Columbia River. Wechner Test. ¶12; Tr. Vol. 3 at 425, lines 4-7. This, too, was not envisioned by the WVFA Project, as that project was largely agnostic as to the train's origins and ultimate routes to the Port. *See* Tr. Vol. 18 at 4132. Finally, Mr. Carrico admitted on cross examination that the WVFA Project did not envision that the rail improvements would be used by oil trains, and predated much of the knowledge we have gained about the dangerous nature of that cargo. Tr. Vol. 3 at 465-66. Yet, it is in part the dangerous nature of oil trains, and the risk of derailment, that has animated many of the concerns voiced by the City of Vancouver and its neighborhoods. *See, e.g.*, Tr. Vol. 12 at 2851, line 8 to 2854, line 1 (testimony of City Manager Eric Holmes; discussing off-site impacts related to crude-by-rail shipments associated with the terminal); Tr. Vol. 21 at 3773-74 (testimony of Linda Garcia, community outreach coordinator for the Fruit Valley Foundation and secretary for

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the Fruit Valley Neighborhood Association); Wechner Test. ¶33 (noting unique risks of crude-by-rail shipments for downtown Vancouver and the Fruit Valley neighborhood). The WVFA Project simply did not envision the unique, project-specific impacts of the Vancouver Energy Terminal—including the risk of derailments, oil spills, fires, and explosions.

III. TESORO-SAVAGE FAILED TO SUPPLY THE FINANCIAL ASSURANCES NECESSARY TO PERMIT THIS FACILITY.

Testimony at the hearing demonstrated that the organizational and financial assurance model for the Tesoro-Savage oil terminal will be business as usual for the industry. Business as usual means that the terminal will be operated by a limited liability shell that has no employees, no assets of meaningful value, and some amount of insurance that may or may not be adequate to cover all incidents at the terminal and will do nothing to address increased rail and marine transport risk outside the strict terminal boundaries.

A. Tesoro-Savage Is a Limited Liability Company.

Tesoro Savage, LLC (the business that will operate the Vancouver Energy Distribution Terminal, although Mr. Larrabee was unclear on this point in his initial testimony, Tr. Vol. 3 at 410) is a Delaware LLC. Casey, Tr. Vol. 9 at 2000.[31] Its company structure and organization will be governed by Delaware law. *Id.*[32] Mr. Larrabee testified and Mr. Keith Casey confirmed

[31] In fact, Mr. Larrabee said a number of things about who will operate what part of the terminal. Mr. Larrabee said Savage Companies will "operate" the train unloading, Tr. Vol. 2 at 298, and Tesoro Refining will "operate" the marine part of the terminal. *Id.* Yet later, in response to questions from Council Member Rossman and on cross-examination, he was unclear about whether financial liability aligned with operational control and said he was unsure about "details" of operation and that some of it is yet to be determined. *See* Tr. Vol. 2 at 390, 392, 395-96 and Tr. Vol. 3 at 410.

[32] Ownership and corporate responsibility for the terminal is buried under layers of limited liability entities organized in other states, mainly Delaware, and each with minimal assets. Tesoro Savage LLC is a joint venture of Tesoro Marketing and Refining Companies, itself an LLC and a subsidiary of Tesoro Corp., and Savage Companies, a privately held organization. Savage Companies offered no testimony about its structure or financial involvement other than the insurance testimony by Ms. Michelle Hollingsed.

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that the management committee of the Tesoro-Savage LLC decides when and how much to fund the LLC by asking the two parent entities for funding (a request that Mr. Larrabee confirmed the parents must then act on through their own internal approval processes). Larrabee, Tr. Vol. 3 at 407-08; Casey, Tr. Vol. 9 at 2018-19. Testimony shows that it will have no employees. Tr. Vol. 3 at 389; Tr. Vol. 9 at 2004, 2020-21. Rather, primarily Savage Companies (a privately held company) will contract with Tesoro Savage LLC to staff the terminal. Tr. Vol. 9 at 2004, 2020-21. That is true even now. Mr. Larrabee, the general manager Vancouver Energy Distribution Terminal, is in fact a Savage person, "seconded" (the term used by Mr. Casey) to Tesoro Savage. Tr. Vol. 9 at 2004.

Tesoro Savage LLC does not and will not own any real property. Hollingsed, Tr. Vol. 8 at 1780 and Tr. Vol. 9 at 2007. It does not and will not own the rail—the rail is owned by either BNSF or the Port. It will, at least according to some of the witnesses, "own" some structures in the future—likely the rail-unloading and storage tanks, and maybe an office building or similar structure—although "buildings" were never specifically identified by any witness for the terminal. Tr. Vol. 8 at 1780-81 and Tr. Vol. 9 at 2007. The only other asset that any terminal witness could muster up as available to help pay for damages in the event insurance is inadequate is the "retained earnings" or "income stream" of the terminal. Tr. Vol. 8 at 1769, 1781 and Vol. 9 at 2008. But as Ms. Hollingshed and Mr. Casey testified, that "equity" or "retained earning" is owed under the LLC structure and/or contractual obligations of the LLC to the parent entities, Tr. Vol. 9 at 2042-43, and that income stream will likely dry up if there is an incident of any size at the facility—the type of large incident where insurance is most likely to be inadequate. Tr. Vol. 8 at 1781.

B. Tesoro-Savage's Insurance Plans Remain Unknown.

As for insurance, the Council still doesn't know how much insurance the joint venture

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will acquire. What is clear is that it will only cover occurrences at the terminal, and it will be held by the joint venture to cover joint venture liability.[33] Tr. Vol. 8 at 1737-39. The parent entities will have no role or financial liability (and will not provide their own insurance coverage to address liabilities of the venture). Tr. Vol. 8 at 1747-48. Ms. Hollingshed made very clear that the amount the Tesoro-Savage LLC carries will not cover the maximum worst case incident as it is not cost effective for companies to cover worst case because they play the odds, deciding what the likelihood of the worst case is and taking reductions, choosing not to cover some portion of it. Tr. Vol. 21at 4946-47, 4964. Ms. Hollingshed admitted that, as with Lac-Mégantic, this meant that Tesoro-Savage insurance would likely be inadequate if the worst case scenario occurred. Tr. Vol. 21 at 4947. Moreover, what she and Tesoro-Savage consider "worst case" and the level below that Tesoro-Savage considers worth covering is still very much under deliberation by Tesoro-Savage and presumably the parent entities. Tr. Vol. 21 at 4946, 4952-53.

As was observed in Council questioning, once the terminal insurance of whatever amount less than worst case Tesoro-Savage decides is worth buying is exhausted, the state and region will be left with the bills and the environmental and human damages. The Council questioned Ms. Hollingshed and Mr. Casey about insurance amounts and coverage and noted that even with insurance, payment is often years in the process as the company and/or insurance carriers fight out issues as esoteric as which state's laws cover the insurance contract, where the claims are litigated, and then, finally, whether and who is responsible for payment and how much. Tr. Vol. 8 at 1740 and Vol. 21 at 4951-52. Ms. Hollingshed admitted that reservation of rights really only meant a company provides an attorney to defend Tesoro-Savage but does not pay the claims, Tr. Vol. 21 at 4948-49, and her assurance that "federal bad faith" laws protect insured and injured

[33] CRK adopts and references the City of Vancouver's arguments regarding maximum loss and insurance availability, including Mr. Blackburn's testimony on these topics.

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parties was simply wrong, as there is no such thing as federal insurance bad faith law. Each state has its own set of insurance laws, some with more protection, some with less, and insurers routinely litigate even the issue of which state's laws apply. Tr. Vol. 21 at 4950 and 4951-52. In response to questions regarding incidents that exceed insurance or bond coverage, the Council received only vague assurances that the parent companies will do the right thing, Tr. Vol. 8 at 1765 and Vol. 9 at 2037-38.[34] That statement is as empty as whatever the current moment in time might dictate—it is highly unlikely that a business entity such as Savage or Tesoro will find it efficacious or wise in a business sense to continue to throw money at a problem when there is no prospect of recovery from insurance or increased income.

Further, Ms. Hollingshed admitted on rebuttal that her assurances that Tesoro Savage would pay to take care of any incident was premised entirely on whether Tesoro Savage believed it was "liable" for that incident. Tr. Vol. 21 at 4957-58, 4971-72. Similarly, she admitted that the "prompt and orderly payment" that would occur under a priority of payment arrangement between carriers of different responsible parties in an accident, would work <u>if and only if</u> there was no question or dispute regarding liability for the accident/disaster. Tr. Vol. 21 at 4948-49. The chance of that being the case with a major incident is a long shot, and a huge gamble that Washington should not take.

[34] *See also* admission by Ms. Hollingshed that Tesoro-Savage could simply pay up to limits of site reclamation bond and walk away from cleanup. Tr. Vol. 8 at 1751-52.

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C. Secondary Economic Impacts Will Not Be Covered By Insurance.

> *But when it comes down to the ceremonial values of these fish, I don't know an economist that's going to go there and say, this is the value of that ceremony, that cultural value. And one of the reasons is … as soon as you start to do this, to say … the cultural value … of these fish is a billion dollars, at that point you're setting the stage for somebody to say, well, here is $1.1 billion, we're going to destroy your culture and you're better off, and that's simply not the case. From an ethical perspective, that's not acceptable.*

Mr. Ernie Niemi, Tr. Vol. 15 at 3552-53.

Finally, there are plainly damages that will arise from accidents or problems at the terminal or caused by terminal operations (that is rail or marine to and from the terminal) that will not be covered by insurance, because some types of damages are simply not recognized as covered or readily-identified by insurance. Ms. Hollingshed plainly testified that only harms that can be monetized will be covered by insurance. Tr. Vol. 8 at 1782. That statement was made in response to a question about cultural and ceremonial harms to tribal rights and practices on the Columbia River. Of course, that begs the obvious question of how does one put a price on catching and sharing the first ceremonial salmon, a cultural practice since time immemorial? How does one put a price on a person's identity that is inextricably tied to catching and sharing fish from a location on the Columbia River that is itself part of your family identity? And yet, those losses will be acutely suffered for a very long time should any incident of even moderate size occur on or near the river. The inability of Tesoro-Savage to protect against harms of this kind and the inability of Tesoro-Savage to ever make people whole who will suffer these damages must be weighed very carefully by this Council; CRK believes it strongly dictates against project approval, even if potential, partial mitigation could be required.

Mr. Ernie Niemi also provided important testimony on the extent to which Tesoro-Savage's financial assurances and insurance will be adequate following an oil spill. Mr. Niemi reinforced the point regarding the intrinsic resource values, including cultural and ceremonial

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values, of an intact environment that are difficult or impossible to quantify and for which money damages are never truly adequate. Niemi, Tr. Vol. 15 at 3526-28 and 3533-38. *See also* Ex5632 (Secondary Economic Impacts of Coastal Spills). Mr. Niemi also noted that a number of costs are often not covered or addressed in the usual reimbursement scenarios. Mr. Niemi cited examples from an oil spill in Micronesia and the *Exxon Valdez* disaster to demonstrate that while a party that causes an oil spill may pay people from the community to perform cleanup, this simple expenditure does not make communities and people whole or mean that there is not a significant unrecovered loss. Ex5632 and Tr. Vol. 15 at 3530-32 and 3540-42. And relatedly, Mr. Niemi testified that even losses directly related to the spill are often not recovered because they can't be documented to an insurance carrier's satisfaction. He cited examples of city employees that simply show up and do their job, which necessarily involves spill response, without being able to show diverted resources from other jobs left undone; or the city infrastructure such as buildings taken over by spill response teams making those resources unavailable; or the increases in policing necessitated by the stress and influx of people that is part and parcel of an oil spill. *Id.* Again, this simply demonstrates how inadequate insurance and basic reimbursement is for addressing damage and loss from an oil disaster (or even a moderate accident and oil spill), and how inadequate Tesoro-Savage's financial assurances are.

CONCLUSION

> *[W]e think that shipping oil is a serious threat to the Columbia River. … And I've never seen such a – not only in terms of size of concern of people coming out to raise concerns about something, but the breadth of concerns of people who typically may have concerns but don't speak about it publicly, from developers to some of the unions, firefighters. And so that's formed the basis of some of our concerns, not only the ecological damage to the Columbia and setting back the huge amount of effort we've made for salmon recovery and to clean up the Columbia, but also the public health and safety concerns.*

Brett VandenHeuvel, Columbia Riverkeeper Executive Director, Tr. Vol. 13 at 2964-65.

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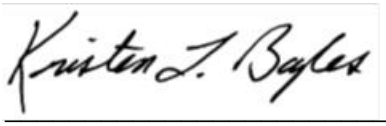
Based on the extensive argument, written testimony, oral testimony, and associated exhibits presented by the allied opponents of this project, intervenors Columbia Riverkeeper *et al.* respectfully request that the Council issue a final recommendation of application denial for the Tesoro-Savage proposed oil shipping terminal in Vancouver, Washington.

Respectfully submitted this 6th day of September, 2016.



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DECLARATION OF SERVICE

I, Cathy Hendrickson, declare that I am a United States citizen, a resident of the State of Washington, over 18 years of age, and not a party to this action. On September 6, 2016, I served via e-mail a true and correct copy of the foregoing *Columbia Riverkeeper, et al. Final Adjudication Brief* on the parties listed below:

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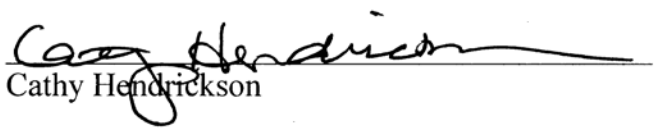
I declare under penalty of perjury under the laws of the state of Washington that the foregoing is true and correct.

Executed this 6th day of September, 2016, at Seattle, Washington.



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