

27 February 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 – UTC Docket No. EF131590
Response to EFSEC NPDES Review Comments

Dear Mr. Posner:

On behalf of Tesoro Savage Petroleum Terminal LLC (the Applicant), BergerABAM is providing a response to the Energy Facility Site Evaluation Council's (EFSEC) Vancouver Energy – National Pollutant Discharge Elimination System Permit (NPDES) application review comments, dated 29 July 2014. Clarifications to these comments were provided to the Applicant at a meeting conducted by EFSEC on 18 September 2014. Additional comments related to Facility site stormwater management were also included in EFSEC ASC Memo 5, dated 26 August 2014¹. Since receipt of these comments, and further direction from EFSEC staff regarding the submittal of Facility construction and operation plans, the Applicant has conducted additional stormwater system design work to provide more specific answers to the information requests below. In addition to the responses below, the Applicant is hereby submitting the following additional documents to address agency comments.

- An updated NPDES Engineering Report (Engineering Report)² addressing industrial stormwater system design, configuration, and operations
- A Construction Stormwater Pollution Prevention Plan (construction SWPPP)
- A revised Operations Stormwater Pollution Prevention Plan (operations SWPPP)
- A Contaminated Media Management Plan (CMMP)

¹ Responses to these comments will be provided under separate cover.

² The Engineering Report submitted to EFSEC in April 2014 and subject of the comments being responded to herein addressed both construction and operations stormwater. To address agency review comments, the report has been revised and updated to address industrial stormwater, whereas construction stormwater is now addressed in the construction SWPPP.

The following table provides the Applicant's response to comments.

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<p>1. Under 1.4.6 Past Remediation: This only states PCB contamination in the Vanexco Cap. The other contaminants listed were not called out in the rest of the capped restrictive areas. Please identify the contaminants in those areas and their concentration levels.</p>	<p>The Project will be avoiding, by design, impacts to the other capped areas shown on Figure 6 of the Engineering Report. The Port of Vancouver will be completing the rail improvement in the location of the North/North2, Ingot Plant, and SPL cap areas. By design, the project will avoid impacts to the East Landfill cap.</p> <p>While the project will not involve construction below the caps as noted above, contaminants in the areas are as follows.</p> <ul style="list-style-type: none"> • North/North 2: PCBs and PAHs • Ingot Plant: PCBs • SPL: Cyanide and Fluoride <p>Contaminant concentrations present in each of these areas are presented in the attached CMMP.</p>
<p>2. Some encroachment in the Vanexco Cap may occur and the depth to cap is about 4 feet. Please provide information about the depth of the excavation during construction into the cap, explain management of contaminated soils, management of stormwater and scope of work including cap restoration.</p>	<p>Additional detail regarding depth of excavation, cap restoration plans, soils management, and construction stormwater controls are provided in the construction SWPPP and CMMP, attached. Final foundation loadings and design will not be known until the engineered structure design is completed prior to construction.</p>
<p>3. Include all construction that will involve work within the contaminated areas. Include depth to excavation, will the excavation go through the caps, how will contaminated soils and stormwater runoff be managed. Will the excavation meet ground water depths? If so how will ground water be managed during construction?</p>	<p>Construction of the rail improvements in proximity to the North/North 2 and SPL cap areas. The impacts to the cap areas as a result from rail improvements will be minimal. The caps will be maintained and/or modified to protect industrial waste beneath. Preliminary engineering cross sections showing work within the cap areas are provided within the construction SWPPP and CMMP, attached.</p> <p>Vancouver Energy will include construction of improvements in the proximity of the Vanexco, East Landfill, Northeast Parcel, Ingot, North/North 2, and the SPL cap areas, and at Parcel 1A (the former PCS site). Details regarding excavation and stormwater management requested in Item 2 above are provided in the construction SWPPP and CMMP, attached.</p>

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	<p>Vancouver Energy construction activities are generally designed to be above the site caps in all areas. Exceptions include the footings for the rail unloading buildings that, at this time, are assumed to extend 2 feet below the cap. Final foundation loadings and design will not be known until the engineered structure design is completed prior to construction.</p> <p>Excavations for insertion/receiving pits, pipeline footings, and anchors could be 8 to 12 feet deep and may encounter contaminated groundwater associated with the North/North 2 site. All other activities are either outside of the restricted areas or above the caps.</p>
4. The rail goes over the Spent Pot Liner, North/North 2, and Ingot Plant capes. We understand the Port of Vancouver will be doing those improvements as a part of their West Vancouver Freight Access (rail project permit WAR12000). Please confirm whether this is correct?	Yes, the Port will be completing the rail improvements shown in the Application for Site Certification under their West Vancouver Freight Access project (Permit WAR12000). The Applicant is seeking EFSEC approval to construct one additional loop track. This will result in a total of six loop tracks within the rail improvements corridor of Terminal 5.
5. A Construction SWPPP needs to address management of the storm water from the contaminated area in regards to treatment, disposal, dewatering or discharge, etc.	A construction SWPPP has been developed based upon Facility design plans developed at this time. This construction SWPPP is attached.
6. Submittal of a Separate Construction SWPPP, as indicated in the Draft SW NPDES Engineering Report.	See response to Item 5 above.

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1. Table 2, Page 4 The rail yard area is not listed in Table 2. Stormwater runoff from the yard may be regulated if there are vehicle maintenance and/or equipment cleaning activities in the yard according to the Ecology industrial stormwater general permit. Detailed information on the activities that may occur in the rail yard should be included in the revised engineering report.	A list of anticipated maintenance activities has been included in the revised Engineering Report in section 6.1.6.
2. Section 8.2.1, P. 55	Additional details regarding downstream inlets along the pipeline and rail improvement areas

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<p>The report states the downstream drainage inlets in the pipeline and rail improvement areas will be equipped with spill control devices. Information for the spill control device such as the type employed and their locations should be included in the revised engineering report. Information on how the accumulated water/oil in the spill control devices will be collected and disposed of should also be included.</p>	<p>are included in the updated Engineering Report. Specifically, plans showing downstream inlets are identified in the Civil Drawings submitted with the Engineering Report, including detail of the spill trap device to be retrofitted.</p>
<p>3. Section 8.2.3, Terminal 4, P. 57 The report states that stormwater runoff from the tank farm container area is collected and conveyed to a control structure then to the oil/water separator with maximum flow rate of 880 gallon per minute. After the oil/water separator, the stormwater is discharged to a downstream pump station for manual inspection. The last paragraph on page 57 states "If a sheen is visible or hydrocarbon monitoring probes detect oil in the water the pump station will not be activated and water will be hauled off from the site for disposal". Is there going to be a stormwater treatment system on site to treat contaminated stormwater from the tank farm containment area? If not, the report should specify how and where the contaminated stormwater will be disposed of.</p>	<p>Treatment equipment on site is designed to handle stormwater generated under normal conditions. Prior to release of any stormwater from the containment area, visual inspection for any visible oil sheen will be required. A normally closed valve will be opened, and any flow into the containment area pump station will be monitored.</p> <p>Under any upset to those conditions, contaminated stormwater above anticipated levels described in the Engineering Report will be collected, hauled off site, and legally disposed of.</p>
<p>4. Figure 11 shows there is an oil/water separator for treating stormwater from the tank farm. It also shows effluent from the oil/water separator is mixed with stormwater from parking and yard area prior to be treated at the media filter vaults. Information on the characteristics of wastewater/stormwater from each source, the expected treatment levels of the media filter system and the expected effluent quality of the treatment system should be included in the revised engineering report.</p>	<p>Area 300 has a single proposed point of compliance where treated stormwater from the containment area is comingled with runoff from the parking lots and open yard area for additional treatment and discharge to the Port's existing downstream system. Additional information regarding anticipated pollutant loadings is provided in the updated Engineering Report in section 7.</p>
<p>5. Section 8.2.4 Terminal 5, P. 61 Information on the characteristics of the flow from the Vanexco underdrain system and its potential impact on stormwater quality from the area should be included in the revised report.</p>	<p>The Vanexco underdrain system is a drainage system installed above the protective liner installed above the contaminated capped areas. The Facility is proposing to reroute uncontaminated stormwater collected from above the capped areas through the site without</p>

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	modification to the existing constituents. Stormwater collected by this system is done so outside of the Facility limits and not part of the project. Details for the modifications to this system are included in the construction SWPPP and CMMP, attached.
<p>6. Section 8.2.4, Terminal 5, P 63 The report describes the stormwater system layout for the Terminal 5 as two separate collection and treatment systems. It states "runoff from the administration/support building, west boiler building and half of the yard area will be collected, treated in a water quality vault and discharged to the existing port stormwater system. Runoff from the remaining half of the yard area will be collected, treated in a water quality vault and discharged to the port stormwater system at a point further east". However, it does not provide information on the characteristics of the influent/effluent to the water quality vaults and the expected treatment levels of the vaults. The information should be included in the revised engineering report.</p>	<p>Expected effluent characterizations were provided in section 11 of the original Engineering Report. Additional information on anticipated influent loading is provided in the updated Engineering Report in section 7.</p>
<p>7. Figure 12, Terminal 5 Collection and Treatment Schematic, P.65 Figure 12 shows the stormwater collection system for the areas around the administration building, boiler room building and the rail unloading facility. However, it does not show how stormwater from the rail yard will be collected. Please include the information in the revised report.</p>	<p>The rail yard collection, conveyance, and treatment system were installed by the Port of Vancouver as part of the separate West Vancouver Freight Access project. A copy of the stormwater report for that project was included as Appendix F of the original Engineering Report.</p> <p>The updated Engineering Report includes an additional section to clarify the stormwater collection system, ownership and operational responsibilities, and proposed operations within this area. Data for the rail improvements are located within the updated Engineering Report in sections 5.2.7, 6.1.6, and 7.2.6.</p>
<p>8. Section 8.2.5, Marine Terminal, P. 67 The report states that stormwater from the dock containment area is collected in a floor drain and piped back to an oil/water separator on shore and then discharged to a treatment swale but it does not provide any information on the expected influent/effluent characteristics of</p>	<p>Additional information regarding the anticipated influent and effluent characteristics of stormwater from the containment area at the dock is provided in the updated Engineering Report in section 7.</p>

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<p>stormwater from the dock containment area. Without the information, Ecology is unable to verify the adequacy of the purposed treatment system. Due to the potential high pollutant levels in the water, more extensive treatment than an oil/water separator may be required for the proposed discharge.</p>	
<p>9. Section 9.1, Chemicals used in Treatment Process, P. 71 There are four treatment processes listed in the section, however, the report does not show the locations of the treatment units, sizing information and the expected treatment levels for each treatment unit. The information should be included in the revised engineering report.</p>	<p>Locations of the treatment units were provided in Figures 11, 12, and 13 of the original Engineering Report. Additional sizing and design information is provided in the updated Engineering Report in section 7.</p>
<p>10. Table 21, P. 74 The table provides a list of treatment units employed at the tank farm. However, there is no design information and the expected influent/effluent characteristics provided. Please provide the information in the revised engineering report.</p>	<p>See response to Item 9 above.</p>
<p>11. Table 22, P. 76 The table provides a list of the treatment process employed in the Terminal 5 area. However, there is no design information and the expected influent/effluent characteristics provided. Please include the information in the revised engineering report.</p>	<p>See response to Item 9 above.</p>
<p>12. Table 23, P. 77 As indicated previously, due to high potential high pollutant levels in stormwater from the dock containment area, more extensive treatment than oil/water separator to ensure the proposed discharge meet the applicable water quality criteria.</p>	<p>See response to Item 8 above.</p>
<p>13. Section 10.0, P. 78 Oil and Hazardous Material Spill Control or Accidental Discharge Prevention The facility oil spill prevention and contingency plans/activities should comply with the Washington State regulations.</p>	<p>A more detailed listing of applicable Washington state and federal requirements for the Oil and Hazardous Material Spill Control and Accidental Discharge Prevention plan and measures is provided in the updated Engineering Report.</p>

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<p>14. Section 11.0, Expected Effluent Characteristics, P. 79</p> <p>The characteristics of the tank farm containment area stormwater runoff should be similar to facilities that store similar products since other activities, such as refining will not affect quality of stormwater runoff from the tank farm. Also, characteristics of the rail yard stormwater runoff should be similar to rail yards that conduct similar operations. Without the influent information and the expected treatment unit capabilities, EFSEC is unable to verify the proposed treatment systems are capable of meeting the treatment goals.</p>	<p>Data from a comparable site has become available and will be used to provide detailed characterization of stormwater from the storage area. This data is provided and used in the updated Engineering Report to demonstrate treatment system adequacy.</p> <p>Stormwater collection, conveyance, and treatment from the rail improvement area has been installed as part of the Port of Vancouver's West Vancouver Freight Access project.</p> <p>The rail unloading facility is self-contained under a canopy and partially screened to limit rainwater intrusion into the facility. There is no discharge to stormwater from the industrial activity of this facility.</p>
<p>15. Section 11.1 Anticipated Required Water Quality Benchmarks, P. 79</p> <p>The points of compliance for Terminal 4 and Terminal 5 stormwater treatment systems will be established at the end of the treatment process prior to mixing with stormwater from other sources. The points of compliance are chosen to ensure discharges from the proposed facility comply with Chapter 90.48 RCW, section 520, "In order to improve water quality by controlling toxicants in wastewater, the department of ecology shall in issuing and renewing state and federal wastewater discharge permits review the applicant's operations and incorporate permit conditions which require all known, available, and reasonable methods to control toxicants in the applicant's wastewater."</p> <p>Also, the points of compliance will ensure discharges from the proposed terminal are not the source of contamination in the event that there is any noncompliance with stormwater discharged from Terminal 4 or 5 to the Columbia River. Storm water discharged to ground through infiltration swales at the marine terminal should comply with surface water criteria since it</p>	<p>The updated Engineering Report identifies the connection locations where the proposed project area stormwater system connects to the downstream existing storm drainage system. The proposed point of compliance locations are identified and stormwater monitoring manholes will be installed at these locations.</p>

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appears that groundwater underlying the area and the river is hydraulically connected.	
16. Section 11.2, Terminal 4, P. 80 The report states that stormwater from Area 300 will be collected and conveyed to water quality filter vaults for treatment. The vaults are designed to achieve removal of 80% of the total suspended solids when the influent TSS concentrations are between 100 to 200 mg/L, 40 to 60% removal efficiencies for heavy metals and 40% of removal efficiency of Benzene and volatile organics. Table 25 provides a list of the predicted influent concentrations and pH and Oil and Grease levels in the effluent. However, no effluent data for heavy metals, Benzene and VOC are provided. Please include the information in the revised engineering report. Also, please include information in the source of influent concentration data, treatment unit sizing and design flow rate in the revised report.	See response to Item 14 above.
17. Section 11.3, Terminal 5, P.82 Please provide source of the influent concentration data listed in Table 26. Stormwater from the proposed rail transportation facility may be regulated under Ecology Industrial Stormwater General permit if there are vehicle maintenance activities and/or equipment cleaning operations in the rail yard. Also, the supporting information showing Terminal 5 lagoons would be able to remove 40% of heavy metal concentration should be included in the revised engineering report.	See response to Item 1 above.
18. Section 11.4, Marine Terminal, P.83 The report that stormwater from the marine terminal will sheet flow to a media filter drain for treatment. However, it does not address how stormwater from the dock containment areas will be collected and treated. Stormwater from areas around the transfer manifold and vapor combustion unit may contain much higher pollutant concentrations and more advanced treatment may be required.	See response to Item 8 above.

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<p><i>Area 200 - Unloading and Office</i></p> <p>This area is proposed for construction of administrative and support buildings, parking, rail access to the rail unloading facility, and the rail unloading facility (control rooms/E-houses, fire pump and foam building). This area contains the Vanexo/Rod Mill Site where the building floor slab and roof served as a cap to address the PCB contamination beneath the building. In 2009 the building was removed and a high density polyethylene (HDPE) geomembrane was installed and the materials sloped to ensure drainage away from the area.</p> <p>The proposed Facility buildings will require concrete foundation excavations or driving piles within the cap area. Any soil or other material excavated that is in excess of MTCA industrial cleanup levels must be properly handled and disposed of as hazardous waste. Construction activity must not affect the integrity or performance of the cap or drainage system or allow for exposure to hazardous substances. If construction impacts the cap, the cap must be restored as designed to be protective of human health and the environment.</p>	<p>Excavation during construction of the west parking lot and minor modifications to the underdrain system would be less than 4 feet deep and are not expected to disturb or penetrate the HDPE cap.</p> <p>Vancouver Energy construction activities are generally designed to be above the site caps in all areas. Exceptions include the footings for the rail unloading buildings that, at this time, are assumed to extend 2 feet below the cap. Final foundation loadings will not be known until the engineered structure design is completed prior to construction. Additional detail regarding depth of excavation, cap restoration plans, soils management, and construction stormwater controls are being provided in the updated Engineering Report.</p> <p>The project will use Port of Vancouver site-specific criteria to characterize excavated soil to determine if material should be handled and disposed as a hazardous waste. The Port's criteria are more stringent than MTCA industrial cleanup levels. The Port's criteria are provided in the CMMP, attached.</p>
<p><i>Area 300 - Storage</i></p> <p>This area will contain the crude oil storage tanks, secondary containment berm, boiler building, pump basin, control room/E-house, and fire pump and foam building.</p> <p>Contamination in this area does not appear to be impacted by installation of the Facility.</p>	<p>There is no history of contamination on this portion of the project site. A description of recent activities at this location are provided in the CMMP, attached.</p>
<p><i>Area 400 -Marine Terminal</i></p> <p>This area will contain the marine vessel loading hoses and equipment, control room/E-house, Crane control room, dock safety unit, Marine Vapor Combustion Unit (MVCU), vapor blower skid, spill prevention, response and containment equipment, and dock improvements. This area is</p>	<p>Activities within Area 400 do not occur in the Shoreline Restrictive Covenant Area. See Figure 4.1-2 in the Application for Site Certification.</p>

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<p>located south of the current Subaru facility at Port Berths 13 and 14.</p> <p>A restrictive covenant to prevent exposure to soil or groundwater that exceeds MTCA industrial cleanup levels is recorded for the Shoreline Restrictive Covenant area, which appears to be immediately adjacent to the proposed activities for this area. Excavation and grading on the north side of the shoreline berm may expose contaminated soil or other materials. Any soil or other material excavated that is in excess of MTCA industrial cleanup levels must be properly handled and disposed of as hazardous waste.</p>	<p>See comment above for Area 200 regarding characterization of soil using Port of Vancouver site-specific criteria to determine if material requires handling and disposal as hazardous waste.</p>
<p><i>Area 500 - Transfer Pipelines</i></p> <p>This area will contain the transfer piping from Area 200 to Area 300, transfer piping to/from Area 300 to Area 400, and piping from vessel loading to the MVCU.</p> <p>Contamination in this area does not appear to be impacted by installation of the Facility.</p>	<p>Excavations for insertion/receiving pits, pipeline footings, and anchors could be 8 to 12 feet deep and may encounter contaminated groundwater associated with the North/North 2 site. All other activities are either outside of the restricted areas or above the caps.</p>
<p><i>Area 600 - West Boiler</i></p> <p>This area will contain the West Boiler building.</p> <p>Contamination in this area does not appear to be impacted by installation of the Facility.</p>	<p>This area is not known to contain contamination from past industrial activities.</p>
<p><i>Train Infrastructure</i></p> <p>Two rail loops are proposed to receive unit trains. On April 2, 2012 Ecology approved the installation of five new rail tracks and a new asphaltic cap. Ecology required that any contaminated soil encountered during the installation would be disposed of in a regulated landfill off-site. These same conditions apply to the additional rail infrastructure proposed for the Tesoro Savage Vancouver Energy Distribution Terminal Project proposal.</p>	<p>The Port of Vancouver will be completing the rail improvements shown in the Application for Site Certification under their West Vancouver Freight Access project (Permit WAR12000). This project is seeking permit approval to construct up to two additional loop tracks. This will result in a total of six loop tracks within the rail improvements corridor of Terminal 5. The additional rail tracks will be constructed by the Port. See Item 2 above.</p>

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Please feel free to contact me at 206/431-2373, or 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
Attachments

cc w/attach: Kelly Flint, Savage Companies
Jay Derr; Van Ness Feldman
Brent Carson, Van Ness Feldman