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4 **BEFORE THE STATE OF WASHINGTON**  
5 **ENERGY FACILITY SITE EVALUATION COUNCIL**

6 In the Matter of:  
7 Application No. 2013-01

CASE NO. 15-001

8 TESORO SAVAGE, LLC

**CITY OF VANCOUVER'S  
CLOSING BRIEF**

9 VANCOUVER ENERGY DISTRIBUTION  
10 TERMINAL

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1  
2 **1. INTRODUCTION**

3           The City of Vancouver asks the Council to recommend to the governor that he deny  
4 Tesoro's proposal to site the largest crude oil rail-to-vessel terminal in the country in the midst of  
5 Washington's fourth largest city. The proposal to handle the equivalent of 1,667 tanker trucks of  
6 Bakken crude and diluted bitumen every day in the heart of Vancouver provides no benefit to the  
7 state. The Project's rail route would send 4-5 oil trains ("High Hazard Flammable Trains" or  
8 "HHFTs")<sup>1</sup> daily across the width of the state, with high hazard payloads. The trains would run  
9 non-stop through the height of fire season and through the Columbia River Gorge. Within the  
10 City, the trains would pass adjacent to the new City Hall and due to circuitous routing, make a  
11 total of 15 passes through the core of the City. The Project itself is located proximate to  
12 vulnerable populations, including a school, a jail, and a residential community. If there are  
13 serious accidents, the City lacks the necessary response resources and the train itself could easily  
14 block escape routes. In return, the project provides no energy to the state.

15           The oil will go from the Project to California for refining and shipment elsewhere. While  
16 the unfunded shell corporation proposing the Project has protected itself from risk, it has done so  
17 by passing that risk on to the City and state. It has done so because the Project's financial  
18 exposure has the potential to bankrupt even its parent companies. Given Bakken crude cannot  
19 yet be transported safely, there is no shield to protect the City's citizens, infrastructure, and  
20 property from the risks this proposal presents. Given these risks, and the complete absence of  
21 need for this facility, this type of project simply does not belong in the midst of a heavily  
22 urbanized setting.

23 \_\_\_\_\_  
<sup>1</sup> PHMSA May 1, 2015 Final Rule, "Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains"

1 Tesoro Savage Petroleum Terminal, LLC (“Tesoro”) bears the burden of proving that  
2 this Project satisfies the Council’s statutory and regulatory criteria for approval. It must  
3 demonstrate that there is a need for its Project; that Project’s environmental impacts are minimal;  
4 and that the state and City will not be left with tab once a worst case scenario unfolds, and the  
5 empty shell corporation formed for this Project skips town. Tesoro cannot by any stretch meet  
6 EFSEC siting criteria. The City asks the Council to recommend that the governor deny the  
7 Project.

## 9 2. ARGUMENT

### 10 2.1. Applicable Legal Framework

11 EFSEC is charged with protecting the interests of the public in having access both to  
12 reasonably priced energy and to safe and healthful human and natural environments.

13 EFSEC was created to advise the Governor in deciding which proposed locations  
14 are appropriate for the siting of new large energy facilities. Ch. 80.50 RCW. The  
15 Council’s mandate is to balance [the] need for abundant energy at a reasonable  
16 cost with the broad interests of the public.<sup>2</sup>

17 In *In re Whistling Ridge Energy Project*, Council Order No. 869, p. 3 (Oct. 6, 2011)<sup>3</sup>, the  
18 Council noted that “One of the Council’s principal duties is to ensure that the location of energy  
19 facilities will produce minimal adverse effects on the environment.”<sup>4</sup>

20 To fulfill this duty, EFSEC must consider the true cost of Tesoro’s proposal, including:  
21 (1) threats to human health and safety, the protection of which is paramount; (2) harms to  
22 environmental and cultural resources, which for the Project cannot fairly be characterized as  
23 “minimal”; (3) adverse land use impacts, including detrimental effects upon Vancouver’s

<sup>2</sup> RCW 80.50.010; see also WAC 463-47-110.

<sup>3</sup> Available at <http://www.efsec.wa.gov/Whistling%20Ridge/Adjudication/Orders/869%20-%20Council%20Order%20869%2010-7-2011.pdf>.

<sup>4</sup> Id. at 11 (emphasis added).

1 property values and long-term planning vision for its future; (4) total societal costs, including  
2 accounting for the costs of maintaining necessary emergency response preparedness and  
3 providing adequate public infrastructure; and (5) whether Tesoro has the ability to maintain  
4 sufficient financial assurances to make whole those who may be injured by its proposed  
5 operations.<sup>5</sup>

### 6 **2.1.1. Burden of Proof**

7 As the Project proponent and potential permittee, Tesoro bears the burden of presenting  
8 evidence sufficient to demonstrate that the Project will benefit the public, not just Tesoro's  
9 private financial interests, and that the public will not be harmed.<sup>6</sup> EFSEC can recommend  
10 approval of the Project only if all of the required criteria are satisfied and the Project is  
11 "consistent with legislative policy and intent." The Council stated in *In re BP Cherry Point*  
12 *Cogeneration Project*, Council Order No. 803 Revised, p. 13 (Oct. 26, 2004),<sup>7</sup> that EFSEC could  
13 recommend approval of a proposed project only if the applicant made "a prima facie  
14 demonstration that the project met the requirements of law and was consistent with the  
15 legislative policy and intent of Chapter 80.50 RCW". Tesoro has failed to satisfy this burden.  
16 This Project does not produce needed energy for Washington, yet places the public safety and  
17 public purse in jeopardy. In short, Tesoro, an unfunded shell corporation, retains all the benefit,  
18 and none of the risk.

19  
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22 

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<sup>5</sup> See generally ch. 463-60 WAC.

<sup>6</sup> See RCW 80.50.010; WAC 197-11-080; WAC 197-11-100; WAC 463-60-010.

<sup>7</sup> available at <http://www.efsec.wa.gov/FILES/orders/803%20Rev%2010-21-04.pdf>

1                   **2.1.2. EFSEC’s Dual Charge: Addressing the State’s Need for Energy at**  
2                   **Reasonable Cost and its Duty to Protect the Public’s Fundamental**  
3                   **and Inalienable Right to a Healthful Environment**

4                   The Council must balance the need for the Project to provide abundant energy at  
5                   reasonable cost in conjunction with the broad interests of the public and the need to preserve and  
6                   protect the quality of the environment; to enhance the public’s opportunity to enjoy the aesthetic  
7                   and recreational benefits of the air, water, and land resources; to promote air cleanliness; and to  
8                   pursue beneficial changes in the environment.<sup>8</sup> The Council’s recommendation must reflect its  
9                   “overriding policy to avoid or mitigate adverse environmental impacts which may result from the  
10                  [C]ouncil’s decisions.”<sup>9</sup> The Council is to use all practicable means to “fulfill its responsibilities  
11                  as a trustee of the environment for future generations”; assure that all people of Washington have  
12                  a safe, healthful, productive, and aesthetically and culturally pleasing environment; and attain the  
13                  widest range of beneficial uses of the environment without degrading it, risking health or safety,  
14                  or causing other undesirable consequences.<sup>10</sup>

15                  In determining whether to recommend approval or denial of the application to the  
16                  governor, EFSEC must consider, among other things:<sup>11</sup>

- 17                  • whether approval of the application is necessary to meet state energy needs.
- 18                  • whether the adverse consequences of the Project’s construction, operation and  
19                  decommissioning are justified, reasonable and sufficiently mitigated, including:
  - 20                          ○ threats to human health and safety, the protection of which is paramount;
  - 21                          ○ adverse land use impacts, such as detrimental effects upon Vancouver’s property

22                  <sup>8</sup> RCW 80.50.010.

23                  <sup>9</sup> WAC 463-47-110.

<sup>10</sup> *Id.*

<sup>11</sup> This list is not intended to be exhaustive, and the omission of a required consideration from this list should not be interpreted as reflecting in any way Vancouver’s position on the omitted consideration. Vancouver generally concurs with the positions taken and supports the arguments made by the other statutory parties and the intervenors to this matter with respect to legally required considerations not discussed in this brief.

1 values and long-term planning vision for its future; and

- 2 ○ total societal costs, such as maintaining necessary emergency response  
3 preparedness and providing adequate public infrastructure.

- 4 ● whether Tesoro has the ability and has made a binding commitment to maintain sufficient  
5 financial assurances to make whole those who may be injured by the Project's  
6 construction, operation and decommissioning.<sup>12</sup>

7 The policies of the state, with respect to siting of energy facilities, are to assure the  
8 welfare and protection of the state's citizens, preserve and protect the environment, and seek  
9 "[t]o provide abundant energy at reasonable cost."<sup>13</sup> "In acting upon any application for  
10 certification, the [C]ouncil action will be based on the[se] policies."<sup>14</sup> As noted above,  
11 Vancouver will not address in this brief all of the considerations factoring into EFSEC's public  
12 interest analysis, but instead will focus on several issues of special significance to Vancouver.

13 EFSEC, as the state's energy facility siting authority, is charged not with simply taking  
14 out a ruler and measuring compliance with setbacks and engineering standards, as emphasized by  
15 Tesoro's witnesses, but with taking a hard look at a proposal's impacts to evaluate whether  
16 approving it truly serves the public interest.<sup>15</sup> If not, then EFSEC must recommend that the  
17 governor deny the application. The legislature charged EFSEC with this duty to ensure the  
18 health and safety of Washington's citizens and environment.<sup>16</sup>

19 This paramount duty of safety is statutorily mandated. EFSEC is required to balance the  
20

21 \_\_\_\_\_  
22 <sup>12</sup> See generally ch. 80.50 RCW; ch. 463-60 WAC.

<sup>13</sup> RCW 80.50.010.

<sup>14</sup> WAC 463-14-020.

<sup>15</sup> Residents Opposed to Kittitas Turbines v. EFSEC, 165 Wn.2d 275, 321-22, 197 P.3d 1153, 1176 (2008) (en banc).

<sup>16</sup> See RCW 80.50.010.

1 demand for energy facilities “with the broad interests of the public.”<sup>17</sup> As stated by the Council:

2           Implicit in the charge by the legislature to the Council to balance demand  
3 against the public interest, and the legislative grant of power to the Council to  
4 recommend a position of acceptance or rejection of an application, is the  
5 recognition that the demand for a particular facility, while it exists, may not be  
6 great enough to outweigh the facility’s net detrimental effects on the broad  
7 interests of the public.<sup>18</sup>

8 A project must demonstrate it will have “operational safeguards” which “are technically  
9 sufficient” to “assure Washington state citizens” that the proposal benefits their welfare and that  
10 their protection and safety is assured.<sup>19</sup> EFSEC “shall use all practicable means” to “assure” this  
11 safety.<sup>20</sup> Both EFSEC and state law recognize that this right to a safe environment is a  
12 “fundamental and inalienable right” held by every citizen of Washington State.

13           The council recognizes that each person has a fundamental and inalienable right  
14 to a healthful environment and that each person has a responsibility to contribute  
15 to the preservation and enhancement of the environment.<sup>21</sup>

16 The appellate courts have recognized this duty to preserve the right to a healthful environment,  
17 explaining that a "trust" duty may be imposed on government to protect this right.

18           [E]ach generation [serves] as trustee of the environment for succeeding  
19 generations, ... each person has a fundamental and inalienable right to a healthful  
20 environment and ... each person has a responsibility to contribute to the  
21 preservation and enhancement of the environment. Although these policies apply  
22 to the State generally, they speak with an insistent voice to the Department of  
23 Ecology. By condoning violations of its own standards through this permit, the  
Department has not acted in keeping with this trust.<sup>22</sup>

Our courts recognized this core right nearly 40 years ago.

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<sup>17</sup> RCW 80.50.010; see also WAC 463-14-020.

<sup>18</sup> Northern Tier Pipeline Company, EFSEC Order 636 at p. 477, (Jan. 27, 1982).

<sup>19</sup> RCW 80.50.010(1).

<sup>20</sup> WAC 463-47-110(1)(b), (1)(b)(ii).

<sup>21</sup> WAC 463-47-110(1)(c) (emphasis added); see also RCW 43.21C.020(3) (“The legislature recognizes that each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.”); RCW 43.21C.020(2)(b), (2)(c).

<sup>22</sup> Puget Soundkeeper Alliance v. Pollution Control Hr’gs Bd., 189 Wn. App. 127, 148, 356 P.3d 753 (2015) (quoting State Environmental Policy Act, ch. 43.21C RCW (“SEPA”)) (internal quotation marks omitted).

1 It is the policy of this state, expressed in the State Environmental Policy Act of  
2 1971 “that each person has a fundamental and inalienable right to a healthful  
3 environment ....” This right has been threatened in the community directly  
4 affected by the environmental consequences of [the City’s] ... zoning decision.  
5 The welfare of people living in this area must be served.

6 ....  
7 In sum, the City has a duty to serve the welfare of the entire affected community  
8 when acting on this rezone application and it has failed to do so.<sup>23</sup>

9 These rights speak with particular force in this case. EFSEC determines not only for a  
10 city or county, but for the entire state, what shall be sited and where. In this role, it acts as a  
11 state-wide siting authority, establishing state energy policy on siting issues.<sup>24</sup> In this context, the  
12 right to a healthful environment carries Washington constitutional protection. Our government is  
13 “established to protect and maintain individual rights.”<sup>25</sup> As such, EFSEC, along with the  
14 governor, have a paramount duty to protect the fundamental individual right to a healthful  
15 environment held by the citizens of Vancouver and the state.

16 To ensure protection of this fundamental right, EFSEC must evaluate at least three  
17 aspects of Tesoro’s proposal. First, EFSEC is required “to ensure through available and  
18 reasonable methods, that the location and operation of [proposed] facilities will produce minimal  
19 adverse effects on the environment.”<sup>26</sup> Second, the proposal must be consistent with the state’s  
20 policies to preserve and protect environmental quality, to enhance public enjoyment of healthful  
21 air, water and land resources, and “to pursue beneficial changes in the environment.”<sup>27</sup> Third,  
22 EFSEC must review the proposal’s financial cost and determine whether the proposal is  
23

<sup>23</sup> *Save a Valuable Env’t (save) v. Bothell*, 89 Wn.2d 862, 871-72, 576 P.2d 401 (1978) (citations omitted).

<sup>24</sup> *See, e.g., Protect Peninsula’s Future v. Clallam Cnty.*, 66 Wn. App. 671, 676, 833 P.2d 406 (1992) (shoreline permit that would have permitted a sewer outfall into the Strait of Juan de Fuca “was clearly a matter of substantial importance to the general public in that region of the state and to a lesser degree all of the citizens of the state,” and so was considered a legislative matter under the Open Public Meetings Act).

<sup>25</sup> Wash. Const. art. I, § 1.

<sup>26</sup> RCW 80.50.010; *see* WAC 463-14-010 (specifying “significant policy determinations and interpretations” that guide EFSEC’s decision making); WAC 463-14-020(1) (same); *see also* WAC 463-47-110(1)(a) (“The overriding policy of the council is to avoid or mitigate adverse environmental impacts which may result from the council’s decisions.”).

<sup>27</sup> RCW 80.50.010(2).

1 consistent with the state's policy to "provide abundant energy at reasonable cost."<sup>28</sup> If the  
2 Project's total societal cost, in terms of threats to public health and safety, risks of environmental  
3 degradation, and fiscal consequences (including costs of public infrastructure, emergency  
4 response, and financial assurance), outweighs its public benefits, EFSEC must recommend denial  
5 of the application.<sup>29</sup>

6 Foremost among these considerations are protecting human health and safety and  
7 ensuring that threats thereto caused by a proposed project are eliminated or sufficiently  
8 minimized.<sup>30</sup> EFSEC evaluates "whether a plant at a given location is in the public interest,  
9 considering the environmental cost of that facility at that location."<sup>31</sup> This basic premise  
10 underlies land use law in Washington. Not only is land use planning designed to serve the  
11 public, but there is no right to use property in a way that is injurious to the public.

12 Regulations safeguarding the public's interest in being protected from injurious  
13 uses would obviously be insulated from characterization as a taking. As the  
14 Supreme Court recognized in *Mugler*, and recently restated in *Keystone Coal*  
15 *Ass'n*, "all property in this country is held under the implied obligation that the  
16 owner's use of it shall not be injurious to the community". *Keystone Coal Ass'n*,  
17 [480 U.S. 470, 491-92,] 94 L. Ed. 2d at 492 (quoting *Mugler v. Kansas*, 123 U.S.  
18 623, 665, 31 L. Ed. 205, 8 S. Ct. 273 (1897)). Thus, if, for example, Orion could  
19 make no reasonably profitable use of its property without injuring the public trust  
20 or the public's interest in health or in the environment, no compensable taking  
21 could have occurred. Likewise, if any profitable use of the tidelands would have  
22 harmed the critically important commercial fishing industry, the State could  
23 choose to protect the interest of "preponderant public concern" without having to  
pay compensation. *Miller v. Schoene*, 276 U.S. 272, 279, 72 L. Ed. 568, 48 S. Ct.  
246 (1928) (no taking occurred when Virginia required diseased cedar trees be cut  
down to protect critically important apple orchards).<sup>32</sup>

<sup>28</sup> RCW 80.50.010(3); WAC 463-14-020(3).

<sup>29</sup> See *Chehalis Generation Facility*, EFSEC Order 688 at 3-4 (Aug. 4, 1995) (rejecting an argument by the 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.

<sup>30</sup> See RCW 80.50.010; WAC 463-14-020(1).

<sup>31</sup> In re BP Cherry Point. at 16.

<sup>32</sup> *Orion Corp. v. State*, 109 Wn.2d 621, 661-62, 747 P.2d 1062 (1987) (en banc), cert. denied, 486 U.S. 1022 (1988).

1 This concept is also imbedded in Washington's public trust doctrine, applicable due to the risks  
2 the proposal presents to the Columbia River.

3 The principle that the public has an overriding interest in navigable waterways  
4 and lands under them is at least as old as the Code of Justinian, promulgated in  
5 Rome in the fifth century A.D. It is also found in the English common law, from  
6 whence our own common law is derived, as early as the 13th century A.D. The  
7 concept is a part of the established common law of the United States and ... is  
8 stated with clarity in the seminal opinions of this court interpreting Const. Art. 17,  
9 § 1. This jus publicum interest[,] as expressed in the English common law and in  
10 the common law of this State from earliest statehood, is composed of the right of  
11 navigation and the fishery. More recently, this jus publicum interest was more  
12 particularly expressed by this court ... as the right of navigation, together with its  
13 incidental rights of fishing, boating, swimming, water skiing, and other related  
14 recreational purposes generally regarded as corollary to the right of navigation  
15 and the use of public waters.

16 The state can no more convey or give away this jus publicum interest than it can  
17 "abdicate its police powers in the administration of government and the  
18 preservation of the peace." Thus it is that the sovereignty and dominion over this  
19 state's tidelands and shorelands, as distinguished from title, always remains in the  
20 State, and the State holds such dominion in trust for the public. It is this principle  
21 which is referred to as the "public trust doctrine." Although not always clearly  
22 labeled or articulated as such, our review of Washington law establishes that the  
23 doctrine has always existed in the State of Washington.<sup>33</sup>

24 Evaluating a proposed facility's adverse impacts and balancing them against the need for  
25 the facility inform the Council's recommendation whether the project would serve "the broad  
26 interests of the public."<sup>34</sup> Adverse impacts analysis includes evaluating the appropriateness and  
27 sufficiency of proposed mitigation.<sup>35</sup> EFSEC's authority to consider adverse impacts to public  
28 interests is broad, and is not limited to consideration of environmental impacts under SEPA.<sup>36</sup>  
29 "The Council is not limited to mitigation measures in meeting the public's legitimate

33 Caminiti v. Boyle, 107 Wn. 2d 662, 668-70, 732 P.2d 989 (1987) (citations omitted).

34 RCW 80.50.010.

35 WAC 463-14-020(1).

36 RCW 80.50.010.

1 concerns.”<sup>37</sup>

2 Similarly, in the broadest sense, Vancouver’s mission is to promote and protect the  
3 welfare of its citizens and to avoid, when possible, increasing the risk to the public of injury or  
4 death.<sup>38</sup> As a private, for-profit business entity, Tesoro has a very different mission—to  
5 maximize its owners’ profits by all legal means, including minimizing the cost of non-revenue-  
6 producing mitigations.<sup>39</sup> If Tesoro did more than the bare minimum that is legally required to  
7 protect public safety, and thereby increased expenses and decreased profit, an argument could be  
8 made that the directors and officers responsible for that decision had violated their fiduciary  
9 duties to Tesoro’s owners.<sup>40</sup> Thus, Vancouver and EFSEC both have a responsibility to protect  
10 public safety to the utmost—a mission that Tesoro—as exemplified by its utilization of a shell  
11 Delaware LLC with hidden assets and no identified employees—simply does not share. As stated  
12 by the Council, “(t)he determination of whether a facility of this kind [a crude oil pipeline and  
13 vessel loading facility] should be built and placed in operation cannot be left to the financial  
14 marketplace; private markets are not a proper forum for determination of the public interest.”<sup>41</sup>

15 As they serve as trustee for this generation and future generations to preserve and protect  
16 human safety and the environment upon which we depend, EFSEC and the governor cannot  
17 authorize a Project, like this one, which not only does not meet EFSEC criteria, but also puts at  
18 risk fundamental and constitutionally protected rights.

19  
20 <sup>37</sup> Northern Tier Pipeline Company, EFSEC Order 636 at p. 483, (Jan. 27, 1982).

21 <sup>38</sup> See Vancouver City Charter § 1.04 (declaring in the section enumerating Vancouver’s powers that “[t]he city  
shall provide for police, fire and public safety services and for public works and improvements”), available at  
<http://www.cityofvancouver.us/citycouncil/page/city-charter>; see also *State ex rel. Ennis v. Super. Ct.*, 153 Wn. 139,  
152, 279 P. 601, 605 (1929) (“Under the common law, municipal corporations enjoy very broad powers . . .”).

22 <sup>39</sup> *Premera v. Kreidler*, 133 Wn. App. 23, 70, 131 P.3d 930, 954 (Ct. App. 2006) (noting that “for-profit insurers  
have a ‘legal, ethical, and fiduciary duty to maximize profits for shareholders’” (quotation omitted)), review  
23 withdrawn, 2007 Wash. LEXIS 185 (2007).

<sup>40</sup> (See *id.*)

<sup>41</sup> Northern Tier Pipeline Company, EFSEC Order 636 at p. 483-4.(Jan. 27, 1982).

1           **2.2. Project Not Necessary for Washington**

2           An applicant for site certification must establish that the proposed energy facility is  
3 necessary, judged by whether the facility will provide abundant energy to the state’s citizens at a  
4 reasonable cost.<sup>42</sup> Tesoro and its economist, Brad Roach, took a simplistic view of necessity  
5 making much of short-term price volatility and projected supply and demand for crude oil.<sup>43</sup>  
6 However adopting Tesoro’s market-driven approach would be tantamount to using private  
7 markets to measure the public interest, contrary to *Northern Tier Pipeline Company*,<sup>44</sup> In fact,  
8 necessity, based simply on current supply and demand, is not the Council’s yardstick. EFSEC  
9 has expressly rejected this market-driven approach on multiple occasions.<sup>45</sup>

10           Instead, EFSEC simultaneously evaluates need and the public interest by “asking whether  
11 an energy facility at a particular site will produce a net benefit after balancing the need for  
12 abundant power at reasonable cost and the impact to the environment.”<sup>46</sup> Specifically, EFSEC  
13 “questions whether a plant at a given location is in the public interest, considering the  
14 environmental cost of that facility at that location.”<sup>47</sup> This approach is comports with the  
15 Council’s responsibility to protect the public interest, which includes the “fundamental and  
16 inalienable right” of each citizen to a healthful environment.

17           This Project is not needed to provide crude oil supply to Washington refineries.  
18 Washington’s extensive energy facilities include five oil refineries, as well as extensive energy  
19 logistics facilities relating to those refineries. Four of these refineries (including the refinery

20  
21 <sup>42</sup> RCW 80.50.010.

22 <sup>43</sup> See, e.g., 2 Tr. 186:13-24 (test. of B. Roach re weekly price fluctuations of crude oil); 2 Tr. 188:16-17 (test. of B. Roach) (“[T]he price [of crude oil] has been notoriously volatile and hard to predict.”); 2 Tr. 193:17-18 (same) (“[W]e base these things on fundamentals and that is **supply and demand**.” (emphasis added)).

23 <sup>44</sup> *Northern Tier Pipeline Company*, EFSEC Order 636 (Jan. 27, 1982).

<sup>45</sup> See, e.g., *In re BP Cherry Point*, pp. 15-16.

<sup>46</sup> *Id.*

<sup>47</sup> *Id.* at 16.

1 owned by Tesoro’s corporate affiliate) have recently constructed and are now operating onsite  
2 unit train unloading terminals.<sup>48</sup> The fifth refinery (owned by Shell) is in the permitting process  
3 for an unloading terminal.<sup>49</sup>

4 Given the capability to accept crude oil directly by unit trains or by pipeline, Washington  
5 refineries have no need to rely on a more cumbersome system that has unit trains unload their oil  
6 at the Project; store it at the Project; then have the oil loaded onto ships; and shipped to the  
7 refineries only to be unloaded again. Since none of the refineries in Washington have a need for  
8 a rail-to-vessel crude oil terminal, this Project will not facilitate the production of any energy for  
9 the state. Instead, it will simply move crude oil from the mid-continent through Washington to  
10 refineries elsewhere.

11 Washington has a combined refining capacity of 657 kbpd,<sup>50</sup> and its extensive existing  
12 energy facilities already more than meet its energy needs.<sup>51</sup> “The capacity of Washington  
13 refineries has not significantly changed in recent years, and it is not expected to change in the  
14 future. Likewise, the overall crude supply processed by Washington refineries has remained  
15 steady at about 560 kbpd, and it is not expected to change in the future.”<sup>52</sup> Washington refineries  
16 are already operating at more than 85 percent of maximum capacity using well-established  
17 sources of crude oil.

18 “Washington refineries and energy logistics facilities not only supply Washington, but  
19 also provide sizable energy supply to neighboring states and international markets.”<sup>53</sup> “These  
20 refineries produce more refined product than is needed by Washington State. In 2011

21 \_\_\_\_\_  
22 <sup>48</sup> (Prefiled Test. of I. Goodman, ¶ 51 at 13.)

<sup>49</sup> (Id.)

<sup>50</sup> *Id.* ¶ 37 at 10.

<sup>51</sup> *Id.* ¶ 17 at 5.

<sup>52</sup> *Id.* ¶ 40 at 10.

<sup>53</sup> *Id.* ¶ 36 at 9-10.

1 approximately 35 percent of the combined refinery output was sent to domestic consumers,  
2 mainly in Oregon and California. Approximately 14 percent was shipped to foreign consumers,  
3 mostly to British Columbia.”<sup>54</sup> Not only do the Washington refineries supply the refined  
4 petroleum products needed in Washington, about half of their combined refinery output goes to  
5 other states and countries. Washington refineries are in part an export industry, and Washington  
6 is already a sizable net exporter of refined petroleum products.

7 Thus, this Project will not benefit Washington or serve “the broad interests of the  
8 public.”<sup>55</sup> Washington refineries are already operating near capacity and meeting our state’s  
9 energy needs without the Project. What the Project will do is benefit Tesoro, its corporate  
10 parents, and refineries in California and overseas. Furthermore, this Project is being proposed at  
11 a time when Washington is working to reduce its oil dependency and greenhouse gas emissions  
12 and ward off climate change.<sup>56</sup> Consequently, the proposal is at odds with Washington’s stated  
13 energy policies.

14 As Dr. Barkan, who testified for Tesoro, acknowledged,<sup>57</sup> there is growing pipeline  
15 capacity, and transportation by pipeline is cheaper and safer than HHFTs. With the energy  
16 logistics facilities now in place, Washington refineries have been able to access sufficient crude  
17 supply. The Project is not needed to provide crude supply to Washington refineries.<sup>58</sup>

18 Likewise, declining crude oil production in California does not establish a Washington  
19 need for the Project. Washington does not rely on crude oil produced in California. All  
20

21 <sup>54</sup> *Id.* ¶ 38 at 10 (quoting Ex. 5578-000068-CRK).

22 <sup>55</sup> RCW 80.50.010.

23 <sup>56</sup> See Wash. Exec. Order No. 14-04 (Apr. 29, 2014), available at  
[http://www.governor.wa.gov/sites/default/files/exe\\_order/eo\\_14-04.pdf](http://www.governor.wa.gov/sites/default/files/exe_order/eo_14-04.pdf) (Washington Carbon Pollution Reduction  
and Clean Energy Action) (setting forth state policy on carbon reduction and establishing task force).

<sup>57</sup> 20 Tr. 4735:17-24.

<sup>58</sup> Prefiled Test. of I. Goodman. ¶¶ 37-41 at 10-11.

1 California crude production is refined in California to supply consumers in California.<sup>59</sup> Nor do  
2 claims of instability of foreign (non-Canadian) supplies of crude oil support a claim that  
3 Washington needs the Project. Washington only receives 5% of its crude oil supply from these  
4 sources.<sup>60</sup>

5 What seems more likely is that the Project will supply crude oil to refineries in California  
6 and overseas. As California production declines, refineries in California will need substitute  
7 supplies of crude oil. Also, to the extent that the instability of foreign (non-Canadian) supplies of  
8 crude oil justify the need for the Project, that need predominantly exists in California where half  
9 of the supply comes from oversea compared to Washington where only five percent of the  
10 supply comes from overseas.<sup>61</sup> Tesoro has 4 refineries on the US West Coast. The two largest  
11 Tesoro refineries are in California: Tesoro Golden Eagle (Martinez, CA) 166 kbpd; and Tesoro  
12 Los Angeles (Los Angeles, CA) 380 kbpd. The Los Angeles refinery, with a capacity of 380  
13 kbpd, is the largest single refinery complex on the West Coast.<sup>62</sup> California is the only U.S.  
14 market that could feasibly utilize the large amount of crude that could be handled by the  
15 Project.<sup>63</sup> Tesoro has not satisfied its burden of proving that the Project will provide the citizens  
16 of Washington with abundant energy at a reasonable price. Rather, the evidence indicates that the  
17 Project will benefit Tesoro and refineries in California and overseas.

### 18 2.3. Unacceptable Risk from Rail Transport

19 While providing little to no benefit to Washington, the Project exposes Washington  
20 communities to an unacceptable level of risk from increased HHFT traffic. Tesoro's witnesses  
21

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22 <sup>59</sup> *Id.*, ¶ 71 at 17.

<sup>60</sup> *Id.*, ¶ 78 at 18.

<sup>61</sup> *Id.*, ¶¶ 78 at 18, 88 at 20

<sup>62</sup> Prefiled Test. of B. Roach, ¶¶ 14-15 at 6.

<sup>63</sup> Prefiled Test. of I. Goodman, ¶ 89 at 20 21.

1 stated repeatedly during the hearing that there would be an average of four trains per day arriving  
2 at the Project, and only rarely, if ever, would there be five trains.<sup>64</sup> These assertions are at odd  
3 with the application, which states that the Project would receive crude oil shipments from a  
4 maximum of 1,713 unit trains per year.<sup>65</sup> This equates to an average of 33 trains per week and  
5 4.7 trains per day. Thus, at full capacity, the Project would receive five trains a day about  
6 70 percent of the time. If, as stated in the application,<sup>66</sup> there are days when only three trains  
7 arrive, then the percentage of days when five trains arrive will be higher than 70 percent.

8 Currently, the estimated weekly average number of unit trains carrying Bakken crude in  
9 Clark County ranges from 10 to 18.<sup>67</sup> Consequently, with the Project, these numbers would  
10 increase to 43 to 51, which represent an increase in HHFT traffic of 283 to 430 percent. That is a  
11 283 to 430 percent increase in the exposure to the risks of oil train derailments and fires.

12 To gloss over this fact, Ms. Kaitala from BNSF testified that these additional trains are  
13 just part of the normal fluctuation of rail traffic.<sup>68</sup> Under these circumstances, a math teacher  
14 could easily explain that the total number of trains traversing Vancouver would increase, because  
15 the sum of a variable ( $x$ ), representing existing train volume, and a known positive quantity of  
16 trains arriving at the Project (for example, 4) is always greater than the value of the variable  
17 alone (*i.e.*,  $x + 4 > x$ ). Contrary to Ms. Kaitala's testimony, this result holds true regardless of the  
18 value assigned to the variable ( $x$ ).

19 Bakken and diluted bitumen crude oil typically have relatively low flash points and  
20 relatively high vapor densities, which means that at ambient temperatures they vaporize readily

21 \_\_\_\_\_  
22 <sup>64</sup> *E.g.*, 2 Tr. 307:24-309:8 (test. of J. Larrabee); 5 Tr. 1034:24-25, 1035:4-5, 1036:15-16 (test. of T. Schatzki); 7 Tr.  
1483:3-11 (test. of D. Kaitala); *see also* Ex. 0001-000220-PCE.

23 <sup>65</sup> Ex. 0001-000740-PCE.

<sup>66</sup> Ex. 0001-000220-PCE.

<sup>67</sup> Ex. 3138-0003-VAN.

<sup>68</sup> 7 Tr. 1539:1-4 Test. of Ms. Kaitala).

1 and are highly flammable.<sup>69</sup> If crude oil is released into the environment, these flammable  
2 vapors, which are heavier than air,<sup>70</sup> would tend to spread along the ground and collect in  
3 confined areas such as storm sewers, potentially causing secondary fires to erupt unpredictably,  
4 even hours later, when the vapors come into contact with an ignition source.<sup>71</sup> Secondary fires  
5 from flammable vapors are particularly dangerous because they may occur at a distance from the  
6 main incident, in an area that is considered safe, and they may occur later in time.<sup>72</sup> These  
7 migrating vapors also can create a pathway for fire to spread from an ignition source at a  
8 distance back to the accident site, where any pooled oil could suddenly ignite in an intense flash  
9 fire.<sup>73</sup>

### 10 **2.3.1. Risks of Unit Train Transport of Crude Oil**

11 The unit trains that would supply the Project have a deeply concerning safety record.  
12 There have been 25 derailments of unit trains with releases in the last 10 years, as shown on  
13 Attachment 1.<sup>74</sup> In the last 18 months, there have been seven derailments—each with a spill, and  
14 each with a fire.<sup>75</sup> That is an average of one every 2.5 months. A fire erupted in 84 percent (21  
15 out of 25) of the total derailments; and each accident, on average, involved 13 cars releasing  
16 product.<sup>76</sup> When these cars derail, they have a high failure rate, as Robert Chipkevich, an expert  
17

18 <sup>69</sup> Ex. 3002-0018-VAN (quoting John Frittelli, *U.S. Rail Transportation of Crude Oil: Background and Issues for*  
*Congress* 14 (CRS Dec. 4, 2014) (footnotes omitted), available at <https://www.fas.org/sgp/crs/misc/R43390.pdf>.)

19 <sup>70</sup> 9 Tr. 2733:2-7 (test. of J. Molina; Prefiled Test. of J. Molina, p. 4 n.2)

20 <sup>71</sup> 9 Tr. 2736:14-2737:18 (test. of J. Molina).

21 <sup>72</sup> *Id.*

22 <sup>73</sup> *Id.* at 2737:19-2738:4

23 <sup>74</sup> This attachment updates Table 1 from Robert Chipkevich's prefiled testimony to include the recent incident near  
Mosier, Oregon. (*See* Prefiled Test. of R. Chipkevich, p. 12). For accident reports providing detail from several  
accidents, *see* Exs. 3125-VAN (FRA report, Mosier, OR Accident); Exs. 3126, 3127, 3128, and 3129-VAN  
(investigation photos and NTSB reports on Heimdal, ND accident); Ex. 3059-VAN (NTSB safety report on  
Casselton, ND accident); Ex. 3134-VAN (NTSB report, Lesterville, SD); Ex. 3028-VAN (NTSB accident brief,  
Lynchburg, VA); Ex. 3029 (NTSB report, Mount Carbon, WV); Ex. 3030-VAN (NTSB accident report, New  
Brighton, PA).

<sup>75</sup> Attach. 1.

<sup>76</sup> *Id.*

1 witness who spent 25 years at the NTSB investigating railroad accidents explained.<sup>77</sup>

2 314 of the 442 tank cars breached or failed during the accidents, that was 71  
3 percent, ... an average of about 270,000 gallons per accident or about the  
equivalent of 30 highway gasoline cargo tank[er]s.<sup>78</sup>

4 Accidents have occurred with regularity at speeds which the trains will travel at as they transit  
5 Vancouver. 18 of 25 accidents occurred at 40 miles per hour or less, eight of the 25 at 25 miles  
6 per hour or less.<sup>79</sup> Routine inspections have not resolved the issue. It is not unusual for accidents  
7 to happen just after track inspection.<sup>80</sup>

8 An example, Lynchburg, Virginia, which is one of the accidents that occurred in  
9 2014, one of the crude oil train accidents, ultrasonic inspection was done on that  
rail the day before the accident, and a reverse detail fracture was identified during  
10 the ultrasonic inspection.

11 But, historically, the size of that defect had not been considered as one that would  
grow to failure rapidly, but, in fact, did grow to failure and broke under a load of  
12 the crude oil train the next day.<sup>81</sup>

13 And, tracks proximate to the Project cannot be counted on to be adequately maintained. In  
14 Mosier, the “FRA has made the preliminary determination” that the railroad’s “failure to  
15 maintain its track and track equipment resulted in the derailment.”<sup>82</sup> In Vancouver, as  
16 documented by photographs taken by Mr. Chipkevich, “[a]t one of the grade crossings ... some  
17 of the crossties were split and not supporting of holding the spikes in.... And some of the  
18 crossties were raising, showing that they weren’t anchored down in there strong.”<sup>83</sup> Yet, these  
19 are not necessarily legal violations. Thus, the regulatory structure does not resolve the issue.

20 <sup>77</sup> 10 Tr. 2360:21-22 specifically and 10 Tr. 2360-61 generally (25 years in total at the NTSB, with “the last nine  
21 years” heading “the railroad accident investigation program....”). *Id.* at 2361:10-11.

<sup>78</sup> 10 Tr. 2364:10-14. These figures do not include the recent accident in Mosier.

<sup>79</sup> 10 Tr. 2364:21-23 and 2365-66 (describing the Mosier accident in Oregon which occurred after the Table in Mr.  
22 Chipkevich’s prefiled testimony was submitted).

<sup>80</sup> 10 Tr. 2382-86 (Test. of R. Chipkevich).

<sup>81</sup> 10 Tr. 2385:15-24 (Test. of R. Chipkevich)..

<sup>82</sup> Ex. 3125-4-VAN (noting presence of undetected “[b]roken and sheered lag bolts”).

<sup>83</sup> 10 Tr. 2391:24-25 - 2392:1-4. The photographs are at Ex. 3003-VAN.

1 That includes the new tank car standards. Risk issues may improve, but it is not known by how  
2 much.

3 I've seen estimates of 10 to 21 percent in preliminary documents. I've seen in the  
4 Final Rule, the DOT stated that they believed that the DOT-117 tank car will  
5 perform at 7 to 40 percent better as far as a car being punctured in an accident  
6 above the CPC-1232 tank car that's out there today. And they qualify that by  
7 saying it dependent upon track speed and braking components and things of this  
8 nature.<sup>84</sup>

9 Even tank cars built to more stringent "chlorine tank car standards" can be punctured.<sup>85</sup>

10 The CPC 1232 oil tank cars, with "puncture velocity" improved to only 12.3 miles per hour (the  
11 Mosier accident occurred at 25 miles per hour), are not anywhere close to chlorine tank  
12 standards.<sup>86</sup> And, even the new DOT 117 tank cars with thermal protection, cars are only  
13 designed "to withstand a 100-minute pool fire or a 30-minute torch fire."<sup>87</sup> This design provides  
14 little comfort in view of the fact that no responder has been able to suppress an oil train fire  
15 within the first one to two hours.<sup>88</sup>

16 Dr. Barkan, a witness called by Tesoro, admitted that the City's accident scenarios  
17 addressed by Mr. Hildebrand are entirely realistic. "There's no question we saw this happening  
18 at places like Casselton and Mount Carbon and a few other accidents..."<sup>89</sup> But, the witness then  
19 brushed these scenarios aside, claiming better tank cars help resolve the issue, although how  
20 these untested cars will perform cannot be accurately predicted and will not eliminate tank car  
21 releases, fires, and explosions.<sup>90</sup> The industry has not been proactive in addressing these issues,  
22 delaying on safety improvements to address known risks up until after Lac Megantic claimed 47  
23

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<sup>84</sup> 10 Tr. 2399:11-18.

<sup>85</sup> Mr. Chipkevich provided examples, including accidents he "was responsible for the investigation of..." 10 Tr. 2398:19-21, *see generally* 2398:19 - 2399:1-4; *also see* 10 TR. 2362:6-7.

<sup>86</sup> 20 Tr. 4714:5-14.

<sup>87</sup> 10 Tr. 2398:6-18.

<sup>88</sup> Prefiled testimony of M. Hildebrand at p. 15, L. 4-6.

<sup>89</sup> 20 Tr. 4606:14-16.

<sup>90</sup> 20 Tr. 4606-07.

1 lives.<sup>91</sup>

2 Tesoro may assert that the risk of a serious or catastrophic Lac-Mégantic-type accident is  
3 low, but even Tesoro's witnesses admitted they cannot guarantee that such an event will not  
4 happen. ("The nature of risk analysis is that even if any event has a low likelihood of occurring,  
5 there is no guarantee that it will not."<sup>92</sup>) The inability of the industry to prevent accidents and  
6 assure human safety at the Project and along the transit route is evidenced by the fact that  
7 incidents involving derailed tanker cars with ensuing oil releases, fires, fireballs, and explosions  
8 are not an anomaly. And, the risk has risen dramatically over the last decade.

9 Q: What concerns me is that there seems to be a trend from your table here of  
10 a much higher incidents in the last three years. I'm seeing generally one  
11 derailment including a release, one per year from '06 to '09, then there was none  
12 in '10. It picks up a little bit in '11 and '12 with two each, and then it really takes  
13 off in '13, '14, '15; we've got five, five and six with 2015 being the highest year.  
14 So if I'm just going by your table, I'm seeing about two-thirds or 67 percent of  
15 the derailments with a release in the last three years. Is that trend - - is the table  
16 indicative of what you would say is occurring?

17 A: I think it is, because it was about 2006 when we began seeing unit trains  
18 moving --- and a little bit before that period with ethanol. And when we had the  
19 accident in 2006 in New Brighton, that was kind of the beginning of it. And then  
20 we had some ethanol accidents, and then there were crude oil trains began to  
21 move. And prior to that time there wasn't crude oil unit trains.<sup>93</sup>

22 Consistent with this testimony, is the fact that over a 10-year period from 2006 to 2016,  
23 accidents have occurred, on average, more than twice per year. Earlier this summer, 16 tanker  
24 cars derailed in the Columbia River Gorge near the town of Mosier, Oregon, causing a release of  
25 crude oil and a fire.<sup>94</sup> And, the year before, in 2015, six such accidents occurred.<sup>95</sup> These

21 <sup>91</sup> 20 Tr. 4702:16-25 ("thermal problems with ... 112s have been known for 40-odd years") through 20 Tr. 4704.

22 <sup>92</sup> Ex. 123-17-TSS.

23 <sup>93</sup> 10 Tr. 2435:5-25 (Test. of R. Chipkevich).

<sup>94</sup> See Exs. 3034-0002-VAN, 3035-0015-VAN, 3036-0008-VAN, 3037-0002-VAN, 3038-0003-VAN, 3039-0000-VAN, 3040-0000-VAN, 3084-0002-VAN, 3112-0001-VAN.

<sup>95</sup> See 80 Fed. Reg. at 26665 (PHMSA final enhanced tank car rule) (noting "increasing frequency" of HHFT accidents "[i]n recent years").

1 accidents are occurring even though, according to Tesoro, supposedly the “railroad’s  
2 infrastructure is as good as it’s ever been.”<sup>96</sup>

3 These accidents have so far not occurred in major population centers, but that that may be  
4 due in part to the fact that 90% of hazardous materials transport occurs “outside of urban  
5 areas.”<sup>97</sup> Even Lac Megantic occurred in a relatively small town. But, we have also been lucky.  
6 With respect to Mosier, at the epi-center of a national wind surfing mecca, it just so happened  
7 that on the day of the accident, the wind was not blowing. Just 24 hours before the fire, “we had  
8 a 30-mile-an-hour sustained wind with higher gusts from the west...”<sup>98</sup> With those gusts, the  
9 Mosier accident would have been very different, as Jim Appleton, the Fire Chief of the Mosier  
10 Fire District explained.

11 [T]hose second growth hundred-year old trees would have been on fire from top  
12 to bottom. They would be shooting off embers that would go miles in some cases  
13 and cause secondary fires downwind. And that would be totally at the mercy of  
14 the directional speed of the wind. Typically, we have a little bit of north in our  
wind so that the pattern would be to go this way. That’s our school right there.  
So that fire would have probably affected our school almost immediately, which  
was full of kids and parents arriving to pick them up.<sup>99</sup>

15 Given it took “a little over an hour and a half just to” evacuate the school, a fire in those  
16 conditions could have been catastrophic.<sup>100</sup> “We would have been overwhelmed...”<sup>101</sup> Mosier  
17 was also lucky because other fires had not drawn outside emergency response services the  
18 volunteer department depended on that day.<sup>102</sup> With the fourth largest population in  
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20 <sup>96</sup> 20 Tr. 4626:12-13.

21 <sup>97</sup> 20 Tr. 4622:4-5, *see generally* 4621-22.

22 <sup>98</sup> 10 Tr. 2331:7-20 (Test. of R. Chipkevich).

23 <sup>99</sup> 10 Tr. 2332:17-2333:1-2. A witness for Tesoro also noted the significance of “wind direction” in assessing  
accident consequences, including fatality concerns. 20 Tr. 4783 (Test. of C. Barkan).

<sup>100</sup> 10 Tr. 2354:17-24 (Test. of R. Chipkevich). In Washougal, there are 4 schools within the one-half mile  
evacuation zone from the tracks. Prefiled Test. of D. Monaghan § 24 at 41, fig. 3.

<sup>101</sup> 10 Tr. 2350:1-8.

<sup>102</sup> 10 Tr. 2352:2-16.

1 Washington, EFSEC should not accept Tesoro's invitation to play fire-roulette in Vancouver.<sup>103</sup>

2 To mask the potentially catastrophic game it is playing, Tesoro looks to statistics  
3 computed by a former employee of a Washington D.C. "trade association representing the major  
4 railroads in North American,"<sup>104</sup> who "continue[s] to serve the rail industry" through his  
5 university employment,<sup>105</sup> and who "receive[s] financial support from the industry."<sup>106</sup> That  
6 employee, Dr. Barkan, used derailments of all types of freight trains to calculate his derailment  
7 rate, rather than focusing on crude oil trains, although even he admits "the jury is out," on the  
8 risk differential between the train types.<sup>107</sup>

9 This industry witness does not explain his rationale for relying on statistics for all types  
10 of trains—47,000 tank cars involved in over 30,000 accidents, or a rate of 1.6 tank cars per  
11 accident<sup>108</sup>—when for 24 documented oil and ethanol HHFT accidents (not counting Mosier),  
12 the average number of cars derailed cars in each accident was 18.4 and the average number of  
13 cars which breached in each accident was 13.<sup>109</sup> In addition, he uses data from 2005 to 2009,  
14 which is before the growth of oil train shipments exploded.<sup>110</sup> PHMSA, in its draft and final  
15 regulatory impact analyses,<sup>111</sup> states that all types of freight trains cannot be used as "proxies" to  
16 calculate derailment rates for oil trains.

17 In the Draft Regulatory Impact Analysis, PHMSA states: "There is reason to believe that

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18 <sup>103</sup> Vancouver is also centered on the Columbia River, raising significant oil spill concerns. Other parties have  
19 addressed these issues in detail. See, e.g., Prefiled Test. of S. Rice; 17 Tr. 4070:5-4102:3 (Test. of S. Rice).

<sup>104</sup> 20 Tr. 4671:13-22.

<sup>105</sup> 20 Tr. 4671:23-25 - 4672:1-2; Ex. 316-2-TSS.

<sup>106</sup> 20 Tr. 4672:16-19.

<sup>107</sup> 20 Tr. 4630:25 - 4631:1-7; see also 20 Tr. 4633:11-24 ("[T]his is an important research question which again my  
21 group is currently investigating. We're not in a position to say that we have answers yet. But I apologize if it's a  
22 little bit of an ambiguous answer, but I think that is the state we are at right now. ... [W]e may be in a position a year  
or so from now to start speaking more quantitatively about it."), and 20 Tr. 4681-82. See also 20 Tr. 4675:13-17  
("That is correct. We used information on all freight trains.")

<sup>108</sup> Ex. 123-19-TSS; Pre-Filed Testimony of R. Chipkevich, p. 13 and Table 1 at p. 12.

<sup>109</sup> Prefiled Testimony of R. Chipkevich, p. 13:8-10.

<sup>110</sup> 20 Tr. 4676:4-11.

<sup>111</sup> Exs. 3058 and 3067.

1 derailments of HHFTs will continue to involve more cars than derailments of other types of  
2 trains. There are many unique features to the operation of unit trains to differentiate their risk.”<sup>112</sup>  
3 PHMSA forecasts two “higher consequence events” will occur in the next 20 years having large-  
4 scale property damage and multiple deaths. Greg Rhoads, testifying on behalf of Tesoro, states  
5 in his prefiled testimony that:

6 In the past 8 years the number of crude oil shipments by rail has increased at any  
7 almost exponential rate, before leveling off and now declining somewhat. During  
8 this same period the number of train accidents has continued to decrease.<sup>113</sup>

9 However, on cross examination, Mr. Rhoads had to concede that when the analysis  
10 focuses on oil trains, the conclusion is different, and derailments of oil trains have increased,  
11 rather than decreased.

12 Q: Would you agree that at least during the period of 2009-2013 shown on  
13 this graph<sup>114</sup>, the number of crude oil derailments has increased right along with  
14 the increase in the number of shipments?

15 A: Yes, I would.

16 Q: So [in] your testimony and your prefiled testimony, you’re talking about  
17 all types of train accidents decreasing?

18 A: Yes, that’s correct.

19 Q: But we’re here focused on crude oil trains, aren’t we?

20 A: We are.<sup>115</sup>

21 When asked whether, “given that oil trains concentrate a large amount of crude oil and that  
22 increases the probability of large fires and explosions,” and that means “oil trains pose a different  
23 and greater risk of fire and explosion than mixed freight trains,” Mr. Rhoads had to concede, “I

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<sup>112</sup> Ex 3058 p 24.

<sup>113</sup> Prefiled Testimony of Mr. Rhoads, ¶ 41.

<sup>114</sup> Ex. 3058-7-VAN, at bottom of page 7.

<sup>115</sup> 21 Tr. 4844:10-21

1 would agree with that.”<sup>116</sup> Yet, Tesoro’s statistics rely on mixed freight trains. These are not the  
2 only issues with this statistical analysis.

- 3 • Tesoro asserts one third of release incidents result in less than 5% of a tank’s  
4 contents being spilled.<sup>117</sup> Yet, in 24 accidents from 2006-15, 314 tanks cars  
5 released 6.5 million gallons, an average of 21,000 gallons per car and 271,000  
6 gallons per accident.<sup>118</sup>
- 7 • The statistical analysis estimates the probability of one large spill (92,000 gallons)  
8 as occurring every 13-110 years.<sup>119</sup> However, in 2015, on BNSF track alone,  
9 there was one ethanol and two oil train accidents. The average release for the two  
10 oil train derailments was 104,316 gallons.<sup>120</sup>
- 11 • The statistical analysis identifies a mathematical summation, but none of the  
12 computations ran to reach report conclusions are provided.<sup>121</sup>
- 13 • Calculation inputs were subjective with some factors included while other  
14 relevant factors in risk analysis were excluded.<sup>122</sup>
- 15 • No numeric data was provided to allow for verification of the assumption that the  
16 accident rate through Washington is three times less than that occurring  
17 elsewhere,<sup>123</sup> although the witness had no understanding of “the makeup of the  
18 infrastructure,” east of the state line,<sup>124</sup> no knowledge of “BNSF’s routing  
19 strategy,” and no understanding of Washington geology (*i.e.*, inclines or other  
20 features which could increase or decrease risks) underlying possible train  
21 routes;<sup>125</sup>
- 22 • Tesoro relied on undisclosed and confidential data which cannot be verified.<sup>126</sup>
- 23 • The statistical analysis further dilutes risk percentages by measuring risk of an

<sup>116</sup> 21 Tr. 4841:22-25 - 4842:1-2.

<sup>117</sup> 20 Tr. 4585:21-25 (“34% of the tank cars that are releasing will release 5 percent or less.”). The witness is describing Ex. 123, p. 11, Fig. 4.

<sup>118</sup> Prefiled Testimony of Robert Chipkevich, p. 12, Table 1.

<sup>119</sup> Ex. 123-4-TSS; 20 Tr. 4601:21-22 . There is no computation for the DOT-117r cars.

<sup>120</sup> Prefiled Testimony of Robert Chipkevich, p. 12, Table 1.

<sup>121</sup> Ex. 123-5-TSS.

<sup>122</sup> The inputs did not factor in braking, crossing signals, or geography, although all are important factors in accidents. 20 Tr. 4679:15-25, 4680:11-18 and 19-22. Seismic issues are also excluded. 20 Tr. 4718-19.

<sup>123</sup> 20 Tr. 4754-55.

<sup>124</sup> 20 Tr. 4773:13-16.

<sup>125</sup> 20 Tr. 4792:11-25.

<sup>126</sup> “Q: [Y]ou rely on a combination of historical FRA accident data and proprietary rail industry data? A: In the calculation of train accident rates, that is accurate, that’s correct.” 20 Tr. 4673:17-21. That “rail industry data is proprietary ... not generally available ... not publicly available.” 20 Tr. 4674:1-6.

1 accident at a one mile segment along the transit route in Washington.<sup>127</sup> With this  
2 scenario, the risk of Mosier was once every 9,000-42,000 years although an  
3 accident occurred in 2016,<sup>128</sup> and a derailment was estimated to occur every 2.4  
4 years along the route in Washington.<sup>129</sup>

- 5 • Further confusing the analysis, the industry witness was unable to provide “the  
6 odds of a spill during the life of the project.”<sup>130</sup>
- 7 • The analysis was incremental, meaning it did not account for existing traffic,<sup>131</sup>  
8 and looked at only one route of travel, not accounting for other routes which may  
9 be used, including the Union Pacific route used in the Mosier accident.<sup>132</sup>
- 10 • The analysis assesses four trains per day,<sup>133</sup> although five trains per day will occur  
11 approximately two-thirds of the time.<sup>134</sup>
- 12 • The analysis did not account for the DOT 117R’s, which will not have increased  
13 steel thickness, despite the importance of that factor in car performance.<sup>135</sup>

14 In short, this statistical analysis was computed to provide a picture favorable to Tesoro.

15 The industry witness, Dr. Barkan, was initially confident that the solution for Washington in  
16 addressing risks on the scale of the Titanic’s sinking, or greater, given Vancouver’s population,  
17 is to have the benefit of a “proper risk analysis.”<sup>136</sup> Yet, he later faltered, acknowledging not  
18 only that the consequences of a major accident at an urbanized location were not “factored into”  
19 his analysis,<sup>137</sup> but also that his ability to predict future accidents was really just as limited as  
20 Captain Smith’s.

21 Q: [P]art of that problem is that there’s a lot of variables at play on any given  
22 day, many of which we can’t know, right?

23 <sup>127</sup> 20 Tr. 4602:11-25.

<sup>128</sup> 20 Tr. 4613:23-25 - 4614:1-7. The witness admitted that his analysis did not mean another derailment would not  
occur there for a very long period of time, stating, “We could have that derailment tomorrow.” 20 Tr. 4692:21-25.

<sup>129</sup> 20 Tr. 4796:6-17.

<sup>130</sup> 20 Tr. 4789:8-13, see also Sworn Supplemental Testimony of Chris Barkan (August 22, 2016) pp. 3-4.

<sup>131</sup> 20 Tr. 4768:11-23, see 4768:20-21 (“there’s no estimation of the risk of the current traffic.”).

<sup>132</sup> 20 Tr. 4693:16-25.

<sup>133</sup> 20 Tr. 4720:1-14.

<sup>134</sup> See *supra* at 17.

<sup>135</sup> 20 Tr. 4696-4698; see also 20 Tr. 4761:6-10

<sup>136</sup> 20 Tr. 4669:1-7 (Test. of C. Barkan) (“I would say they hadn’t done a proper risk analysis.”).

<sup>137</sup> 20 Tr. 4716:12-14, see also 20 Tr. 4783.

1 A: Sure.

2 Q: It's not like a situation where ... we can figure out something with a finite  
3 set of information, like the chance of drawing an ace out of a deck of cards; it's  
not like that?

4 A: Right.<sup>138</sup>

### 6 2.3.2. Location-Specific Risks of Rail Transport

7 Tesoro proposes handling the equivalent of 1,667 tanker trucks<sup>139</sup> of highly flammable  
8 hazardous material<sup>140</sup> every day of the year, in a city of 165,000. After their daily journey across  
9 southern Washington, four to five oil trains, each 1.5 miles long, would be routed through the  
10 urban core of Vancouver, then onto a mile length of Port rail tracks and into the Port.<sup>141</sup> The  
11 crude oil would then be transferred into above-ground storage tanks for later transfer to vessels  
12 transporting it down the Columbia River and into the Pacific Ocean. Placing this huge oil  
13 terminal in the midst of a large population base and environmental "hot spot" brings with it  
14 significant and potentially catastrophic impacts to the Vancouver community, including:

- 15 • nearby residential and mixed-use neighborhoods;
- 16 • critical public works facilities, for example, schools, a wastewater treatment plant, a jail  
work center, and multiple city government facilities;
- 17 • major public and private real estate investments, including the new Vancouver City Hall;  
18 and

19 <sup>138</sup> 20 Tr. 4694:8-17; see also 20 Tr. 4695:12-13 ("[I]f we could plan derailments, we could plan not to have them.").

20 <sup>139</sup> A standard gasoline cargo tanker truck holds 9,000 gallons. The proposal involves the handling of 15 million  
gallons per day.

21 <sup>140</sup> "The properties of Bakken shale oil are highly variable, even within the same oil field. In general, however,  
Bakken crude oil is much more volatile than other types of crude. Its higher volatility may have important safety  
implications." (Ex. 3002-0018-VAN (quoting John Frittelli, *U.S. Rail Transportation of Crude Oil: Background  
and Issues for Congress* 14 (CRS Dec. 4, 2014) (footnotes omitted), available at <https://www.fas.org/sgp/crs/misc/R43390.pdf>.) "[D]ilbit [diluted bitumen] may pose different hazards, and possibly different risks, than other forms  
of crude oil. .... [A]ccording to EPA, the oil sands crude will not appreciably biodegrade." Frittelli at 13 (quotation  
and footnote omitted).

23 <sup>141</sup> (Ex. 5902-000054-CRK at 10-11 (describing potential routes for trains to enter, circle through (sometimes  
making multiple loops), and exit downtown Vancouver and Port facility).)

- critical habitat for several endangered and threatened species, including culturally and economically valuable lamprey and salmon.

The local natural features of the rail route through Vancouver increase the risk of flammable vapors and fires spreading. The route is located at the base of a slope running parallel to the tracks. A fire next to an upward slope will generally intensify local winds, which makes the fire more likely to spread uphill.<sup>142</sup> The dynamics of these local winds also affect the spread of flammable vapors.<sup>143</sup> This tendency increases the chances of a fire spreading to surrounding vegetation and improvements and is particularly relevant to planning emergency response for the portion of the BNSF rail line running along the northern bank of the Columbia River.<sup>144</sup>

There are 32 at-grade railroad crossings in Vancouver.<sup>145</sup> Ten of these crossings are public, and 22 are private. Twenty of the 22 private crossings have no protective measures.<sup>146</sup> Twenty of the crossings are the only means of ingress or egress for the properties they serve.<sup>147</sup> If a train were to derail and spill or catch fire at a crossing that is the sole means of access to a property, emergency responders would be unable to evacuate people from the property. Ryan Lopossa, Vancouver's transportation engineer, identified three locations which he finds to be of particular concern for evacuation or delay in emergency response. These are the crossing leading to Wintler Park with 242,750 visitors per year; the crossing leading to Steamboat Landing with 1660 average daily traffic volume; and a crossing leading to a lumber mill with a 1,647 average daily crossing volume.<sup>148</sup>

Tesoro has minimized the impacts on the City should a worst-case scenario unfold,

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<sup>142</sup> 12 Tr. 2743:4-22 (Test. of J. Molina); Prefiled Test. of J. Molina, p. 4;

<sup>143</sup> *Id.*

<sup>144</sup> *Id.*

<sup>145</sup> Exs. 3014-0002 and 3015-0002 VAN.

<sup>146</sup> 10 Tr. 2274: 5-10.

<sup>147</sup> 10 Tr. 2282:25 - 2283:1.

<sup>148</sup> 10 Tr. 2289:11- 2290:12

1 failing even to consider necessary evacuation ranges.

2 Q: I'm asking you whether a person like Mr. Johnson, Scott Johnson, who is  
3 an emergency response planner, if planning for a worst case scenario, which is  
4 part of his job, would it be reasonable for him to plan for eventuality of a one-  
5 mile radius evacuation in the event of an oil train derailment and fire? ... The fact  
6 is, in 5 out of 24 incidents, the evacuation area has been one mile. You  
7 acknowledge that?

8 A: Well, yes, there were five.<sup>149</sup>

9 Q: OK, so given that, that's over 20 percent of the time. Would it not be  
10 prudent for Mr. Johnson to consider the one-mile evacuation and what resources  
11 would be needed to effectuate that?

12 A: Yes.<sup>150</sup>

13 Yet, Mr. Rhoads only evaluated an evacuation distance of one-half mile and a release  
14 event involving a single tank car, although of the 25 accidents identified in Attachment 1, in all  
15 but two accidents, more than two tank cars released. In fact, the average was 13, and numerous  
16 incidents involved many cars, up to 59.<sup>151</sup> Also worrisome is the fact that Mr. Rhoads evaluated  
17 evacuation issues for only 1,200 people.<sup>152</sup> Yet, even with a half-mile radius, Mr. Johnson  
18 (CRESA's Emergency Management Division Manager) calculated that 3,563 people would need  
19 evacuation, even without counting employees or recreational visitors, would require  
20 evacuation.<sup>153</sup>

21 These local geographic features compound the already unacceptable fire risk posed by  
22 HHFT traffic through Vancouver. Nonetheless, Tesoro makes it clear throughout the application  
23 that Vancouver Fire Department ("VFD") and other public emergency response resources will be

<sup>149</sup> 21 Tr. 4834:4-10 and 22-25 (Test. of G. Rhoads).

<sup>150</sup> 21 Tr. 4834:4-10 and 22-25 and 4835:1-5 (Test. of Mr. Rhoads).

<sup>151</sup> See Table 1 at end (from Prefiled Testimony of R. Chipkevich, p. 12); and 21 Tr. 4836:12-25 - 4837:1-23  
(conceding at lines 22-23 that "[t]he majority of the incidents on Mr. Chipkevich's list involved multiple cars.").

<sup>152</sup> 9 Tr. 2108:8-11 (Test. of G. Rhoads).

<sup>153</sup> 14 Tr. 3188, 3191, 3192 (Test. of S. Johnson); compare with 21 Tr. 4837:1-19 and 4838 (Test. of G. Rhoads).

1 the first line of defense in the event of a fire or explosion.<sup>154</sup> Additionally Tesoro assumes that its  
2 mobilization of additional resources will not be hindered by the emergency situation itself, an  
3 assumption which is patently unrealistic given the near certainty of road, bridge and rail closures  
4 in all but the smallest of incidents.<sup>155</sup> The reality is that Vancouver and its citizens will be solely  
5 responsible for first response to emergencies caused by oil train derailments and fires and that  
6 supplemental resources may not arrive in time to make a difference.

### 7 **2.3.3. UNACCEPTABLE RISK FROM TERMINAL OPERATIONS**

8 There are significant risks at the site and to the nearby community from the Project which  
9 Tesoro has shown extraordinary reluctance to address. Rather than reaching out to the  
10 community and providing the necessary resources to address these issues, Tesoro's focus is the  
11 bottom line. Jared Larrabee, who will be running the Facility, did not offer much hope that this  
12 approach would change.

13 Q: As the general manager of the project, what factors do you consider when  
14 determining what issues that have been raised here merit further review or  
15 perhaps even alterations of the terminal design?

16 ....

17 A: So cost is certainly one of the elements that is considered. It is not always  
18 the overriding element that we look at.<sup>156</sup>

19 Examples of this business philosophy were evident from the very beginning, with Tesoro's  
20 use of an unfunded LLC structure with no employees.<sup>157</sup> "At this point in time, there are no

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21 <sup>154</sup> See Ex. 0352-000049-TSS ¶ 108 at 39.

22 <sup>155</sup> See, e.g., Prefiled Test. of G. Rhoads ¶ 124 at 45 (recommending "staging of key response resources like foam,  
23 foam application equipment, and booming equipment" at specific locations rather than distributing equipment in  
advance of emergency); Prefiled Test. of G. Rhoads ¶ 28 at 15 (assuming "specialty contractors ... could be quickly  
mobilized"); *id.* ¶ 30 at 15-16 (discussing hazmat "response equipment strategically located along [BNSF's] rail  
system" and "pre-loaded on a high rail flat for a rapid deployment").

<sup>156</sup> 21 Tr. 5057:6-10, 23-25 - 5058:1-4 (Test. of J. Larrabee).

<sup>157</sup> We do not even know who really runs this shell. We have been told there is a management committee, but its  
members have remained unidentified, with no document of LLC management structure provided.

1 employees of Vancouver Energy.”<sup>158</sup> And, perhaps there never will be. There is only a  
2 “management committee,” supposedly in charge of this project.<sup>159</sup> Tesoro conceded that the four  
3 individuals on this committee would assess the cost effectiveness of needed mitigation to reduce  
4 project risks, and if it was not cost effective, “[t]hen they wouldn’t do it.”<sup>160</sup> This lack of  
5 accountability for the project continued throughout the entirety of the month long adjudication. If  
6 this use were a flower shop or a bakery, the lack of sensitivity to the community would perhaps  
7 be of little moment. But, this project poses enormous risks to human health and safety.

8 To avoid addressing the realities of its project, Tesoro engaged in risk modeling that did  
9 not account for worst case scenarios. For example, the worst-case scenario (or “upper end”) in  
10 the risk assessment was the accidental occurrence of a “6-inch hole in a pipe,” which indirectly,  
11 could allow for just one of the six massive storage tanks to drain.<sup>161</sup> That assessment did not  
12 account for catastrophic failure due to geographic events or sabotage.

13 Q: I’m wondering if there’s other dimensions of risk like seismic that  
14 are just sort of fundamentally out of scope of your analysis. And I would assume  
15 like an intentional sabotage or an act of terrorism would be outside the scope of  
16 your analysis?

17 A: Yes. ... I would say that, you know, when we look at tank failures,  
18 historically they’ve happened and so we’re representing that rate in our analysis.  
19 Whether other things could happen like terrorism, yes.

20 Q: So your analysis would include past tank failures that have been  
21 caused by earthquake but not modeling the probability of an earthquake on this  
22 site?

23 A: No, I wouldn’t say that. ... I am pretty sure that the database of  
24 tank failures upon which the tank failure frequency is based does not include  
25 seismic failure....

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<sup>158</sup> 3 Tr. 389:19-20 (Test. of J. Larrabee).

<sup>159</sup> 3 Tr. 390 (Test. of J. Larrabee).

<sup>160</sup> 19 Tr. 4520:13-18 (Test. of Kelly Thomas).

<sup>161</sup> 6 Tr. 1289:16-23 (Test. of James Thomas).

1 Q: So a facility that you model would have the same risk profile  
2 whether it was seated in a seismically active area so long in both cases it had been  
3 designed to the seismic standard of the area?

4 A: Yes.<sup>162</sup>

5 Tesoro's witness, Dr. James Thomas, then went on to explain that because the risk analysis had  
6 not accounted for seismic failure at this site, "I can't really advise you on how to think about that  
7 [risk],"<sup>163</sup> while conceding that the risk posed by handling Bakken crude (at what would be the  
8 largest facility in North America) faces distinct and "particular risks" unique to the  
9 commodity.<sup>164</sup>

10 The risk analysis failed to account for not only geographically specific features and  
11 natural disasters,<sup>165</sup> but also the nature of the uses proximate to the facility, such as the Jail Work  
12 Center. "[M]uch of the Jail Work Center property, including many of the buildings fall within  
13 the LFL to 1/2 LFL range," which results in a high fatality rate without immediate evacuation,  
14 yet the risk analysis assumed inmates would flee at a rate of three meters per second, despite  
15 being incarcerated.<sup>166</sup> The presence of an electrical substation was also not accounted for,  
16 although its presence increases risk to offsite populations due to enhanced ignition probability.<sup>167</sup>  
17 Risks to first responders were also not accounted for.<sup>168</sup>

18 Even without such caveats and exclusions, Tesoro calculated an onsite annual fatality risk  
19 level a little less than a 1-in-1,000 chance of a fatality for Project operations, excluding the  
20

21 <sup>162</sup> 19 Tr. 4514-15 and 4518:7-12 (Test. of Kelly Thomas).

22 <sup>163</sup> 6 Tr. 1313:9-10 (Test. of James Thomas).

23 <sup>164</sup> 6 Tr. 1315:21-25 - 1316:1-9.

<sup>165</sup> 6 Tr. 1311:16-25.

<sup>166</sup> 6 Tr. 1294-96 (Test. of James Thomas).

<sup>167</sup> 6 Tr. 1299-1300 (Test. of James Thomas).

<sup>168</sup> 6 Tr. 1311:4-7 (Test. of James Thomas).

1 construction and decommissioning phases<sup>169</sup> The risk assessment excludes injuries. Tesoro's  
2 witness admitted, "I don't know how to factor that into your decision making."<sup>170</sup>

3 The risk analysis also seemed to assume certain basic safety concerns associated with fire  
4 and explosion would be met, although Tesoro has no "firefighting response plan,"<sup>171</sup> lacks a  
5 "dedicated fire fighting crew,"<sup>172</sup> and cannot even ensure the most basic of fire fighting tools -  
6 water - is available. "An adequate supply of water and foam concentrate must be available to  
7 execute an offensive strategy."<sup>173</sup> Tesoro has not demonstrated it can supply either.

8 There is a single water pipeline serving the Port area, so there is no redundancy in the system  
9 and no agreement in place to provide for same.<sup>174</sup> In other words, Tesoro proposes to tie into a  
10 "dead-end system without a redundant supply of water."<sup>175</sup> If the City "lose[s] that main, we  
11 lose the entire feed to that area of the Port."<sup>176</sup> Tesoro has not provided "specific information"  
12 on needed piping improvements, where pumps would be drawing water from the City system,  
13 and at what flow rates.<sup>177</sup>

14 Tesoro's witness, Mr. Corpron, acknowledged that with a major incident, water pressure  
15 drawn-down could result in "draw-down below the regulatory mandated 20 PSI," noting hurdles  
16 for addressing the issue, including acquiring "water rights and talking with tribes...."<sup>178</sup> Tesoro

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18 <sup>169</sup> 6 Tr. 1307:17-21 and 1314:12-18 (Test. of James Thomas); Ex. 0118-000007-TSS.) Dr. Thomas modeled risk  
19 scenarios that could only occur during the operational phase of the Project. (See Ex. 0118-000020-TSS to 0118-  
000022-TSS.) See Ex. 5508-000008-CRK (defining scope of work for Thomas' risk analysis as "assess[ing] the risk  
of the *operation* of the facility" (emphasis added)); cf. 6 Tr. 1288:3-15 (Test. of James Thomas) (admitting that  
maintaining high levels of safety requires "big investments").)

20 <sup>170</sup> 6 Tr. 1313:14-24 (Test. of James Thomas).

21 <sup>171</sup> 3 Tr. 428:9-12.

<sup>172</sup> 3 Tr. 428:18-25.

<sup>173</sup> Prefiled Testimony of M. Hildebrand, p. 15:20-21.

22 <sup>174</sup> 12 Tr. 2667:68 (Test. of Mr. Clary).

<sup>175</sup> 12 Tr. 2677:10-14.

23 <sup>176</sup> 12 Tr. 2685:5-7 (Test. of Mr. Clary). 1,500-2,00 feet of looping is necessary. *Id.* at 2685:21-25. These are the  
applicant's responsibility, not the City's. *Id.* at 2688:4-13.

<sup>177</sup> 12 Tr. 2679:2-7 (Test. of Mr. Clary).

<sup>178</sup> 21 Tr. 4858:6-20 (Test. of Mr. Corpron).

1 does not have those water rights,<sup>179</sup> and its witness seemed oblivious to the hurdles associated  
2 with obtain those rights, and dealing with other issues, such as the Endangered Species Act.<sup>180</sup>

3 In addition to its decision to not investigate and cover gaps in emergency response, which  
4 are extensive, Tesoro will be hampered by the limitations of foam (and potentially by an  
5 inadequate foam supply)<sup>181</sup> for addressing the types of fire risks associated with this project. Fire  
6 suppression and vapor suppression for spilled and pooled crude oil product will require the use  
7 of product-compatible firefighting foams. Application of foam requires the use of specialized  
8 and compatible foam appliances and equipment. Sufficient volumes of foam must be on hand  
9 before beginning this attack to prevent the attack being interrupted due to no foam supply and  
10 thus the foam was waste without full fire suppression.<sup>182</sup>

11 Tesoro has not offered to fund a Foam Logistics Plan to ensure such a foam supply is on  
12 hand and can be used properly.<sup>183</sup> This is even though water pressure is “too low to operate the  
13 form fire suppression systems without the use of auxiliary pumps.”<sup>184</sup> But, even with this on  
14 hand, many types of fires are not appropriate for foam application. A major limitation to the use  
15 of foam is that it is only effective on a two dimensional fire (i.e., a pool fire) where the fuel  
16 surface is flat to allow the foam blanket to float on top of the fuel and exclude air. A three  
17 dimensional fire such as a fire affecting a tank car manway, valve, or a torch fire will not be  
18 controlled with the application of foam. Foam is also ineffective when the fire involves a fuel  
19 released from a tank breach or valve that is falling and creating a pool.<sup>185</sup>

20 Tesoro’s inability or refusal to come to terms with the true risks this type of proposal

21 <sup>179</sup> 21 Tr. 4879-80 (Test. of Mr. Corpron); *see also* 12 Tr. 2690-91 on system water volume and pressure needs.

22 <sup>180</sup> 21 Tr. 4880:12-20 (Test. of Mr. Corpron).

23 <sup>181</sup> *See infra* n.231.

<sup>182</sup> Prefiled Test. of G. Rhoads, ¶ 75.

<sup>183</sup> Prefiled Test. of M. Hildebrand, p. 28:1-8.

<sup>184</sup> 12 Tr. 2681:24-25 - 2682:1-4 (Test. of Mr. Clary).

<sup>185</sup> Prefiled Test. of G. Rhoads, ¶ 76.

1 presents at this location was evidenced throughout the proceeding.

- 2 • Tesoro could not confirm whether it planned to cover the cost of burying pipe to  
3 protect 200 people at the Jail Work Center.<sup>186</sup> Tesoro was even unaware that “inmate  
4 staff and visitors” are frequently outdoors at the jail property, so failed to account for  
5 that fact in its risk analysis although agreeing that fact could alter the risk analysis.<sup>187</sup>  
6 Tesoro also did not account for future expansion to the Jail Work Center, although  
7 admitting that would increase predicted risk to the inmate population.<sup>188</sup>
- 8 • The facility as a whole would not meet the building code standard of risk Category 3,  
9 but only the tanks.<sup>189</sup> That is even though “the differential settlement within any 50-  
10 foot section” could be up to eight inches.<sup>190</sup> There is no commitment to bring the  
11 entire facility up to an ASCE risk Category 3 to better address seismic risk.<sup>191</sup>
- 12 • For purposes of the risk analysis, workers “inside of the rail loop,” are considered  
13 “offsite workers,” although they are not actually working off site.<sup>192</sup> Based on  
14 testimony, it was not clear if Tesoro has committed to providing those workers with  
15 protective gear.<sup>193</sup>
- 16 • Tesoro initially refused to commit to using newer tank cars. When Tesoro finally  
17 agreed to (while still hedging its bets with preemption arguments), it was only under  
18 cross examination that Tesoro conceded it may use 117Rs, or retrofitted 1232’s,  
19 which lack improvements required for the 117.<sup>194</sup>

20 Tesoro’s sanguine attitude to fundamental safety issues is appalling, given Tesoro has  
21 proposed locating a facility of this size in the heart of Washington’s fourth largest City, with its  
22 tanks and Port track about one-third mile from the Columbia River,<sup>195</sup> adjacent to a jail facility,  
23 and proximate to the Fruit Valley residential neighborhood and school, raising environmental  
justice and basic human rights concerns.

#### 24 **2.3.4. Unacceptable Seismic Risk**

25 <sup>186</sup> 21 Tr. 4885-86 (Test. of Mr. Corpron).

26 <sup>187</sup> 6 Tr. 1291:13-22 (Test. of James Thomas).

27 <sup>188</sup> 6 Tr. 1291:23-25 - 1292:1-15.

28 <sup>189</sup> 21 Tr. 4889-90 (Test. of Mr. Corpron).

29 <sup>190</sup> 21 Tr. 4872:5-15 (Test. of Mr. Corpron).

30 <sup>191</sup> 21 Tr. 5082:22-25 - 5083:1-21.

31 <sup>192</sup> 21 Tr. 5075:8-15 (Test. of Mr. Larrabee).

32 <sup>193</sup> 21 Tr. 5075-75 (Test. of Mr. Larrabee).

33 <sup>194</sup> 21 Tr. 5073:3-15 (Test. of Mr. Larrabee); 3 Tr. 421-424:1.

<sup>195</sup> 2 Tr. 3045-10 (Test. of Mr. Larrabee).

1           The risk of a significant earthquake occurring at the Project in the next 50 years is  
2 “quite high,” at about 15 percent.<sup>196</sup> Experts addressing seismic risk for both the proponents and  
3 the opponents agree that the Project’s Area 300, which would house the storage tanks, is at a  
4 high risk for soil liquefaction.<sup>197</sup> The storage tanks would hold a staggering total maximum of  
5 94,591,608 gallons of oil.<sup>198</sup> However, the containment berm around the tanks would be  
6 designed to hold only 110 percent of a single tank’s maximum capacity plus precipitation from a  
7 24-hour, 100-year storm event.<sup>199</sup> Thus, the ability of the storage tanks and their foundations to  
8 withstand a seismic event without failing is critically important.

9           Tesoro, however, has provided scant assurance that Area 300 would able to contain the  
10 stored oil during an earthquake. Despite the substantial soil liquefaction risk, “[t]here are no  
11 ground improvements underneath the [containment] berm.”<sup>200</sup> In a “worst-case scenario” the  
12 containment berm could “settle up to 10 inches.”<sup>201</sup> Astonishingly Tesoro contends that the  
13 berm’s settlement is not a problem, because “other non-ground improved surface area[s] inside  
14 of the berm” would also settle up to 10 inches.<sup>202</sup> In addition Tesoro states that the first 15 to 20  
15 feet of soil below ground surface “are not susceptible to reduction of seismic strength” because  
16 groundwater does not reach above that level.<sup>203</sup>

17           Tesoro’s explanations do not withstand scientific scrutiny. As Dr. Wartman explained,  
18 Area 300 is:

19  
20 <sup>196</sup> Prefiled Test. of J. Wartman, ¶ 8 at 6.

21 <sup>197</sup> (See Prefiled Test. of M. Rohrbach, ¶¶ 28-29 at 11-12; Prefiled Test. of J. Wartman, ¶ 26 at 17; 3 Tr. 556:21-23,  
561:15-562:17 (Test. of D. Corpron); Ex. 0001-000378-PCE (“The site has been identified as having moderate to  
high liquefaction susceptible soils.”).)

22 <sup>198</sup> Ex. 0189-000001-TSS, 0189-000005-TSS, 0189-000096-TSS.

23 <sup>199</sup> Ex. 0001-000238-PCE; Ex. 0001-000382-PCE.

<sup>200</sup> 3 Tr. 568:12-13 (Test. of D. Corpron).

<sup>201</sup> Ex. 0001-000382-PCE.

<sup>202</sup> *Id.*

<sup>203</sup> Ex. 0001-000382-PCE.

1 ...underlain by approximately 20 feet of sandy fill located over a ~10-foot layer  
2 of soft silts and clays. These, in turn, overlies sands extending to the top of a deep,  
3 stiff gravel deposit. Analyses indicate that the lower sand layer is susceptible to  
liquefaction, which is expected to cause several feet of lateral deformation of the  
ground surface.<sup>204</sup>

4 It is irrelevant that the upper layer of fill material is not within the saturated zone. Once the soils  
5 underneath liquefy, the upper soils will deform.<sup>205</sup>

6 Likewise, Tesoro's assertion that all portions of Area 300 without ground improvements  
7 will settle a uniform 10 inches is utterly without merit. First, this argument ignores the fact that  
8 ground deformation due to soil liquefaction involves both lateral and vertical movement.<sup>206</sup>

9 Second, the top 20 feet of soils in Area 300 are composed of fill material from multiple sources  
10 and of varying types, including sandy materials from dredge spoils.<sup>207</sup> Thus, these uppermost  
11 soils are not uniform and likely subject to differential settlement.<sup>208</sup>

12 EFSEC staff and expert consultants apparently appreciate the gravity of this risk, as they  
13 asked Tesoro in August 2015: "Has the stability analysis considered (i) the liquefaction-induced  
14 total and differential settlements likely to occur beneath the berm during the ground shaking, and  
15 (ii) the effect these settlements may have on the integrity of the berm?"<sup>209</sup> Tesoro responded, "A  
16 seismic stability analysis has not yet been conducted."<sup>210</sup> Then Tesoro made several vague and  
17 general statements about complying with all applicable requirements.<sup>211</sup>

18 In fact, Area 300 has been deliberately designed to have highly uneven settlement.

20 <sup>204</sup> Prefiled Test. of J. Wartman, ¶ 21 at 13-14.

21 <sup>205</sup> *Id.*

22 <sup>206</sup> *Id.* ¶ 24 at 17 ("[L]iquefaction-induced horizontal and vertical deformation of the ground surface would cause  
significant damage to tanks, connectors, pipelines, and/or containment systems, releasing oil into the  
environment.").

23 <sup>207</sup> 4 Tr. 667:12 (Test. of D. Corpron); Prefiled Test. of J. Wartman, ¶ 21 at 13-14.

<sup>208</sup> *See id.*

<sup>209</sup> Ex. 0027-000002-PCE.

<sup>210</sup> *Id.*

<sup>211</sup> *Id.*

1 According to Tesoro, the storage tanks will not settle more than two inches and the tank's  
2 differential settlement will not exceed one inch.<sup>212</sup> Assuming Tesoro is correct,<sup>213</sup> the berm and  
3 the tanks could experience differential settlement of up to eight inches (the berm settling up to 10  
4 inches, and the tanks settling no more than two inches). Under these circumstances, the flexible  
5 impervious membrane liner,<sup>214</sup> is unlikely to maintain the functionality of Area 300's  
6 containment system.<sup>215</sup> Tesoro's own witness, Eric Haugstad, acknowledged that damage to this  
7 liner would cause the containment system to fail,<sup>216</sup> and that, upon such failure, oil could migrate  
8 readily through groundwater in sandy soils.<sup>217</sup>

#### 9 **2.3.4. INADEQUATE FIRE RESPONSE**

##### 10 **2.3.4.1. CHARACTERISTICS OF HHFT FIRE FRUSTRATE** 11 **OFFENSIVE RESPONSE**

12 The first step in responding to a fire is to evaluate the situation and determine the  
13 appropriate response strategy.<sup>218</sup> In describing the response options for an HHFT fire, Mr.  
14 Hildebrand relied on a recent publication developed by the National Fire Protection Association  
15 Research Foundation and sponsored by PHMSA, called the High-Hazard Flammable Trains  
16 (HHFT) On-Scene Incident Commander Field Guide.<sup>219</sup> Specifically, he referenced a graph  
17 from this publication, also contained in his prefiled testimony,<sup>220</sup> showing the probability of

18 <sup>212</sup> Prefiled Test. of M. Rohrbach, ¶ 14 at 5.

19 <sup>213</sup> It is questionable whether Tesoro is correct. The ground improvements under the storage tanks "do not extend  
all of the way through the liquefiable soil layers." (Prefiled Test. of M. Rohrbach, ¶ 30 at 12.)

20 <sup>214</sup> Ex. 0027-000003-PCE.

21 <sup>215</sup> Prefiled Test. of J. Wartman, ¶¶ 25-26 at 17.

22 <sup>216</sup> 6 Tr. 1440:10-14.

23 <sup>217</sup> *Id.* at 1441:8-10.

<sup>218</sup> See 9 Tr. 2094:16-2095:3 (test of G. Rhoads).

<sup>219</sup> 11 Tr. 2511. This publication is available at <https://www.bnsfhazmat.com/wp-content/uploads/2016/08/RFHFTOnSceneFieldGuide.pdf>. It was not entered into the record as an exhibit because it was still in the process of publication during the hearing. "Many states adopt NFPA standards and then they become law." 11 Tr. 2511:3-4 (Test. of M. Hildebrand). Thus, this document may be appropriate for official notice, pursuant to RCW 34.05.452(5), RCW 80.50.040(3) and WAC 463-30-230.

<sup>220</sup> Prefiled Test. of M. Hildebrand at 17.

1 containment failure over time.<sup>221</sup>

2 An HHFT fire, during the first stage, which extends for one to two hours after ignition,  
3 “is a hot fire in the growth stage”.<sup>222</sup> At this point, the pressure relief valves on the railcars that  
4 have not failed are temporarily relieving thermal stress and retarding overheating of the tanks,<sup>223</sup>  
5 which provides responders with a brief opportunity to contain and extinguish the fire before it  
6 spreads to other railcars or the surrounding environment.<sup>224</sup> However, to date, no one has been  
7 able to extinguish an HHFT fire during this first stage, primarily due to response resource  
8 constraints.<sup>225</sup>

9 For example, as Greg Rhoads, Tesoro’s expert witness for emergency response planning,  
10 explained, the first responders to the HHFT fire at Mosier, Oregon, on June 3, 2016, were unable  
11 to implement an offensive strategy during first phase due to resource constraints.<sup>226</sup> Even if the  
12 Mosier first responders had access to a sufficient amount of foam,<sup>227</sup> Rhoads opined that the  
13 preferred strategy would be to wait for additional resources.<sup>228</sup> Foam deteriorates over time and  
14 has to be reapplied,<sup>229</sup> and it is counterproductive to begin fire suppression with foam and then  
15 run out of foam before the fire is completely extinguished, due to the risk that “[t]he fire will  
16 burn back as the foam breaks down[,] and you will have wasted that resource.”<sup>230</sup> Moreover,  
17 firefighting foam will have been released into the environment, which could adversely affect  
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19 <sup>221</sup> Ex. 3123-0001-VAN.

20 <sup>222</sup> 11 Tr. 2512:23-24 (Test. of M. Hildebrand).

21 <sup>223</sup> *Id.* at 2512-13.

22 <sup>224</sup> *Id.* at 2514:21-23.

23 <sup>225</sup> *Id.* at 2514:23-2515:2.

<sup>226</sup> 9 Tr. 2132:10-2133:4.

<sup>227</sup> “[I]t’s very difficult for any department currently to be able to bring the quantity of water and foam, water to bear and foam to arrive to the scene, because foam is fairly well [a] precious commodity and scattered throughout the region.” 12 Tr. 2739:18-23 (Test. of J. Molina).

<sup>228</sup> 9 Tr. 2132:10-2133:4 (Test. of G. Rhoads).

<sup>229</sup> *Id.* at 2158:5-13.

<sup>230</sup> *Id.* at 2132:21-22.

1 groundwater, without gaining any benefit.<sup>231</sup>

2 As an HHFT fire moves out of the first stage it becomes increasingly unsafe to first  
3 responders, the public, and the environment.<sup>232</sup> First responders may have to resort to using  
4 unmanned spray nozzles to apply cooling water, exposing the firefighters who set up and  
5 reposition the equipment to extreme risks.<sup>233</sup> Application of foam is tricky<sup>234</sup> and requires proper  
6 training and prior hands-on experience.<sup>235</sup> Many firefighters (e.g., mutual aid volunteer  
7 responders) lack this technical knowledge and experience.<sup>236</sup> Moreover, foam is only effective  
8 on “pool” fires which are two dimensional, and are ineffective once a fire has become three-  
9 dimensional, such as with an HHFT fire.<sup>237</sup>

10 Using firefighters from outside Clark County who have the necessary technical  
11 knowledge and experience may not fill this gap, as knowledge of local geographic and  
12 topographic characteristics is also critically important. For example, Tesoro’s expert on  
13 firefighting issues, Greg Rhoads, has the necessary technical knowledge,<sup>238</sup> but demonstrated his  
14 complete lack of understanding regarding unique features of the local geography when the  
15 administrative law judge asked him about factoring wind along the Columbia River Gorge into  
16  
17

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18 <sup>231</sup> Many firefighting foams contain hazardous substances. However, despite EFSEC’s requirement that an  
19 applicant for site certification identify chemicals anticipated to be used and/or stored at the proposed energy facility  
20 and provide information, including quantities to be kept on hand and material safety data sheets, for all these  
21 chemicals, Tesoro failed to identify any firefighting foam in the Application. *See* Ex. 0001-000978-PCE  
(Application’s list of chemicals to be used and/or stored on site).

22 <sup>232</sup> 11 Tr. 2512:25-2514:6 (Test. of M. Hildebrand) (describing progression of events into and through second stage  
23 of HHFT fire).

24 <sup>233</sup> *Id.* at 2505:21-2509:3 (M. Hildebrand’s eyewitness testimony regarding brave firefighters at Mosier who  
25 repeatedly entered zone where fireballs could erupt to position and reposition equipment for cooling operation).

26 <sup>234</sup> *Id.* at 2158:1-4.

27 <sup>235</sup> *See* Prefiled Test. of J. Molina at 9:8-14; 12 Tr. 2740:24-2742:8 (Test. of J. Molina) (describing importance and  
28 difficulty of maintaining foam blanket over HHFT fire).

29 <sup>236</sup> Prefiled Test. of J. Molina at 7:13-16.

30 <sup>237</sup> Prefiled Test. of G. Rhoads § 76 at 28.

31 <sup>238</sup> *See* Ex. 0353-000004-TSS (curriculum vitae of G. Rhoads).

1 his opinions on letting HHFT fires burn themselves out.<sup>239</sup> Mr. Rhoads stated that local winds  
2 did not increase his concerns about potential wildfires caused by his recommended let-it-burn  
3 strategy and even went so far as to say that local winds could be beneficial.<sup>240</sup>

4 Mosier Fire District Chief Jim Appleton, who is very familiar with the Columbia River  
5 Gorge area, testified that wild land fires were his “biggest” concern because of the unique local  
6 wind patterns; that, had typical prevailing winds been blowing when the Mosier HHFT fire  
7 occurred, the local school, and then the entire town, could have burned down; and that the  
8 Mosier area has a history of large, wind-driven wildfires.<sup>241</sup> In fact, Mosier and its residents  
9 were very lucky that the winds on that day were highly atypical.<sup>242</sup> Local winds also can hamper  
10 evacuation efforts.<sup>243</sup>

11 Over time, as an HHFT fire continues to burn, it becomes more and more probable that  
12 additional railcars will fail and release crude oil into the environment.<sup>244</sup> Releases resulting from  
13 thermal stress may take various dangerous forms, including for example: a sudden energetic  
14 rupture, called a “boiling liquid expanding vapor explosion” or “BLEVE”; a failure of a valve or  
15 other railcar fitting, causing a fireball; a “heat-induced tear” or “HIT,” followed by a fireball; or  
16 any of these initial releases then causing a wildfire and/or structural fire in the vicinity.<sup>245</sup> If the  
17 HHFT fire remains uncontained then the recommended strategy shifts from offensively  
18 containing and extinguishing the fire to defensively ensuring human safety and, secondarily and  
19 to the extent practicable, protecting property, in the face of an uncontrolled and potentially very

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21 <sup>239</sup> 9 Tr. 2176:5-12.

<sup>240</sup> 9 Tr. 2176:13-2178:4 (Test. of G. Rhoads).

<sup>241</sup> 10 Tr. 2331:7-2333:3 (Test. of J. Appleton).

<sup>242</sup> *Id.*

<sup>243</sup> 14 Tr. 3178:12-20 (Test. of S. Johnson).

<sup>244</sup> Ex. 3123-0001-VAN.

<sup>245</sup> See 11 Tr. 2502-2505 (Test. of R. Chipkevich); 11 Tr. 2512-2514 (Test. of M. Hildebrand); *id.* at 2564-65; *id.* at 2572-73.

1 dangerous fire.<sup>246</sup> At this point, it is highly likely that more than one railcar will be  
2 compromised.<sup>247</sup>

### 3 2.3.4.2. EMERGENCY PLANNING AND NOTIFICATION 4 SHORTFALLS

5 As with the fire response effort, Vancouver would face substantial challenges evacuating  
6 the public within the hazard zone, due to resource shortfalls, and would look to the Clark  
7 Regional Emergency Services Agency (“CRESA”) to provide support. CRESA, which was  
8 formed pursuant to the Washington Interlocal Cooperation Act, ch. 39.34 RCW, “is an interlocal  
9 governmental agency that provides 9-1-1 dispatch, emergency communications support and  
10 emergency management for the seven cities in Clark County and the county itself.”<sup>248</sup> CRESA  
11 plans for, prepares for, mitigates against, responds to and assists in recovery from natural and  
12 technical disasters.<sup>249</sup> In the event of the need for an evacuation due to an HHFT fire, Vancouver  
13 would contact CRESA immediately and rely on it throughout the remainder of the incident.<sup>250</sup>

14 Tesoro’s expert, Mr. Rhoads, agreed with Vancouver’s witnesses, Chief Molina and Mr.  
15 Hildebrand, that thorough emergency response planning and preparedness are necessary to  
16 ensure the public’s safety against the risks posed by the Project.<sup>251</sup> Mr. Rhoads further testified  
17 that he reviewed the three principal emergency response planning documents relevant to the  
18 community where the Project would be located, the Clark Regional Comprehensive Emergency  
19 Management Plan (“CEMP”),<sup>252</sup> the Clark County Hazard Identification Vulnerability

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21 <sup>246</sup> 9 Tr. 2158:5-13 (Test. of G. Rhoads); see ERG 128, Ex. 0196-000197-TSS (“For massive fire, use unmanned  
hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.”); Ex. 3123-0001-VAN.

22 <sup>247</sup> See 21 Tr. 4836:24-4837:23 (Test. of G. Rhoads).

23 <sup>248</sup> 14 Tr. 3166 (test. of S. Johnson).

<sup>249</sup> *Id.*

<sup>250</sup> 13 Tr. 3071-72 (test. of M. Lester).

<sup>251</sup> See, e.g., 9 Tr. 2086:10-2087:18; Prefiled Test. of G. Rhoads ¶ 95 at 35.

<sup>252</sup> Ex. 0374-000133-TSS.

1 Assessment (“HIVA”),<sup>253</sup> and the Clark County Hazardous Material Emergency Response Plan  
2 (“HMERP”).<sup>254, 255</sup> Mr. Rhoads acknowledged that none of these key emergency planning  
3 documents analyzed the risk of or responses to unit trains transporting crude oil.<sup>256</sup>

4 Scott Johnson, CRESA’s emergency management division manager, testified that the  
5 HIVA serves as the foundation for CRESA’s emergency planning.<sup>257</sup> He opined that an update  
6 to the HIVA to include the anticipated total HHFT traffic with the Project was needed and would  
7 likely change Clark County’s vulnerability to a hazardous material incident from moderate to  
8 high.<sup>258</sup> Whereas, “[a] moderate risk rating warrants modest program effort to prepare for,  
9 respond to, recover from, and mitigate against the hazard,” “[a] high risk rating warrants [a]  
10 major program effort.”<sup>259</sup> Additionally, because the HIVA is used in the preparation of the  
11 CEMP, both documents would need to undergo substantial revisions to include planning for  
12 responses to incidents involving crude oil HHFTs.<sup>260</sup> The inescapable conclusion is that the  
13 Clark County’s emergency response planning documents are in need of substantial revision to  
14 respond to the risks that Tesoro’s operations would impose.

15 After the decision to evacuate has been made, it is critical to be able to communicate that  
16 information to the affected population rapidly and effectively. Unfortunately, CRESA’s  
17 emergency notification systems are outdated. CRESA cannot customize or target messages  
18 within a geographic area to communicate simultaneously with different populations.<sup>261</sup> As Scott  
19 Johnson explained, “If we wished to ... subdivide [the evacuation] area, for example, to tell a

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20 <sup>253</sup> Ex. 2004-000000-CLA.

<sup>254</sup> Ex. 0376-000092-TSS.

21 <sup>255</sup> 21 Tr. 4840:11-16 (test. of G. Rhoads).

<sup>256</sup> *Id.* at 4840:17-4841:13.

22 <sup>257</sup> 14 Tr. 3169:5-7 (test. of S. Johnson).

<sup>258</sup> *Id.* at 3170:12-16.

23 <sup>259</sup> HIVA at 4, Ex. 2004-000004-CLA (emphasis omitted).

<sup>260</sup> 14 Tr. at 3171:3-10 (test. of S. Johnson).

<sup>261</sup> *Id.* at 3174:19-20.

1 certain segment of that population to take one action and a certain segment to take another, we  
2 would have to send follow-up messages.”<sup>262</sup>

3 In an emergency situation requiring evacuation, minutes matter, and delays can cost  
4 lives.<sup>263</sup> Moreover, CRESA’s “current system does not allow [it] to identify areas such as  
5 schools, medical facilities or other high-occupancy areas that could use—or could require special  
6 messaging.”<sup>264</sup> And none of CRESA’s five different methods of emergency notification can  
7 communicate with each other, so each method has to be activated separately.<sup>265</sup> Scott Johnson  
8 therefore concluded that CRESA’s current systems are unable to provide Vancouver with  
9 adequate support for essential notifications of a fire involving a crude oil unit train or at the  
10 terminal Project.<sup>266</sup> Although improved systems are available, CRESA lacks funding to acquire  
11 them.<sup>267</sup>

#### 12 2.3.4.3. Insufficient Fire Response Resources

13 VFD lacks the necessary resources, including personnel and equipment, to ensure the  
14 safety of Vancouver’s residents in the event of a worst-case incident involving the Project or its  
15 related rail or vessel operations.<sup>268</sup> VFD’s resources are already stretched thin, and responding  
16 to an incident related to Tesoro’s operations would adversely affect VFD’s ability to meet  
17 Vancouver’s other needs for emergency and fire services.<sup>269</sup> Other firefighting resources in  
18 Clark County and surrounding areas are limited, and they cannot be relied upon to provide  
19

20 <sup>262</sup> *Id.* at 3174:21-25; *see* HMERP at 7-8, Ex. 0376-000011-TSS to -000012-TSS (describing characteristics and  
limitations of available emergency warning methods).

21 <sup>263</sup> *See, e.g.*, 14 Tr. 3178:23-3179:18 (test. of S. Johnson) (explaining importance of being able to target emergency  
notifications to specific populations).

22 <sup>264</sup> 14 Tr. at 3175:7-10 (test. of S. Johnson).

23 <sup>265</sup> *Id.* at 3177:15-18.

<sup>266</sup> *Id.* at 3179:19-22.

<sup>267</sup> *Id.* at 3179:23 -3180:4.

<sup>268</sup> *See* 12 Tr. 2722:24-2723:8 (test. of J. Molina).

<sup>269</sup> *Id.* at 2714:25-2716:18.

1 sufficiently skilled assistance, under mutual aid agreements and regional response systems, to fill  
2 in all of the gaps in VFD's capabilities, particularly with respect to hazardous materials response  
3 ("hazmat") resources.<sup>270</sup>

4 Despite these limitations, Tesoro has repeatedly stated that it will rely solely on VFD and  
5 other local resources to provide emergency response during the critically important first hours of  
6 a crisis situation. For example, Greg Rhoads stated that "[f]eeding, sheltering, and support[ing]  
7 evacuated residents is a local level activity for the first 12 hours of the event until railroad claims  
8 personnel can being [sic] to provide individual assistance."<sup>271</sup> Likewise, Eric Haugstad stated,  
9 with respect to releases at the Project, "Spills ... can be mitigated with resources available at that  
10 location ...."<sup>272</sup> Since Tesoro's contract employees at the Project will not be trained to handle  
11 spills involving fires beyond the incipient level, Vancouver will be expected to provide first  
12 responders for any significant fires.<sup>273</sup>

13 However, VFD would have great difficulty meeting these expectations. VFD maintains  
14 minimum staffing of 40 on-duty personnel<sup>274</sup> to handle an average of 70 calls per day<sup>275</sup> for a  
15 population of approximately 255,000 people in a service territory extending beyond Vancouver's  
16 boundaries.<sup>276</sup> VFD would treat any fire incident involving Tesoro's operations, whether at the  
17 Project, the Port, or the rail lines servicing these facilities, as a commercial fire call and would  
18 dispatch the following resources, exclusive of "hazmat".

- 19 • First Alarm: 2 Battalion Chiefs; 4 Engines (12 personnel); 2 Trucks (8 personnel)

21 <sup>270</sup> *Id.* at 2716:19-2720:17.

22 <sup>271</sup> Prefiled Test. of G. Rhoads ¶ 108 at 39.

23 <sup>272</sup> Prefiled Test. of E. Haugstad ¶ 18 at 9.

<sup>273</sup> *E.g.*, Ex. 0001-004993-PCE.

<sup>274</sup> 12 Tr. 2701:18-20 (test. of J. Molina).

<sup>275</sup> *Id.* at 2704:16-17.

<sup>276</sup> *Id.* at 2699:23-2700:2; *see* Ex. 3018-0001-VAN (map of VFD's service territory).

- Second Alarm: 4 Engines; 2 Trucks<sup>277</sup>

Thus a two-alarm commercial fire, not involving hazmat, would require 42 firefighters, which exceeds VFD's minimum on-duty staffing. As a practical matter, anything larger than a single alarm commercial fire would require VFD to call other local fire departments for mutual aid, to allow VFD to continue responding to other emergency calls.<sup>278</sup>

In addition, VFD maintains a hazmat team, but it is not minimum-staffed. Rather, when hazmat resources are needed, off-duty firefighters trained in hazmat are called back to active duty.<sup>279</sup> The performance response standard for hazmat services is 60 minutes.<sup>280</sup>

Consequently, hazmat personnel would not be available during the first phase of an HHFT fire, when their expertise is most needed to evaluate and select among the response alternatives.<sup>281</sup>

Similarly, firefighting tools such as foam and foam deployment equipment must be rapidly mobilized.<sup>282</sup> However, very few of these tools are distributed among local firefighting organizations; most are stored at refineries and in periodic caches along the rail lines.<sup>283</sup>

Consequently, even though the first hour of an HHFT train derailment incident is critical, and a successful outcome requires a commensurate level of response resources to be available during this early stage,<sup>284</sup> Vancouver completely lacks the ability to rapidly deploy and utilize the necessary specialized response resources.<sup>285</sup>

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<sup>277</sup> 12 Tr. 2714:11-24 (test. of J. Molina); Prefiled Test. of J. Molina at 5.

<sup>278</sup> 12 Tr. 2715:22-24 (test. of J. Molina); Prefiled Test. of J. Molina at 5-6.

<sup>279</sup> *Id.* at 2706:23-2707:1.

<sup>280</sup> *Id.*

<sup>281</sup> *See, e.g.*, Prefiled Test. of G. Rhoads ¶ 74 at 27; Ex. 3123-000001-VAN (M. Hildebrand Problem vs. Response Timeline Graph).

<sup>282</sup> Prefiled Test. of M. Hildebrand at 14.

<sup>283</sup> *See* 12 Tr. 2739:18-24 (test. of J. Molina); 12 Tr. 2809:25-2810:2 (test. of Spokane Assistant Fire Chief Brian Shaeffer).

<sup>284</sup> Prefiled Test. of M. Hildebrand at 14.

<sup>285</sup> 12 Tr. 2739:25-2740:2 (test. of J. Molina).

1 2.3.4.4. Insufficient Police Resources

2 In the event of an emergency involving the Project or the rail lines leading to the Project,  
3 the Vancouver Police Department (“VPD”) would also have many difficulties evacuating people  
4 from the hazard zone. The extent of the hazard zone is determined on a case-by-case basis,<sup>286</sup>  
5 but there is standard guidance that emergency management personnel would reference to  
6 circumscribe the evacuation area. The 2012 DOT Emergency Response Guidebook’s Guide No.  
7 128 (“ERG 128”),<sup>287</sup> which covers releases of petroleum crude oil,<sup>288</sup> provides, in the case of an  
8 HHFT incident involving a “tank, rail car or tank truck,” for an initial evacuation of one-half  
9 mile in all directions.<sup>289</sup> However, as recommended in ERG 128, the evacuation area is often  
10 expanded to one mile in all directions when multiple railcars are involved.<sup>290</sup> Tesoro’s expert,  
11 Mr. Rhoads, agreed that, consequently, responsible planning would include evaluating a  
12 reasonable worst-case scenario with a one-mile evacuation zone.<sup>291</sup>

13 Using the one-mile radius, CRESA and Vancouver cooperatively performed such an  
14 evaluation.<sup>292</sup> Planning to police an emergency like an HHFT derailment is inherently difficult.  
15 A wide variety of policing needs could arise during an emergency event, and there is a high  
16 degree of uncertainty regarding the extent to which these different potential needs will be  
17 required.<sup>293</sup> Subject to these uncertainties, CRESA and VPD estimate that an evacuation of  
18 7,000 to 13,000 people could be required if an HHFT derailed in Vancouver, and that a police

19 \_\_\_\_\_  
20 <sup>286</sup> See HMERP at 14, Ex. 0376-000018-TSS (“Due to weather conditions, plume, and other variables, evacuation  
and alternative traffic routes cannot be specifically determined in advance, but are determined by the Incident  
Commander on scene at the time of the incident.”)

21 <sup>287</sup> Ex. 0196-000196-TSS to -000197-TSS.

22 <sup>288</sup> *Id.* at 28.

23 <sup>289</sup> *Id.* at 196.

<sup>290</sup> See 9 Tr. 2146:16-24 (test. of G. Rhoads) (discussing evacuation recommendations in ERG 128); 21 Tr.  
4832:17-4835:10 (same) (discussing evacuation zones for incidents involving more than one railcar).

<sup>291</sup> 21 Tr. 4832:17-4835:10 (test. of G. Rhoads); see 9 Tr. 2146:16-24 (same).

<sup>292</sup> 13 Tr. 3046:18-20 (test. of M. Lester).

<sup>293</sup> See, e.g., *id.* at 3065:22-3066:2.

1 staff of 75 to 105 might be required.<sup>294</sup> Despite the uncertainty in these estimates, one thing is  
2 clear: An incident of this size would require far more police personnel than the 10 to 24 officers  
3 VPD typically has on duty,<sup>295</sup> and it could require roughly half of VPD's current total police  
4 force of 190 officers.<sup>296</sup> In addition, during an evacuation incident, Vancouver will still have to  
5 address the community's ordinary policing needs.<sup>297</sup>

6 During the evacuation, VPD also would be responsible for securing a perimeter around  
7 the hazard area and directing traffic flow to facilitate the evacuation and emergency response  
8 efforts.<sup>298</sup> VPD can field officers to perform these functions, but that would come at a cost of  
9 failing to serve Vancouver's other policing needs.<sup>299</sup> VPD nearly always is operating at  
10 minimum staffing,<sup>300</sup> which depending on the time of day fluctuates between 10 and 24 on-duty  
11 officers for the entire city.<sup>301</sup> VPD is so short staffed that, just to meet the community's  
12 ordinary needs for police services, it requires mandatory overtime,<sup>302</sup> and spends about half of  
13 its annual overtime budget to backfill positions.<sup>303</sup>

14 As with the fire department, VPD would call in off-duty officers in the event of an  
15 emergency, but these officers would take at least one hour to mobilize.<sup>304</sup> Simply securing more  
16 officers, however, often does not address the particular policing needs, as different police  
17 officers have specialized skills that are not necessarily fungible or readily replaceable by calling  
18

19 \_\_\_\_\_  
20 <sup>294</sup> See *id.* at 3046:18-24; Prefiled Test. of M. Lester at 6-7.

<sup>295</sup> 13 Tr. 3046:25-3047:4 (test. of M. Lester).

<sup>296</sup> See Prefiled Test. of M. Lester at 3.

<sup>297</sup> 13 Tr. 3051:2-18 (test. of M. Lester).

<sup>298</sup> *Id.* at 3046:5-8; Prefiled Test. of M. Lester at 6:9-11.

<sup>299</sup> See 13 Tr. 3051:2-18 (test. of M. Lester).

<sup>300</sup> Prefiled Test. of M. Lester at 4:6-7.

<sup>301</sup> 13 Tr. 3039:7-3040:10 (Test. of M. Lester).

<sup>302</sup> *Id.* at 3038:16-3039:6.

<sup>303</sup> *Id.* at 3086:4-5.

<sup>304</sup> Prefiled Test. of M. Lester at 7 n.5 and accompanying text.

1 in more officers.<sup>305</sup> Differing skill sets are required to address the variety of policing needs  
2 Vancouver is likely to have in the event of a large-scale evacuation, for example: a citizen who  
3 refuses to evacuate and is barricaded in at home; citizens who cannot evacuate using their  
4 personal transportation, either because they lack such transportation or because their egress  
5 routes are blocked by an accident's aftermath; inmates at a correctional facility who must remain  
6 in secure custody during evacuation; criminals who would loot evacuated homes and businesses;  
7 and hospital patients and residents of medical-care facilities, who might require both assistance  
8 evacuating and special medical attention during the evacuation period.<sup>306</sup>

9 While VPD can assist in evacuating residents, it lacks even basic resources needed to  
10 support an evacuation.<sup>307</sup> As discussed in Section 2.3.4.2. , VPD and VFD rely on CRESA for  
11 9-1-1 dispatch, emergency management and associated technology services.<sup>308</sup> Vancouver and  
12 CRESA do not have buildings or tents to provide shelter to evacuees; they cannot provide  
13 transportation to large numbers of people; and they lack equipment such as blankets, cots, and  
14 portable toilets.<sup>309</sup> For these resources, Vancouver and CRESA would be completely dependent  
15 upon volunteers, donations, and any support provided by a responsible party, such as Tesoro.

16 These resource shortfalls are compounded by the geographic location of the rail lines  
17 serving oil trains headed to the Project. A number of significant resources in Vancouver are  
18 located between the east-west BNSF main line (to the north) and the Columbia River (to the  
19 south), including residential neighborhoods with thousands of residents, business and retail  
20 developments, and industrial facilities. An HHFT accident in this area could block any of the

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21 <sup>305</sup> See 13 Tr. 3043-45 (Test. of M. Lester) (describing different policing roles and needs).

22 <sup>306</sup> Prefiled Test. of M. Lester at 8.

23 <sup>307</sup> 13 Tr. 3048:2-3050:24 (Test. of M. Lester).

<sup>308</sup> Prefiled Test. of S. Johnson at 1; see HMERP at 3, Ex. 0376-000007-TSS ("Activation of this plan should begin if ... [e]vacuation is necessary due to a hazardous materials incident especially outside a facility boundary.").

<sup>309</sup> See Prefiled Test. of M. Lester at 8; Prefiled Test. of S. Johnson at 13-14.

1 32 at-grade railroad crossings in Vancouver along this line and prevent evacuees from complying  
2 with an evacuation notice. However, despite Vancouver's numerous legitimate concerns for its  
3 citizens' health and safety, Tesoro has failed even to evaluate and quantify shortfalls in local  
4 response capabilities and has not offered any plan to make up the difference between local  
5 capabilities and the community's estimated needs in the event of an incident involving the  
6 Project or its operations.<sup>310</sup>

### 7 **2.3.5.5. Challenges of Multi-Jurisdictional Emergency Response Action**

8 Vancouver has reciprocal agreements with other jurisdictions in the vicinity to provide  
9 firefighting and policing mutual aid in the event of a larger-scale and/or longer-duration  
10 emergency,<sup>311</sup> but use of these resources involves multiple inherent limitations.<sup>312</sup> Providing  
11 mutual aid is subject to needed resources being available and to limitations in the mutual aid  
12 agreements.<sup>313</sup> For example, the mutual aid agreement with Portland does not require Portland  
13 Fire and Rescue to respond to requests for hazmat resources.<sup>314</sup> In addition, providers of mutual  
14 aid typically withdraw as soon as the immediate emergency is under control, leaving the affected  
15 jurisdiction to deal with longer-term response needs on its own.<sup>315</sup> Nonetheless Vancouver  
16 routinely gives and receives mutual aid and is grateful for the cooperation of its many mutual aid  
17 partners working to ensure regional coverage.

18 During the hearing, Tesoro's counsel blatantly mischaracterized Mr. Hildebrand's  
19 testimony regarding Vancouver's use of mutual aid, by asking Mr. Rhoads the following leading  
20 questions: "What about Mr. Hildebrand's testimony about the need to be able to respond to an  
21

22 <sup>310</sup> See Ex. 3056-0020-VAN to 3056-0026-VAN.

<sup>311</sup> 13 Tr. 3041:14-3042:9 (test. of M. Lester).

<sup>312</sup> See 12 Tr. 2716:19-2720:17 (test. of J. Molina) (discussing use and limitations of mutual aid).

<sup>313</sup> 9 Tr. 2149:16-2150:4 (test. of G. Rhoads) (discussing limitations of Vancouver's mutual aid partners).

<sup>314</sup> *Id.* at 2149:25-2150:4.

<sup>315</sup> 12 Tr. 2718:20-2719:3 (test. of J. Molina).

1 incident entirely on its own? And we're talking about the City [of Vancouver] here. Do you  
2 agree that the City has to be able to handle an incident entirely on its own?"<sup>316</sup> During cross-  
3 examination by Vancouver's counsel, Mr. Rhoads agreed that Mr. Hildebrand never said  
4 Vancouver needed to be able to respond on its own or had to be able to handle an incident on its  
5 own and admitted that mutual aid is subject to certain limitations, including availability of  
6 resources.<sup>317</sup>

7       Apparently Tesoro fails to understand that, because the purpose of emergency planning is  
8 to plan for a reasonable worst-case scenario, making the conservative planning assumption that  
9 mutual aid resources would be unavailable for the first response to incidents involving Tesoro's  
10 operations makes good sense. In fact it would be foolhardy not to take into account the various  
11 limitations of existing mutual aid agreements and the fact that any party receiving a request for  
12 mutual aid can decline if, at that point in time, it lacks the necessary resources to respond. Even  
13 if mutual aid resources are available, they may take several hours to deploy, and if the  
14 emergency has caused road or bridge closures, mutual aid may be completely unavailable.  
15 Consequently, mutual aid cannot be relied upon to provide assistance for first-response activities  
16 and is often used instead for responding to ongoing community needs during an emergency.

17       Mutual aid cannot substitute for maintenance of sufficient emergency response  
18 preparedness by the local jurisdiction and maintaining preparedness is critical for VFD and VPD  
19 to assure the health and safety of Vancouver's citizens. Yet Tesoro has utterly failed to address  
20 this critically important community need. Tesoro would impose substantial risks on the  
21 community without assessing or mitigating the impacts that those risks would place upon local  
22 emergency response resources.

23 <sup>316</sup> 9 Tr. 2096:6-10 (questions by Tesoro counsel Tadas Kisielius to expert witness Greg Rhoads).

<sup>317</sup> 9 Tr. 2149:6-2150:4 (test. of G. Rhoads).

1           **2.4. Unreasonable Land Use Impacts**

2           EFSEC’s process supplants all local land use processes.<sup>318</sup> Nevertheless an application  
3 must be consistent and in compliance with existing land use plans or zoning ordinances.<sup>319</sup>  
4 Potential adverse land use impacts, such as detrimental effects upon Vancouver’s property values  
5 and its long-term planning vision for the future, are relevant to the evaluation of the merits of an  
6 application for site certification.<sup>320</sup>

7           Vancouver has been pursuing a path of urban redevelopment for decades. The focus of  
8 redevelopment in the downtown and waterfront areas has consistently emphasized the overriding  
9 importance of fostering connectivity between these areas.<sup>321</sup> Another major objective is the  
10 clustering of compatible land uses, which improves the efficiency of municipal service  
11 delivery.<sup>322</sup> The result is an area of intensive urban development and redevelopment along the  
12 waterfront, particularly in the downtown area, but also in nearshore areas east of downtown.  
13 Vancouver is Washington State’s largest city on the Columbia River and is committed to  
14 encouraging sustainable economic growth centered on its waterfront.<sup>323</sup>

15           In the Northern Tier Pipeline case, the Council recognized the fact that siting a crude oil  
16 facility proximate to the city of Port Angeles was inconsistent with the public interest. It stated:

17           No sufficient reason has been shown to put the people of Port Angeles and their  
18 property at risk from the applicant’s proposal. Locating the port in a remote and  
19 relatively unpopulated area would not eliminate the possibility of an explosion or  
spill fire, but it would tremendously reduce the potential consequence should  
either event occur.<sup>324</sup>

20 <sup>318</sup> RCW 80.50.110(2); WAC 463-14-050; (Ex. 3091-VAN).

21 <sup>319</sup> RCW 80.50.90(2); WAC 463-026-110.

22 <sup>320</sup> See 3 Tr. 476:15-19 (test. of B. Carrico); Prefiled Test. of D. Wechner, ¶ 21 at 10; *Residents Opposed to Kittitas Turbines*, 165 Wn.2d at 311-13, 197 P.3d at 1171-72.)

23 <sup>321</sup> See, e.g., Ex. 3097-0011-VAN.

<sup>322</sup> See Ex. 3097-0139-VAN.

<sup>323</sup> See Ex. 0254-000005-TSS (recognizing Vancouver’s commitment to overcoming “the barrier-like feeling of the BNSF railroad berm between downtown and the waterfront.”)

<sup>324</sup> Northern Tier Pipeline Company, EFSEC Order 636 at p. 479.(Jan. 27, 1982).

1 The citizens of Vancouver are no less deserving of protection from crude oil facilities than the  
2 citizens of Port Angeles. Proposing the siting of this Project near Vancouver's downtown is  
3 simply not responsible.

4 Beginning on the far eastern side of Vancouver, the Riverview Gateway Plan envisions  
5 future development "with a vibrant and urban mix of residential, commercial, office and  
6 employment uses, linked by a network of parks, trails, and open spaces with connections to  
7 surrounding neighborhoods."<sup>325</sup> "This subarea and its intended mix of uses will be critical to  
8 [Vancouver's] long-term economic health and development."<sup>326</sup> Currently, there is a lumber  
9 company in this area located between the railroad tracks and the river that is served by a single,  
10 private at-grade crossing.<sup>327</sup> "Semitrailers have been known to have difficulty making the  
11 crossing, which raises concerns about the risk of an [oil train] collision with a semitrailer, with  
12 potentially disastrous results."<sup>328</sup>

13 The BNSF rail line continues west through the Old Evergreen Highway Neighborhood,  
14 which is 3.4 miles long, extending north one-half mile from the river.<sup>329</sup> As of the 2000 Clark  
15 County Census, this neighborhood contained approximately 2,300 homes and had a resident  
16 population of approximately 5,700.<sup>330</sup> Two significant redevelopment areas are farther west. To  
17 the north of the rail line is the Lower Grand Employment Area, where 173 acres of older  
18 industrial land are being redeveloped and which provides employment to approximately 1,600  
19 workers.<sup>331</sup> The Columbia Shores mixed-use waterfront development and the Columbia  
20

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21 <sup>325</sup> Ex. 3096-0005-VAN.

22 <sup>326</sup> Ex. 3096-0008-VAN.

23 <sup>327</sup> Ex. 3015-0002-VAN.

<sup>328</sup> Prefiled Test. of E. Holmes at 6.

<sup>329</sup> Ex.3117-0006-VAN.

<sup>330</sup> *Id.*

<sup>331</sup> Ex. 3055-003-VAN.

1 Business Center industrial area are south of the railroad tracks,<sup>332</sup> and are served by only two  
2 crossings, one of which is a grade-separated crossing that is restricted in height and only a single  
3 lane with single-direction access.<sup>333</sup>

4 Continuing west along the BNSF rail line leads to downtown Vancouver and the Port,  
5 where the Facility would be located. Hundreds of millions of dollars have already been spent on  
6 downtown and waterfront redevelopment. Reconnecting downtown Vancouver with the  
7 Columbia River has been and will continue to be a central feature of Vancouver's redevelopment  
8 vision. For example, the Vancouver Waterfront Access Project is an ongoing public works  
9 project involving investments of \$44.6 million in infrastructure improvements to roads, utilities  
10 and the BNSF railway berm. The direct connection of downtown with a major redevelopment of  
11 a former waterfront industrial site is expected to spur an estimated \$1.3 billion in new private  
12 investment.<sup>334</sup>

13 Tesoro understates both the importance to Vancouver of reconnecting downtown with the  
14 waterfront and the probable impacts caused by such a large increase in HHFT traffic on this  
15 central feature of Vancouver's urban planning vision. Tesoro acknowledges that four to five  
16 HHFTs per day will deliver crude oil to the Terminal. However, Tesoro does not discuss that  
17 this could result in as many as 15 HHFT transits of the downtown area every day. Each HHFT  
18 will arrive in Vancouver heading west on the BNSF rail line running alongside and parallel to the  
19 Columbia River. HHFTs will have two options for leaving Vancouver after unloading. Either  
20 they could exit heading east the same way they came, or they could leave by heading north from  
21 the Terminal out of Vancouver to head through the Cascade Mountains. If they take the former  
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23 <sup>332</sup> *Id.* at 3, 5.

<sup>333</sup> Prefiled Test. of E. Holmes at 12.

<sup>334</sup> Prefiled Test. of E. Holmes at 5-6.

1 route and leave Vancouver by heading east, they will make two passes of the downtown area.<sup>335</sup>  
2 However, if they head north, as Tesoro states most of them will do, they will make a total of  
3 three passes through downtown, because of the need to maneuver to switch tracks near the  
4 Columbia Street rail overpass.<sup>336</sup> Thus, on any given day, if the maximum of five HHFTs came  
5 to Vancouver, and all existed to the north, there would be 15 HHFT passes through central  
6 Vancouver directly between the downtown area and the waterfront development area. This  
7 would equal 22.5 miles of trains in a single day.

8 The Facility and its resultant impacts are wholly incompatible with this vision of  
9 Vancouver's future. Siting an oil terminal facility of this magnitude within a densely populated  
10 urban environment makes no sense. The unmitigatable risks and adverse impacts resulting from  
11 a decision to site the Facility in Vancouver would be extensive and far reaching. Foremost are  
12 threats to public safety, including releases of oil, fires or both, occurring from collisions or  
13 malfunctions of HHFTs, during transloading activities at the Facility, and aboard marine vessels  
14 at the Port. Tesoro's own experts admit that it is difficult to plan for a rail or marine accident,  
15 due to the high number of possible scenarios,<sup>337</sup> and Tesoro has not even analyzed the potential  
16 public safety threats posed by sabotage or terrorism. Moreover, Tesoro has not analyzed the  
17 financial assurance and indemnity insurance requirements for the Facility,<sup>338</sup> so taxpayers have  
18 no way of knowing whether they will be forced to foot the bill in the event of a disaster.  
19 Approval of the application would be bad public policy.

## 20 2.5. UNENFORCEABLE MITIGATION RE RAIL TRANSPORT RISK

21 Bakken crude transport and handling presents unacceptable risks to the City and state.

22 <sup>335</sup> Ex. 5902 at 10-11.

23 <sup>336</sup> *Id.*

<sup>337</sup> See Prefiled Test. of G. Rhoads ¶¶ 84-90 at 32-33; Prefiled Test. of E. Haugstad ¶ 18 at 9

<sup>338</sup> *infra* Section 2.4..

1 Tesoro tried to paint a picture of an industry that is fully regulated, with a great safety record, but  
2 that picture conflicts with the reality. In truth, Tesoro has fought at every turn to avoid  
3 incorporating the safety measures necessary to ensure its proposal does not present significant  
4 risks to the public.

5 Even the very basic question on what type of rail car will be used is unknown. There is  
6 no way to know what cars Tesoro plans to move and unload at the Port site. Tesoro says it is  
7 “committed” to accepting only DOT 117 tank cars,<sup>339</sup> but has demonstrated ambivalence  
8 regarding the new standards as recently as earlier this year, in its comments to the draft  
9 environmental impact statement (“DEIS”).<sup>340</sup> And, it has also undercut this “commitment” by  
10 asserting that this is not a condition that the Council can impose or enforce.<sup>341</sup> Mr. Larrabee  
11 acknowledged that in January of this year that Tesoro commented on the DEIS saying that they  
12 could not operate in an economically competitive manner if they were limited tank cars to using  
13 only DOT 117s.<sup>342</sup> Now, just 6 months later, they are saying they can. What will they say 6  
14 months or a year from now? There is no way to know. And, we do not even know what type of  
15 117 will be in use. Under cross examination, Tesoro conceded the reference to the 117 included  
16 the 117R, which is just a retrofitted 1232.<sup>343</sup>

## 17 2.6. LACK OF FINANCIAL RESPONSIBLE OWNER-OPERATOR

18 Tesoro is required to ensure that it, and not the state and host jurisdiction, will cover the  
19 costs stemming from the Project, including costs from catastrophic accidents.

20 The application shall set forth insurance, bonding or other arrangements proposed  
21 in order to mitigate for damage or loss to the physical or human environment

22 <sup>339</sup> 3 Tr. 418:20-23 (test. of J. Larrabee).

<sup>340</sup> *Id.* 418:14-424:1.

<sup>341</sup> See Tesoro’s and Port Motion to Dismiss and Motion for Summary Judgment.

<sup>342</sup> 3 Tr. 419-20, 423-4 (Test. of Mr. Larrabee).

<sup>343</sup> 21 Tr. 5073:3-15 (Test. of Mr. Larrabee); 3 Tr. 421-424:1 (Test. of Mr. Larrabee).

1 caused by project construction, operation, abandonment, termination, or when  
2 operations cease at the completion of a project's life. The application shall  
3 describe the applicant's commitment to the requirements of chapter 463-72 WAC,  
4 Site restoration and preservation.<sup>344</sup>

5 Given the risks this facility presents, before issuing a decision, EFSEC must know the maximum  
6 foreseeable lost ("MFL") this proposal presents.

7 An MFL estimate is an estimate of a worst-case operational risk scenario, in other words,  
8 the financial risk or total dollar amount associated with a worst-case incident. An MFL is not  
9 limited to one type of cost, but includes costs associated with loss of life, injury to persons,  
10 destruction of property, loss of use of property, first responder costs, and cleanup expenses.<sup>345</sup>

11 [M]aximum foreseeable loss is an insurance term that underwriters use to  
12 understand their exposures in a worst-case scenario given a certain operation. So  
13 they're looking at all of the casualty, property and casualty and life and health  
14 potentially -- potential losses that could occur in that environment, in that  
15 particular operation.<sup>346</sup>

16 Without that MFL, there is no way to understand the project's true costs. Yet, Tesoro has not  
17 calculated the MFL, asserting that this can wait.

18 There is one appellate decision upholding a decision to delay procuring financial  
19 indemnities to clean up an oil spill pursuant to RCW 88.40.025.<sup>347</sup> However, that case involved  
20 a condition of a mitigated determination of non-significance (not an EIS as was issued here) and  
21 the State Supreme Court has since accepted review.<sup>348</sup> The court was careful to note the holding

22 <sup>344</sup> WAC 463-60-075.

23 <sup>345</sup> Ex. 3119-0004-VAN to -0005-VAN.

<sup>346</sup> 11 Tr. 2578:5-11.

<sup>347</sup> "An onshore or offshore facility shall demonstrate financial responsibility in an amount determined by the department as necessary to compensate the state and affected counties and cities for damages that might occur during a reasonable worst case spill of oil from that facility into the navigable waters of the state. The department shall consider such matters as the amount of oil that could be spilled into the navigable waters from the facility, the cost of cleaning up the spilled oil, the frequency of operations at the facility, the damages that could result from the spill and the commercial availability and affordability of financial responsibility."

<sup>348</sup> *Quinault Indian Nation v. Imperium Terminal Servs., LLC*, 190 Wn. App. 696, 709, 360 P.3d 949 (2015), rev. accepted, \_\_\_ Wn.2d \_\_\_ (2016).

1 in no way forecloses an earlier showing of financial responsibility in other cases.<sup>349</sup> Here, there  
2 are significant impacts, and the Applicant has utilized a corporate structure to avoid taking  
3 ultimate responsibility for those impacts.

4 The other problem with taking that approach here is that understanding the MFL is  
5 important to understanding the total financial risk the state is being asked to bear. If the project  
6 represents a \$5-6 billion MFL, a risk which is not insurable and could bankrupt even the parent  
7 companies, and this MFL is proposed in the heart of an urban setting, this is not a project would  
8 should be approved. In other words, does the Governor really want to approve a project  
9 potentially responsible for \$5-6 billion in damage? The other part of the issue is that Tesoro has  
10 made no attempt to cover even a modest MFL, expecting the state to pick up the tab.

11 To recap, Tesoro is a shell Delaware limited liability company with no employees. Its  
12 members are Savage Companies and Tesoro Refining & Marketing Company LLC. Tesoro  
13 Refining and Marketing Company LLC (also a Delaware LLC) is a subsidiary of Tesoro  
14 Corporation. Savage Companies is a privately held operator.<sup>350</sup> Tesoro has not provided  
15 financial data on its Delaware LLC, Tesoro Refining and Marketing Company, LLC, or Savage  
16 Companies. Tesoro Corporation financial information is available from the U.S. Securities and  
17 Exchange Commission (SEC) EDGAR System. When asked for Tesoro's net worth, *i.e.*, assets  
18 minus liabilities, Mr. Larrabee refused to respond, stating: "Today I would consider that  
19 proprietary information and confidential information."<sup>351</sup> The response was no different during  
20 discovery, when the City asked for details on proposed insurance, bonding or other assets that  
21 would cover damages. Other than the information in the application, Tesoro refused to

22  
23 <sup>349</sup> *Id.*

<sup>350</sup> Ex. 3119-0014-VAN to -0015-VAN.

<sup>351</sup> 3 Tr. 427:25-428:1.

1 respond.<sup>352</sup> Thus, EFSEC does not know if the shell LLC has zero funding or worse, carries debt.

2 The LLC was created to fully shield the parent corporations. Through Ms. Hollingsed,  
3 Tesoro made clear that its approach was a "stand alone" approach, without ties to the main  
4 operations.<sup>353</sup> This was a concern for the City's insurance expert, Mr. Blackburn.

5 Having a effectively a shell corporation with no assets and no tie [to the parent  
6 corporations], if you will, no responsibility of the main organizations, I think puts  
7 at a much higher risk the operation. I don't feel comfortable with that, you know,  
8 as a risk manager.<sup>354</sup>

9 In addition to the risk of dealing with a shell corporation, financial assurances have to be  
10 considerably higher as there are no company assets to drawn on.<sup>355</sup> And, even if its assets were  
11 reachable in the event of an MFL, an MFL has the potential to bankrupt even the Tesoro  
12 Corporation.<sup>356</sup> By utilizing the Delaware LLC structure, and without evidence of contractual  
13 indemnifications, Tesoro has shielded its parent from this risk. It is protecting its financial  
14 interests, at the expense of the state and City.<sup>357</sup>

15 These are significant risks to ask the public to shoulder. It is reasonable to estimate an  
16 expected MFL for a catastrophic accident associated with this project at roughly \$5-\$6 billion.<sup>358</sup>  
17 This rough estimate is derived from considering costs associated with other major accidents and  
18 insurance reports. As an example, the Lac-Mégantic incident, involving a small town of roughly  
19 6,000 in Quebec Province, Canada, was a catastrophic accident. It occurred in 2013, killed 47  
20 people, and destroyed the downtown. PHMSA estimates the damage to be \$2.7 billion for an

21 <sup>352</sup> Exs. 3046-3049-VAN.

<sup>353</sup> 11 Tr. 2623:10-24.

<sup>354</sup> 11 Tr. 2623:5-9.

<sup>355</sup> 11 Tr. 2620:3-11 ("If that organization is highly leveraged, they have a lot of debt to equity that they've placed in the business, then we would like to see them cover their exposures closer to the maximum foreseeable loss.").

<sup>356</sup> Ex. 3119-0015-VAN to -0016-VAN.

<sup>357</sup> Ex. 3119-0017-VAN.

<sup>358</sup> Ex. 3119-0006-VAN to -0007-VAN.

1 event occurring in a sparsely populated location.<sup>359</sup> Compensation has been a major problem  
2 associated with that incident. In fact, the railroad hauling the crude oil filed for bankruptcy  
3 because it lacked sufficient insurance to pay the claims.<sup>360</sup>

4 That the total risk values are into the billions is not surprising. With respect to railroad  
5 incidents, BNSF has been up front that even available railroad liability insurance (apart from  
6 Tesoro) tops out at “about \$1.0 Billion” and “[i]nsurance is not commercially available to  
7 sufficiently protect us against catastrophic loss.”<sup>361</sup> In a U.S. Department of Transportation  
8 report, this level of insurance was documented as:

9 well short of the \$5-\$6 billion that Class I railroads estimate would be necessary  
10 in a “nightmare scenario,” e.g., an accidental release of TIH [toxic-inhalation-  
11 hazard] gas in close proximity to a large number of people. Once their primary  
insurance has been exhausted, carriers would be held liable for the balance,  
forcing even the largest railroad into bankruptcy.<sup>362</sup>

12 Vancouver, with its considerably larger population than Lac-Mégantic, has higher risks for loss  
13 of human life and physical injury, along with considerably higher infrastructure values.

14 However, there is no market to cover this risk.<sup>363</sup>

15 And, Tesoro has not proposed financial security to cover an MFL. Tesoro—a Delaware  
16 LLC—effectively concedes it will only provide what the markets have available, and there is no  
17 evidence it will be providing financial guaranties from its parent company. For example, it states  
18 it will obtain “environmental impairment liability insurance” but only to the extent such  
19 coverage is available on a commercially viable basis.<sup>364</sup> The only concrete commitment that

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21 <sup>359</sup> Ex. 3067-XX-VAN, PHMSA Final Regulatory Impact Analysis, p. 95.

<sup>360</sup> Ex. 3119-0006-VAN.

<sup>361</sup> Ex. 3119-0006-VAN; see also Ex. 3119-0022-VAN.

<sup>362</sup> U.S. D.O.T., *The Transportation of Hazardous Materials: Insurance, Security, and Safety Costs* (Dec. 2009),  
available at <https://www.transportation.gov/sites/dot.gov/files/docs/The%20Transportation%20of%20Hazardous%20Materials%20-%20Insurance%2C%20Security%2C%20and%20Safety%20Costs%20--%20Dec%202009.pdf>.

<sup>363</sup> Ex. 3119-0007-VAN to -0008-VAN.

<sup>364</sup> Ex. 3119-00011-VAN; see generally Ex. 3119-0009-16.

1 Tesoro has made regarding insurance is to comply with the requirements of the lease with the  
2 Port which requires the tenant to have \$10 million per occurrence and \$15 million aggregate  
3 liability insurance, coupled with \$25 million in environmental pollution coverage. The evidence  
4 produced during the hearing clearly establishes the inadequacy of this minimal amount of  
5 insurance. Tesoro indicates it will obtain property insurance (\$1 million and five percent of  
6 values per location).<sup>365</sup> The application states Tesoro will obtain standard insurance on the  
7 Project, and provide financial security in accordance with RCW 88.40.025 for a "reasonable  
8 worst case oil spill" to navigable waters of the state.<sup>366</sup> Tesoro has declined to provide details on  
9 any of this insurance, including coverage amounts and exclusions.<sup>367</sup> That is also Tesoro's  
10 approach for insurance requirements which apply not to Tesoro, but to the railroads, to cover not  
11 total liability, but cleanup costs for a "reasonable worst case spill," pursuant to WAC 480-62-  
12 300.

13 In theory, Tesoro could purchase insurance of up to \$1 billion to cover potential  
14 accidents, but has provided no indication that it will do so. And, intentional acts of sabotage  
15 would be excluded from most, if not all, insurance policies and would have to be separately  
16 purchased. Thus, a shortfall of at least \$4-\$5 billion toward the estimated MFL is anticipated.<sup>368</sup>

17 As a result, Tesoro cannot fully remedy (from a financial perspective) impacts resulting  
18 in injury and casualties, natural resource and property damage, emergency responder resource  
19 impacts, and infrastructure damage. Recognizing the risk the project presents, Tesoro erected  
20 protective shields should the MFL occur. Further complicating this is that Tesoro has made

21 <sup>365</sup> Ex. 3119-0013-VAN to -0014-VAN.

22 <sup>366</sup> Ex. 3119-0012-VAN.

23 <sup>367</sup> Ex's. 3046-3049-VAN. Tesoro's latest reason for refusing to disclose financial information is that it is not required to do so until 90 days before site preparations commence. This makes no sense. Among other things, accepting Tesoro's position would leave EFSEC no time to analyze and evaluate the proposed financial assurance to determine whether it is adequate.

<sup>368</sup> Ex. 3119-0008-VAN.

1 every effort to neatly compartmentalize risk, with each component of the operation (oil supplier,  
2 shipper, handler, and shipping company) viewed as entirely separate.

3 Liability and insurance have been described throughout this proceeding as very  
4 straightforward and compartmentalized. You have the company which has the oil,  
5 provides it to another company which transport it, that gets sent to the shell LLC  
6 which handles it, and then that's transferred to another company to ship, and if  
7 there's an accident at any point, precisely where the liability is and how it's all  
8 going to work, is that reality?

9 No, I don't believe it is. ... The most difficult thing about that is that  
10 being fragmented, there's typically a -- in a large loss there's a reservation of  
11 rights from all the insurers at that point for continued investigation to determine  
12 who is responsible for what.<sup>369</sup>

13 With this artificial compartmentalization, EFSEC does not have a true picture of total risk, which  
14 is why the entire project MFL for all project stages is needed. Further, if that MFL were to  
15 occur, this compartmentalization works in the LLC's favor. The public ends up being financial  
16 responsible at the outset of the accident, with financial recovery, if any, being years off.

17 Q: So in summary, it can take years to sort these things out on liability and  
18 who bears accountability and all of that?

19 A: It could be decades.<sup>370</sup>

20 If an applicant cannot pay for an energy project's true costs, so refuses to calculate them,  
21 and instead asks the public to bear these un-quantified financial risks while fully shielding itself,  
22 pursuant to EFSEC's financial indemnification requirements, the project must be denied.

### 23 3. CONCLUSION

Tesoro's conduct reflects a profit-driven, minimally capitalized foreign business entity  
that is unwilling to consider compromise to facilitate reaching negotiated resolutions,

<sup>369</sup> 11 Tr. 2601:4-11(Test. of Mr. Blackburn)..

<sup>370</sup> 11 Tr. 2602:13-16.

1 unconcerned about its operation's adverse impacts to its next-door neighbors and to the larger  
2 community in which it is located, and unjustifiably optimistic about probable social, economic,  
3 and environmental outcomes. This business philosophy is directly at odds with the best interests  
4 of the citizens of the State of Washington in fostering realistic, responsible, and sustainable  
5 energy policies. As explained in this closing brief, the evidence adduced at the hearing  
6 demonstrated that Tesoro failed to meet its burden to show that construction and operation of the  
7 Project will advance the public interest.

8 Due to Tesoro's approach, this Project cannot be mitigated such that environmental  
9 impacts are minimal, and the fundamental right to a healthful environment is ensured. And, the  
10 project is in the wrong location. In land use, the core issue is what goes where. Local  
11 jurisdictions grapple with this conundrum every day. However, in this instance, EFSEC is not  
12 grappling with some modest incompatibility issue. This Project involves handling over 15  
13 million gallons of volatile crude oil per day<sup>371</sup>, storing and handling up to six times on that on  
14 site, and the potential for two or more unloaded or partially unloaded trains to stack up at the  
15 Port of Vancouver's rail yard. This, in a City of 165,000. There no mitigation which will make  
16 it safe for this quantity of Bakken crude to be handled at this site every day. Tesoro understands  
17 that gamble, which is why the shell LLC is ghost, unfunded and without employees. At the end  
18 of the day, the Project benefits run only to the parent companies, which have chosen to remain  
19 unaccountable for their offspring. The City requests that the Council recommend its denial.

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<sup>371</sup> 360,000 barrels per day times 42 gallons per barrel.

1 Respectfully submitted, this 6th day of September, 2016.

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**ATTACHMENT 1**

**Table 1 - Crude Oil and Ethanol Train Derailments (Prefiled Test. of R. Chipkevich)**

[Updated to Include Mosier Incident as #25]

	Location	Date	Railroad	Cars Derailed	Cars w/ Release	Fire	Product	Speed (mph)	Release (gallons)
1	Mosier, OR	6/3/2016	UP	16	4	Y	Crude oil	25	30,000 *
2	Bon Homme County, SD	9/19/2015	BNSF	7	3	Y	Ethanol	10	49,748
3	Heimdal, ND	5/6/2015	BNSF	6	5	Y	Crude oil	24	98,090
4	Gogama, Ontario	3/7/2015	CN	39	36	Y	Crude oil	43	500,000
5	Galena, IL	3/5/2015	BNSF	21	10	Y	Crude oil	23	110,543
6	Mount Carbon, WV	2/16/2015	CSX	27	20	Y	Crude oil	33	378,034
7	Gogama, Ontario	2/14/2015	CN	29	19	Y	Crude oil	38	264,172
8	LaSalle, CO	5/9/2014	UP	6	1	N	Crude oil	9	7,932
9	Lynchburg, VA	4/30/2014	CSX	17	1	Y	Crude oil	23	29,416
10	Vandergrift, PA	2/13/2014	NS	21	4	N	Crude oil	31	4,310
11	New Augusta, MS	1/31/2014	IC/CN	15	7	N	Crude oil	47	50,450
12	Plaster Rock, NB	1/7/2014	CN	6	2	Y	Crude/ethanol	47	60,759
13	Casselton, ND	12/30/2013	BNSF	20	18	Y	Crude oil	42	436,437
14	Aliceville, AL	11/8/2013	AGC	26	25	Y	Crude oil	39	630,000
15	Lac-Mégantic, Quebec	7/6/2013	MMA	63	59	Y	Crude oil	65	1,580,000
16	White River, Ontario	4/3/2013	CP	7	2	Y	Crude oil	35	26,600
17	Parkers Prairie, MN	3/27/2013	CP	14	3	N	Crude oil	40	30,000
18	Plevna, MT	8/5/2012	BNSF	17	12	Y	Ethanol	23	245,336
19	Columbus, OH	7/11/2012	NS	3	3	Y	Ethanol	25	54,748
20	Tiskilwa, IL	10/7/2011	IIRR	10	9	Y	Ethanol	37	162,000
21	Arcadia, OH	2/6/2011	NS	31	31	Y	Ethanol	46	834,840
22	Cherry Valley, IL	6/19/2011	CN	19	15	Y	Ethanol	36	323,963
23	Luther, OK	8/22/2008	BNSF	8	5	Y	Crude oil	19	80,746
24	Painesville, OH	10/10/2007	CSX	7	4	Y	Ethanol	48	55,200
25	New Brighton, PA	10/20/2006	NS	23	20	Y	Ethanol	37	485,278
<b>Averages</b>				<b>18</b>	<b>13</b>			<b>34</b>	<b>261,144</b>
<b>Totals</b>				<b>458</b>	<b>318</b>	<b>21</b>			<b>6,528,602</b>

\* approximation

Source of data on Mosier (except release volume) is Ex. 3125-VAN, FRA Preliminary Factual Findings Report.

Source of release volume for Mosier is the Transcript of National Transportation Safety Board Rail Tank Car Safety Roundtable Discussion, p. 98 (July 13, 2016) (comment by Karl Alexy, Federal Railroad Administration), available at <http://www.nts.gov/news/events/Documents/Rail-Tank-Car-Safety-Roundtable-Transcript.pdf>.