

16 June 2015

Mr. Stephen Posner
Energy Facility Site Evaluation Council
Washington Utilities and Transportation Commission
P.O. Box 43172
Olympia, WA 98504-3172

Subject: Vancouver Energy
EFSEC Application No. 2013-01, Docket No. EF131590
Supplemental Information Regarding Vessels

Dear Mr. Posner:

During the conference call held on 2 June with Sonia Bumpus and Cardno Entrix staff relative to the rail and vessel risk analyses, she requested that Tesoro Savage Petroleum Terminal LLC (the Applicant) clarify several items related to vessel traffic at Vancouver Energy (Facility). Please find these clarification items below.

On the issue of the range of vessel sizes and percentage of each anticipated to call at the Facility, you requested a clarification of the potential conflict between statements in (c) and (d) of response to Item PD-25, namely (emphasis in italics added):

“c. The Aframax and Suezmax were only included to demonstrate that larger vessels could call but would have a maximum loading threshold of 600,000 bbls. *In actuality, the Handymax ship would call 99 percent of the time* and the ATBs would only be used during the initial start-up of the Facility before sufficient Area 300 tankage was available to stage a full load for a Handymax-size vessel.

d. On a regular basis, once the Facility is fully operational and storage tanks have been constructed as proposed, *an estimated 365 vessel calls would occur, primarily of the Handymax size; however, as indicated in PD-15, to conservatively assess impacts, “the DEIS should conservatively assume that because the types of vessels could change in the future approximately 15 percent of the vessels calling would be the 105 MDWT and approximately 5 percent would be the 165 MDTW.”*

These statements are revised in underline/strikeout format as indicated below to remove ambiguity.



Code	Data Request Item	Applicant Response
PD-25	<p>The PDEIS provided a list of vessel types/sizes expected to call at the Facility which included Articulated Tug and Barges (ATBs). Your response to Data request PD-15 states the following: “All of the vessel types indicated in Table 5.2-1 could be anticipated to dock at the Facility. The 46 MDTW vessel is anticipated to be the vessel size usually loaded; however the DEIS should conservatively assume that because the types of vessels could change in the future approximately 15 percent of the vessels calling would be the 105 MDWT and approximately 5 percent would be the 165 MDTW.”</p> <p>This response does not include ATBs which are smaller tank vessels.</p> <p>a. Do you anticipate ATBs being used to transport crude oil from the proposed Facility?</p> <p>b. If ATBs would be used, what percentage of the vessels that would call at the proposed Facility would be ATBs?</p> <p>c. An estimate of 365 annual vessel calls per year at the proposed Facility has been used in the risk analysis and a distribution of 80% Handymax, 15% Aframax and 5% Suezmax has been used to characterize the vessel type distribution. How would this distribution change if ATBs are included?</p> <p>d. Please clarify the number of trips by vessel class per year that would be expected to call at the proposed marine terminal.</p>	<p>a. During start-up, these smaller ATBs may call at the Facility to load. ATBs are operated in a similar fashion to tankers.</p> <p>b. The Applicant anticipates ATBs to call only in the very beginning of Facility operations and would represent less than 5 percent of calls. <u>The remaining calls during this period would most likely be from Handymax vessels. The ATBs would only be used during the initial start-up of the Facility before sufficient Area 300 tankage was available to stage a full load for a Handymax-size vessel.</u></p> <p><u>Once the Facility is fully operational and storage tanks have been constructed as proposed, ATBs would not likely be used.</u></p> <p>c. <u>As stated in Item b above, The Aframax and Suezmax were only included to demonstrate that larger vessels could call but would have a maximum loading threshold of 600,000 bbls. In actuality, the Handymax ship would call 99 percent of the time and the ATBs would only be used during the initial start-up of the Facility before sufficient Area 300 tankage was available to stage a full load for a Handymax-size vessel. On a regular basis, once the Facility is fully operational and storage tanks have been constructed as proposed, ATBs would not likely be used, and an estimated 365 vessel calls would occur, primarily of the Handymax size; however, as indicated in PD-15, to conservatively assess impacts, the DEIS should conservatively assume that because the types of vessels could change in the future approximately 15 percent of the vessels calling could be the 105 MDWT and approximately 5 percent could be the 165 MDTW.</u></p> <p>d. <u>As explained in Item c above, on a regular basis, once the Facility is fully operational and storage tanks have been constructed as proposed, an estimated 365 vessel calls would occur, primarily of the Handymax size; however, as indicated in PD-15, to conservatively assess impacts, the DEIS should conservatively assume that because the types of vessels could change in the future approximately 15 percent of the vessels calling could be the 105 MDWT and approximately 5 percent could be the 165 MDTW.</u></p>

You also requested clarification on reasons why vessels larger than the “Handymax” may be limited in the number of calls they make to the Facility.

Table 1 below provides an overview of typical vessel size classes and how such classes relate to the typical vessels identified in Table 5.2-1 of the PDEIS. In order for a vessel to be viable for use by a Facility client to load and transport crude oil, it must meet several requirements:

- 1) The vessel dimensions must be such that once loaded (or partially loaded) it can transit through the Lower Columbia River navigational channel. The world’s largest Very Large Crude Carrier (VLCC) (180-320 MDWT¹) and Ultra Large Crude Carrier (ULCC) (320-441 MDWT) tankers will not meet such requirements and could, therefore, not even transit to the Facility to be loaded. Only smaller-size Suezmax-class vessels could be accepted at the Facility dock due to this navigation channel and berth limitation.
- 2) In accordance with federal regulation, only “Jones Act” vessels are permitted to transport U.S. crude oil to a U.S. port. Table 1 below identifies the approximate number of existing Jones Act vessels by class size available to transport crude oil - there are very few larger Jones Act vessels available.
- 3) Construction of most of the larger vessels was funded through the Capital Construction Fund (CCF)². Vessels funded under the CCF are only permitted to transport crude oil non-contiguously in the U.S., and most of them are being used in the Alaska North Slope trade for that reason (i.e., from loading in Alaska with delivery to the west coast states of Washington, California, and Hawaii). CCF funding requirements, including the “non-contiguous” limitation, expire at the end of the twentieth year from vessel delivery. Table 2 below lists the currently existing larger Jones Act vessels and identifies which were funded through CCF. All but one of the larger Jones Act Vessels were funded with CCF. CCF vessels would not be permitted to carry crude oil from the facility to the contiguous 50 states. To the Applicant’s knowledge, the two smallest vessels listed in Table 2 (Eagle Bay and Liberty Bay, both operated by ExxonMobil) could physically be moored at the Facility for loading, and then transport oil from the Facility to a non-contiguous location (i.e., Alaska Cook Inlet). However, the Applicant is unaware of any interest by ExxonMobil to use the Facility in this manner, and the mooring of these vessels at the Facility is, therefore, highly unlikely. In contrast, to the Applicant’s knowledge³, the medium range (MR) vessels were not built with CCF funding and are not restricted to non-contiguous transportation.

¹ MDWT: Thousand deadweight tonnes.

² See <http://www.marad.dot.gov/ships-and-shipping/capital-construction-fund/> for additional information.

³ Personal Communication, Captain Marc Bayer, June 2015.

- 4) Finally, as noted in Table 2, many of the CCF vessels are approaching, and several have exceeded, 20 years of age; the Facility will not accept vessels greater than 20 years in age.

Table 1: Approximate Vessel Class Sizes and Number of Jones Act Vessels by Class

Vessel Size Class ⁴	Length (meters)	Beam (meters)	Full load deep draft (meters)	MDWT range	Representative vessel in PDEIS Table 5.2-1	Approximate Number of such vessels in Jones Act Fleet ⁵
Oceangoing ATB					27.5 MDWT ATBs	35 existing; 10 of the 35 are >30 yrs ⁶ ; 10 under construction
Medium Range (MR)	180-190	32.2	12.2	45-53	46 and 53 MDWT Tankers	28 MR ⁷ ; 2 of the 28 are >20 yrs; 16 on order ⁸
Panamax	228-230	32.2	13.7	68-76	68 and 76 MDWT Tankers	0
Aframax	244-248	42-45	14.9	99-119	115 and 125 MDWT Tankers	4; 2 of 4 are >35 yrs
Suezmax	273-276	47-49	17.5	140-165	142 and 160 MDWT Tankers	5, of which only 1 constructed without CCF
VLCC	180-330	60	22	Up to 320	Only smallest size could potentially be accepted	4 - all constructed with CCF

⁴ The data presented in this table is for illustrative purposes only. Various worldwide organizations class vessels relative to size; therefore vessel classes (e.g., Medium Range, Handymax, Panamax) may be attributed differently relative to actual vessel weight and dimensions. Examples of vessel classifications are available at the following locations: <http://maritime-connector.com/wiki/ship-sizes/>, accessed June 9, 2015; <http://www.eia.gov/todayinenergy/detail.cfm?id=17991>, accessed June 9, 2015; http://www.worldtraderef.com/WTR_site/vessel_classification.asp.

⁵ Personal Communication, Captain Marc Bayer, June 2015. Additional information about the current composition of the Jones Act fleet is also available at: Shipping U.S. Crude Oil by Water: Vessel Flag Requirements and Safety Issues, John Frittelli, July 21, 2014, available at: <https://www.fas.org/sgp/crs/misc/R43653.pdf>.

⁶ As reported in: Shipping U.S. Crude Oil by Water: Vessel Flag Requirements and Safety Issues, John Frittelli, July 21, 2014, available at: <https://www.fas.org/sgp/crs/misc/R43653.pdf>.

⁷ This number does not include four tankers in this size range, which are greater than 30 years in age and/or in chemical service.

⁸ As reported in: Shipping U.S. Crude Oil by Water: Vessel Flag Requirements and Safety Issues, John Frittelli, July 21, 2014, available at: <https://www.fas.org/sgp/crs/misc/R43653.pdf>.

Table 2: Larger Jones Act Vessels in Crude Oil Transportation and their Status under the Capital Construction Fund

Vessel	CCF	Delivered for Use in Year:	MDWT
Alaskan Explorer	Yes	2005	193
Alaskan Frontier	Yes	2004	193
Alaskan Legend	Yes	2006	193
Alaskan Navigator	Yes	2005	193
Polar Adventure	Yes	2004	142
Polar Discovery	Yes	2003	142
Polar Endeavor	No ⁽¹⁾	2001	142
Polar Enterprise	Yes	2006	142
Polar Resolution	Yes	2002	142
Eagle Bay	Yes	2014	115
Liberty Bay	Yes	2014	115
Kodiak	Yes	1978	122
Sierra	Yes	1979	122

Note (1): This is the only existing vessel available for contiguous lower-48 state crude oil shipments due to CCF funding limitations.

In conclusion, as described above, the pool of existing larger tank vessels that could be drawn upon by Facility clients to load and transport crude oil is very limited. There are presently no U.S. flag ships on the order books over the 46-52 MDWT (MR, such as Handymax). However, given the 20-year life of the Facility, the Applicant anticipates that a small number of larger vessels may be constructed in the future that could be placed into service to load at the Facility. To ensure the needed flexibility to allow receipt of such vessels should they be constructed, the Applicant, therefore, identified such vessels in the PDEIS, and specifically requested that EFSEC consider such vessels in any risk analysis being conducted for the DEIS, i.e., that the DEIS should conservatively assume that because the types of vessels could change in the future approximately 15 percent of the vessels calling could be the 105 MDWT and approximately 5 percent could be the 165 MDTW.

Finally, the Applicant acknowledges that the presently approved planning standard for the Lower Columbia River will limit the maximum volume of crude oil that can be loaded for a single shipment to approximately 300,000 bbl⁹. A vessel with a holding capacity greater than the standard would only be loaded to the planning standard. However, the Applicant also acknowledges that at some time in the future a request may be made to the Washington State

⁹ The planning standard counts both vessel fuel and cargo towards the 300,000 bbl limit.

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Department of Ecology (Ecology) to increase the planning standard¹⁰, and larger vessels could be loaded to a higher capacity. A possible change to the planning standard provides another reason for the DEIS vessel risk assessment to consider the potential for larger vessels.

Please feel free to contact me at 206/431-2373, or at irina.makarow@abam.com, if you have any questions about this submittal. We look forward to further coordination with you, your staff, and EFSEC's consultants.

Sincerely,



Irina Makarow
Senior Environmental Project Manager

IM:nb

cc: Kelly Flint, Savage Companies
Jay Derr, Van Ness Feldman

¹⁰ Because the Applicant is not responsible for transit of the laden vessels once they have departed the Terminal, the Applicant does not have the authority to request an increase to the planning standard. Such a request would come to Ecology from a third party.