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7 **BEFORE THE STATE OF WASHINGTON**
8 **ENERGY FACILITY SITE EVALUATION COUNCIL**

9 In the Matter of:
10 Application No. 2013-01

11 TESORO SAVAGE, LLC

12 VANCOUVER ENERGY DISTRIBUTION
13 TERMINAL

CASE NO. 15-001

EXHIBIT 4508

**DIRECT TESTIMONY OF
EXPERT WITNESS
ROBERT W. JOHNSON ON
BEHALF OF DEPARTMENT
OF NATURAL RESOURCES**

14
15 I, ROBERT W. JOHNSON, declare as follows:

16 1. Since 2014, I have been the Division Manager for the Wildfire Division of the
17 Washington State Department of Natural Resources (DNR). Prior to becoming Wildfire
18 Division Manager, I worked in a variety of positions at DNR all with increasing levels of
19 responsibility and leadership within the agency. In all, I have held 15 positions in a diverse
20 cross-section of DNR programs over a 33-year career with the Department, including 17 years
21 as a manager. A true and accurate copy of an abbreviated resume detailing my relevant
22 experience is provided as Exhibit 4509-000001-DNR.

23 2. As Wildfire Division Manager, working with state, contract, federal, and local
24 partner resources, I lead all aspects of DNR's wildfire program from preparedness to
25 suppression. DNR maintains the state's largest on-call wildland firefighting force. During
26

1 peak fire season, approximately 1,300 agency personnel could be used for suppression efforts.

2 This includes permanent fire staff, seasonal fire staff, and militia from the larger agency ranks.

3 3. I hold Incident Commander and Operations Section Chief national ratings for
4 complex incident response and represent the agency on several boards and committees with the
5 intent of coordinating wildfire prevention, forest health, fire preparedness, and suppression
6 efforts in the Pacific Northwest.

7 4. As Washington State's largest on-call fire department, DNR is responsible for
8 responding to fires on over 13 million acres of land under our protection and assisting local fire
9 districts across the state. DNR wildland firefighting resources consist of 400 seasonal
10 firefighters and 800 regular DNR staff, from foresters to budget analysts, who may be
11 dispatched to fires from their normal jobs as needed.

12 5. Last summer, wildfires in Washington State burned over 1 million acres of land,
13 destroying over 300 homes and taking the lives of three firefighters. The 2015 fire season was
14 the worst fire season on record in Washington State, with 2014 the previous worst. Partway
15 through the 2015 fire season, DNR began dispatching staff who had not previously participated
16 in the fire program. DNR sought assistance from other states as response needs far outpaced
17 resources.

18 6. The increased train traffic from the proposed facility would raise the risk of
19 wildfire ignition along every mile of track used. Heat and sparks from train traffic have a
20 history of igniting wildfires, particularly in areas of dry vegetation, such as is typical of much of
21 Eastern Washington. Railroad maintenance work is an additional potential ignition source. In
22 the summer of 2007, trains travelling west along the BNSF line caused multiple fires along the
23 tracks, including several blazes that grew into a 365-acre complex southwest of Spokane that
24 caused significant property damage and cost state taxpayers \$460,000 in suppression costs. Just
25 this past summer, sparks from a passing BNSF train along the same line caused a 30-acre fire in
26 northwest Portland. In 2003, a westbound BNSF train derailed near the Columbia River.

1 Sparks from that derailment ignited two fires that quickly spread to 800 acres. BNSF
2 operations or track maintenance in Washington State were associated with four unrelated
3 wildfire ignitions in 2008, two in 2014, and one in 2015.

4 7. DNR uses Industrial Fire Precaution Levels (IFPLs) to regulate industrial
5 activities that carry a risk of ignition when conditions create an increased fire danger. When
6 conditions are conducive to fire, as they were for the majority of the 2015 fire season across
7 Washington State, industrial activities in or adjacent to forestlands are either restricted or
8 suspended. IFPLs are applied by zones; for example, Zone 686 covers the City of Spokane
9 and surrounding areas and was under an IFPL restriction or general shutdown from July through
10 September of this past year. IFPL levels are an important tool in the management of fire risk
11 in response to current conditions, and a shutdown often coincides with lower resources on hand
12 to deploy to new fire starts. Increased rail traffic would increase the risk of wildfire in areas and
13 under conditions where the fire risk is so high that a shutdown of other industrial activities is
14 considered necessary. However, rail operations are generally regulated by the Surface
15 Transportation Board, and no indication has been provided that the rail line operations servicing
16 the proposed facility would be adjusted for high-risk fire conditions.

17 8. In addition to the ongoing risk of fire that will rise due to the daily increase of
18 rail traffic, there is an increased risk of a catastrophic explosion at any point crude oil is
19 transported across the state to the proposed facility. Exhibit 0051-003888-92-PCE (DEIS,
20 Appendix E, *Rail Spill Risk Analysis*, 38-42). Fire suppression from either a crude oil spill or
21 sparks generated under normal train operations could quickly become the responsibility of
22 external fire response entities, including state resources. Exhibit 0051-000654-PCE
23 (DEIS 4-14,15). The 2014 survey conducted by the Washington State Emergency
24 Management Division explored the response capabilities of the many local fire response
25 jurisdictions to the increased fire risks that would result from the proposal, but potential impacts
26

1 to state firefighting resources have not been assessed. Impacts to state resources should be
2 assessed and addressed as part of any final decision regarding the proposal.

3 9. The volunteer organization of many fire response entities along the impacted rail
4 line should also be acknowledged. DNR does not employ a standing militia of trained
5 firefighters; rather, resources are staffed for the duration of a fire season. The heightened risk
6 of spark- or explosion-caused fire from the proposal will not be limited to those months when
7 state response resources are available for deployment. A final decision on the proposal should
8 take into consideration the availability of response resources on a year-round basis and the
9 potential impact to state firefighting resources, should more rail-initiated fires start during fire
10 season, when deployment to those starts would take resources away from responding to other
11 fires.

12 10. The results of the 2014 survey showed that “even the most metropolitan,
13 best-equipped departments consider themselves ill prepared to respond to a crude-by-rail
14 [incident] with related explosion and/or fire incident.” Exhibit 0051-000686-89-PCE
15 (DEIS 4-46-49). At least one jurisdiction has indicated that, given available resources, the only
16 mitigation that could be implemented to prevent spread of a spill would be in situ burning.
17 Exhibit 0051-000688-PCE (DEIS 4-48). Where a derailment results in burning tank cars, in
18 situ burning may be a response of choice for fire response entities where burning tank cars do
19 not present a risk to populations. The potential for in situ burning as a response to spills and
20 spill-related fires, raises the wildfire risk associated with the proposal. Exhibit 0051-003938-
21 PCE (DEIS, Appendix E, *Rail Spill Risk Analysis*, 88).

22 11. Any suppression response to a fire involving crude oil would require specialized
23 training and specialized materials and equipment, which would need to be readily available in
24 sufficient quantities at any given location along the rail line. Exhibit 0051-000686-89-PCE
25 (DEIS 4-46-49). DNR wildland firefighters are not trained to respond to hazmat fires, nor does
26 DNR stock materials necessary for such a response. Given the volumes of foam and water

1 needed to combat a crude oil fire related to a derailment, the constraints on making sufficient
2 foam, water, and other resources available to provide adequate response capability for a tank car
3 fire anywhere in the rail corridor should be addressed. This is particularly crucial given the
4 critical first 100-minute window for an adequate response from the beginning of a crude oil fire
5 that is associated with a derailment. Exhibit 0051-000686-PCE (DEIS 4-46).

6 12. Any final decision on the proposal should address the implications of the lack of
7 preparedness for incidents in the absence of substantial training and/or additional firefighting
8 resources, including the impacts on the availability of resources to respond to other fires.
9 Specialized responders should be located at the proposed facility and along the delivery route
10 to the degree necessary to be able to implement a fast, effective, and immediate response.
11 Vancouver Fire Department (VFD) and other willing and capable fire districts should receive
12 specialized training and training to supplement and support a response effort. Both the project
13 proponent and the railroad also should provide qualified teams to be available for an immediate
14 response. These staffing and training requirements need to be established within a Department
15 of Ecology-approved Spill Contingency Plan. This plan should be in place before the facility
16 becomes operational and oil is delivered.

17 I declare under penalty of perjury under the laws of the state of Washington that the
18 foregoing is true and correct to the best of my knowledge and belief.

19 SIGNED at Olympia, Washington, this 12th day of May, 2016.

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21 _____
22 ROBERT W. JOHNSON
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CERTIFICATE OF SERVICE

I certify that I caused a copy of the foregoing document to be served on all parties or their counsel of record on May 13, 2016, as follows:

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20 I certify under penalty of perjury, under the laws of the state of Washington, that the
21 foregoing is true and correct.

22 DATED this 13th day of May, 2016, at Olympia, Washington.

23
24 

25 **KIM L. KESSLER**
26 Legal Assistant
Natural Resources Division