

**VALERO RESPONSES TO:
VALERO CRUDE BY RAIL PROJECT
DATA REQUEST NUMBER 1 (1/18/13)
February 1, 2013**

Please provide the following data/information:

Project Description

1. Provide the number of anticipated construction workers and duration of construction activity.

The construction workforce would include workers conducting activities inside the refinery in and around the project location.. The total workforce is estimated to include 121 construction workers. This staffing level is well below cyclical increases which occur for turnaround maintenance. The overall construction period is estimated to be 25 weeks.

2. Provide a description of the existing TK-1776 and emission control measures.

TK-1776 is an External Floating Roof (EFR) tank with a diameter of 128 feet, a height of 48 feet, and a storage capacity of 101,400 barrels (4,258,800 gallons). It is currently permitted to store Jet 'A', and has a limit of 49,275,000 bbl/yr throughput combined with 7 other storage tanks. The tank has a welded steel shell and a pontoon-type floating roof with tight-fitting double seals that comply with the Bay Area Air Quality Management District (BAAQMD) Regulation 8-5 for the storage of organic liquids.

3. Describe any tank modifications to TK-1776 for crude oil storage and new emission control measures.

No modifications or new emission control measures are planned for TK-1776. The tank's existing control measures, which include tight-fitting double seals, satisfy BAAQMD's Regulation 8-5 and Best Available Control Technology (BACT) requirements.

4. Provide a general description of the crudes used by the Refinery and a description of the North American crude to be transferred by rail car by this Project. Please address the similarities or differences between your existing crude mix and the incoming North American crudes.

Existing blended crude oil slate gravity ranges from 20 – 30 °API and sulfur content ranges from 0.6 – 1.9 weight percent based on 2011 – 2012 laboratory data. The new North American sourced crude oil gravity is expected to range from 20 – 43.5 °API, which is similar or somewhat lighter than current crude oil. The North American sourced crude oil sulfur content would range from 0.06 – 3.1 weight percent, but on average it would be similar to the current crude oil. The new crudes are expected to supplant crude oils of similar gravity and sulfur content that are currently brought in by ship. Crude oil feedstocks are currently blended at the refinery to achieve refinery

feedstock specifications. The new crude oils will continue to be blended with other crudes in the same manner. Since the new crude oils will be substituted for existing crude oils of similar properties, the refinery will continue to operate within its existing specifications for crude gravity and sulfur range.

Please state whether or not this new crude source will require any changes to the existing Refinery operation or emissions.

The refinery does not anticipate a need to change the existing refinery operations nor will emissions from refinery operations change (with the exception of the storage tank service and rail unloading emissions described as part of the project) as a result of accepting and refining the proposed North American sourced crude oil.

5. Provide a P&ID for this project.

The project Piping Flow Diagram (PFD) 132-FD-1-3588093(P), Rev. C, is attached.(Attachment 1)

6. What kind of valves will be used on the railcar unloading station?

The railcar unloading station will use block and check valves specified to comply with BACT requirements for fugitive emissions.

7. Will there be changes to liquid spill containment areas?

The new rail car crude unloading facilities will have new liquid spill containment areas. In addition, the existing liquid spill containment for Tanks abutting the rail car unloading facilities will be modified to allow installation of the unloading facilities. Part of the existing containment berm for the tank field will be removed and a new concrete berm will be constructed approximately 12 feet west of the existing earthen berm. The resulting capacity of the tank field containment system will decrease slightly but will continue to provide adequate spill containment and exceed minimum regulatory requirements.

8. How does Valero ensure that no unanticipated crude spills will enter the adjacent sewer line?

Through the new rail car crude unloading facility spill prevention and containment discussed in item 7 above.

9. What is the length of existing track identified as to be shifted? What is the length of propose new track? *Please see below.*

Track Shift –

Track north of TK-1734 (TRK 732) will include 400 track feet (TF) of shifted track. Hill side Track (TRK 710) will include 3 shifted segments: 500 TF, 600 TF, and 1750 TF

Total Track Realignment = 3,250 TF

New Track –

Track A (Runaround Track) will include 2,262 TF of new track.

Track B (Western side of Unloading Rack) will include 2,216 TF of new track.

Track C (Eastern side of Unloading Rack) will include 2,275 TF of new track.

Track 732 (Track approaching unloading area) will include 614 TF of new track.

Wye Track will include 1,500 TF of new track.

Total New Track = 8,867 TF

10. Regarding the proposed pipeline, the application indicates this would be a 12-inch pipe while the plans list as 16-inch, please clarify.

The proposed pipeline will be a 16 inch diameter unloading pipeline.

11. Provide information regarding existing rail operations at the Refinery as well as rail operations to the adjacent industrial park.

Valero currently exports petroleum coke and liquefied petroleum gas from the refinery to off-site customers. Once per day, typically around 11 am to noon, railcars loaded with petroleum coke leave the refinery via Track 700, cross Park Road, and go towards the AMPORTS facility directly to the south for the product to be loaded onto ships. After the coke products are loaded near the dock into storage silos for eventual loading onto ships for export, the empty coke railcars are brought back onto the refinery site for re-loading for the next day's transfer operations. A similar operation takes place with railcars transporting liquefied petroleum gas (LPG) destined for customers. Other current rail operations in and around the industrial park support the existing Benicia Industrial Park customers 7 days per week, Monday through Sunday.

12. How long would it take to complete one unloading cycle from the rail cars?

The new crude railcars would be brought in 50 cars at a time and taken to the new unloading rack for crude unloading. Once they are empty, a switch engine will move the 50 cars within the refinery to the existing petroleum coke area on the west side of the refinery, via a new wye connector track to Track 710. This whole process would take approximately 8-10 hours for 50 rail cars.

13. Provide the amount of cut/fill necessary to construct the new track and/or shift the existing tracks.

New tracks will result in cut volume of 11,000 cubic yards and fill volume of 3,000 cubic yards. Containment berm work will result in cut volume of 5,000 cubic yards. The new rail unloading racks will also result in a cut volume of 600 cubic yards. Net cut volume is 13,600 cubic yards.

14. Confirm that the fence adjacent to Sulphur Spring Creek would not be relocated.

The fence adjacent to Sulphur Spring Creek would not be relocated.

15. The last bullet item on application page 7 indicates that the project would increase the volume of crude oil received by rail. Currently or in the near past, is any crude oil is shipped to the Refinery by rail? If so, how much?

The refinery has not received shipments of crude oil by rail currently or in recent past. The Benicia Asphalt Plant associated with the refinery recently received heavy residual oil feedstock by rail. In October 2012, five rail cars were offloaded at that facility.

16. What kinds of tanks does Valero currently use to store crude oil? Are they floating roof tanks with the same configuration as TK-1776?

Valero currently uses External Floating Roof tanks with the same configuration as TK-1776 to store crude oil (e.g., TK-1707 and TK-1708). These tanks are configured and operated to comply with the same control requirements for storage of organic liquids under BAAQMD Regulation 8-5.

17. The last bullet item on application page 7 states that overall there would be no net increase in crude oil deliveries, suggesting that there would be no net increase in crude oil volume storage at the Refinery. Please provide an explanation as to why additional crude oil storage capacity is needed for the project when there would be no apparent increase in crude oil volume stored at the Refinery.

The use of Tank 1776 for the new crude oil storage is necessary because of the proximity of the tank to the proposed rail unloading rack. Use of this nearby tank would reduce the capital costs associated with constructing a new pipeline for the sole purpose of transporting the new crude oil to the refinery's crude tank farm, situated farther from the unloading rack. The existing crude storage tanks will continue to be utilized in their existing service. There will be no net increase in crude oil deliveries to the refinery resulting from this project.

18. Provide a functional description of the likely rail cars used to transport the crude oil and existing Refinery owned rail equipment which might be involved in moving the tank cars within the Refinery.

The rail cars are nominally 60 feet long and 700 barrel capacity each. The railcar tank is nominally 10.2 feet inside diameter by 49 feet tangent to tangent. The rail car wheels are nominally 45.8 feet center to center. The refinery will move empty rail cars within the refinery from the unloading rack to the empty rail car spur on the west side of the refinery with a locomotive engine operated by Valero.

Air Quality and Greenhouse Gas Emissions

19. The first bullet item on application page 7 indicates that TK-1776 is currently serviced for JP4 (jet propulsion fuel) storage. Does TK-1776 currently store JP4, and if so, how would the Refinery handle the existing JP4 storage needs due the decreased JP4 storage capacity that would result from the Project?

TK-1776 is currently permitted to store either Jet 'A' or diesel product. Post project Jet 'A' stored in TK-1776 will be stored in other existing jet product storage tanks, i.e., TK-1772, 1778 and 1779. Post project, diesel product currently stored in TK-1776 will be stored in existing refinery diesel product storage tanks, i.e., TK-1773, 1774, 1775 and 1777.

20. Provide a detailed description of what retrofits would be necessary (e.g., in-tank mixers, transfer pumps, heating coils, heat exchangers, etc.) to change the service of TK-1776 from jet propulsion fuel to crude oil. Would the tank have the same overall appearance? (Note: this information is similar to that requested in items 2 & 3 above.)

No retrofits would be necessary to change TK-1776 to crude oil service from a Regulation 8 Rule 5 BAAQMD perspective. The internal tank bottom will be coated for corrosion control prior to putting the tank in crude service. The overall external appearance of the tank would remain the same.

21. How many marine vessel deliveries would be reduced per year under the project?

The project potentially reduces marine vessel deliveries by up to 25,550,000 barrels per year (rail unloading capacity would be 70,000 barrels per day, 365 days per year). For the December 2009 – November 2012 period, marine vessel deliveries averaged 354,000 barrels per call, so marine vessel deliveries could be reduced by up to 72 calls per year.

22. Provide the current and proposed storage capacity for TK-1776.

Current and proposed storage capacity for TK-1776 is 101,400 barrels (4,258,800 gallons). Note that this is the tank's maximum working capacity (the "4620 kgal" capacity listed for TK-1776 in Valero's current Title V permit is based on the tank's exterior dimensions; it is not usable capacity). There will be no change in storage capacity as a result of the project.

23. From the site visit, we understood that the crude being handled by the Project would not require heating for transfer or storage. If it does require heating, please describe any increase in steam demand and production that would be required at the Refinery to heat the contents of retrofitted TK-1776.

TK-1776 will not require heating because the proposed North American sourced crudes flows readily at ambient temperatures. This project will not increase steam demand to heat the TK-1776 contents.

24. Provide a schedule of when Valero plans to submit its air quality and GHG documentation to the City. Also indicate when the BAAQMD permit application will be submitted. Timely submittal of these documents to the City will be critical to maintain Valero's schedule for the Project. Note that we would not be able to finish the Initial Study without air emissions and GHG data.

Valero plans to submit its application to the BAAQMD in mid-February. Once the application is submitted to the BAAQMD, Valero can make a copy available to ESA. Additional air quality and GHG documentation, as needed for CEQA analysis, will be made available to ESA when it becomes available.

Noise

25. Provide the City with a supplemental noise analysis that focuses on Project-related railcar and locomotive noise increases that would occur in the vicinity of the Refinery. The noise supplement should include ambient noise measurement data that accurately reflect current rail delivery/export conditions at the Refinery. If such data are unavailable, ESA can work with Valero to make the necessary noise measurements.

Valero has determined that the most recent ambient noise measurements were taken in 2003 by Illingworth & Rodkin, Inc. This information may not accurately reflect the current rail delivery/export conditions or baseline noise levels of the Refinery, since this was before the installation of the VIP project elements. Valero will make arrangements to obtain the necessary data.

Biological Resources

26. Provide recent water quality testing reports that have been submitted to the Regional Water Quality Control Board.

Attached is a copy of the November 2012 NPDES report submitted to the Regional Water Quality Control Board (RWQCB). If additional information is required, please specify the particular 'water quality testing report' that is needed. (Attachment 2)

Cultural Resources

27. Provide cultural resource records search information applicable to the Project area.

This project only impacts areas previously utilized for industrial activities inside the refinery.

One potential historical nearby resource was identified in Valero's EIR for the VIP Project, that being the Benicia Arsenal Igloo Bunker #C-425, located to the northeast of the Refinery Process Block. Disturbance of Bunker #C-425 is not expected as a result of this project, as this area is not in proximity to construction activity.

Geology and Soils

28. Provide existing geotechnical investigations or geologic studies completed for the proposed Project or those completed for previous refinery projects that are in the near- vicinity to the Project area.

Kleinfelder, Valero's geotechnical consultant, has existing studies and recently conducted additional studies to evaluate soil liquefaction during an earthquake as a basis

for the project's civil and structural design. Valero will obtain the information and provide it to ESA.

Hazards

29. Provide any standard operating procedures to address oil spills or any hazop done for the Project.

Valero conducted a "safety in design" review for the project and concluded that the engineered safeguards and administrative operating procedures will mitigate spills. A copy of the Safety in Design review checklist is attached. (Attachment 3)

Hydrology and Water Quality

30. Drainage plan – provide any information on where construction or operation phase stormwater will be contained, treated, etc. Feed into existing system? Increase in stormwater runoff from changes to impervious surfaces from impervious? Copy of the most recent annual stormwater monitoring report associated with NPDES permit requirements.

Storm water outfalls in the vicinity of proposed construction activities include EFF-004, EFF-007, EFF-008, EFF-009, EFF-010, and EFF-003. Attached is a copy of the facility Storm Water Pollution Prevention Plan (SWPPP) describing the location of these outfalls. The facility NPDES permit sets permit limits for storm water discharge from these outfalls. Should there be a concern that storm water runoff during construction activities may not meet the permit limits, the water will be contained and treated at the facility wastewater treatment plant (WWTP). Also attached is the 2011-2012 annual storm water report. (Attachments 4 and 5)

31. Ground water monitoring well relocation: any planning documents, studies, or tech memos that describe where, depth, rationale for new location, how old wells will be abandoned etc.

Proposed locations of relocated or deleted groundwater monitoring wells are shown on the drawing entitled 'Groundwater Monitoring & Containment Berms', 32-000-04D-89415, Rev B, dated 1/21/2013, and the Drawing entitled 'The Wye Connector', dated 1/30/2013. The wells will be replaced in-kind or abandoned, as approved by the Regional Water Quality Control Board (RWQCB). Relocated wells will be positioned as close to the old location as possible. Abandoned wells will be sealed and capped in accordance with Solano County and CA Department of Water Resources procedures. (Attachments 6 and 7)

32. Current GW monitoring reports / tech memos / water quality or GW hydro data? EIR references reports from 1999-2000, but are new reports available? Monitoring continued since EIR? Changes to State Board Requirements for Water Quality goals or Remedial Action Plans?

Attached is a copy of the 3rd quarter 2012 Groundwater Report. Groundwater monitoring and reporting continues on a quarterly basis. Three Board Orders are currently applicable to the site and were issued between 1994 and 1997: 94-070, 94-144, and 97-077. (Attachment 8)

33. Updated/revised versions of remedial action plan or water quality goals for groundwater monitoring and remediation.

Attached is a copy of the current groundwater monitoring plan, revised in 2010. The plan summarizes the justification and monitoring frequency to comply with the facility Board Orders. (Attachment 9)

Cumulative Projects

34. Describe all of the reasonably foreseeable projects that Valero has planned for the Refinery.

The refinery's capital budget includes the following foreseeable projects:

- *A new building to house maintenance, operations and laboratory personnel*
- *Routine refinery maintenance and turnaround projects*
- *Miscellaneous energy efficiency and environmental compliance projects. Examples: flowmeters and continuous emissions monitors (CEMS).*

*Valero Crude by Rail Project
Data Request 1
Attachments*

<i>Attachment</i>	<i>Response No.</i>	<i>Description</i>
<i>1</i>	<i>5</i>	<i>Crude by Rail Project PFD 132-FD-1-3588093(P), Rev. C ,</i>
<i>2</i>	<i>26</i>	<i>NPDES Report, Nov. 2012</i>
<i>3</i>	<i>29</i>	<i>Safety in Design Review Checklist</i>
<i>4</i>	<i>30</i>	<i>Storm Water Pollution Prevention Plan (SWPPP), Revised 7/2011</i>
<i>5</i>	<i>30</i>	<i>Annual Stormwater Report (2011/2012)</i>
<i>6</i>	<i>31</i>	<i>Drawing entitled 'Groundwater Monitoring & Containment Berms', 32-000-04D-89415 Rev B dated 1/21/2013</i>
<i>7</i>	<i>31</i>	<i>Drawing entitled 'The Wye Connector' dated 1/30/2013</i>
<i>8</i>	<i>32</i>	<i>3Q-2012 Groundwater Report</i>
<i>9</i>	<i>33</i>	<i>Groundwater Monitoring Plan, with Appendix A , Revised 2010</i>