



Oregon

Kate Brown, Governor

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February 2, 2021

Marie E. Piper
Cascade Environmental Management
316 SE Pioneer Way, Suite 294
Oak Harbor, Washington 98277

Ms. Piper,

DEQ received the revised Cleaner Air Oregon (CAO) Air Toxics Emissions Inventory Form AQ405CAO (Inventory) for the Oil Re-Refining Company (ORRCO) facility in Klamath Falls, OR dated July 15, 2020. Based on our review, DEQ requests corrections and updates to the Emissions Inventory in accordance with Oregon Administrative Rule (OAR) 340-245-0030(2), by March 19, 2021.

I. Process Flow Diagram

DEQ requested in our last correspondence dated March 17, 2020 that ORRCO provide a process flow diagram (PFD), including specific instruction to:

Designate each individual TEU in its Emissions Inventory as they are labeled on the PFD, including tanks.

The PFD submitted to DEQ dated July 17, 2020 does not identify TEUs as requested in 1(a) above. Please verify the cross-reference values DEQ has proposed in Table 1 – see attached.

II. Emissions Inventory

1. Dehydrators

Emissions from the dehydrators on the PFD are not characterized. Please consider toxic air contaminant (TAC) emissions from dehydrators D-1, D-2, and D-3. Label dehydrators with the same ID on the PFD and in the Emissions Inventory.

2. Recycled Fuel Oil (RFO) Combustion

- a. Auxiliary boiler source testing was performed at a firing rate of 15 gallons per hour. The maximum daily firing rate for the boiler presented in the Emissions Inventory is 463 gallons per day, or 19.29 gallons per hour. The requested annual capacity of the boiler also reflects a firing rate of 19.29 gallons per hour. Please verify that source testing was completed at 90% or greater of normal maximum.
- b. Please revise emission factors for the auxiliary boiler combusting RFO (TEU ID TEU-1A) to include:
 - i. Emission factors outlined in DEQ's source test approval dated January 15, 2021
 - ii. Phenol (CAS No. 108-95-2, 2.40E-03 lb/1000 gal)

- iii. 1,1,1-trichloroethane (CAS No. 71-55-6, 2.368E-04 lb/1000 gal)
- iv. Report o-xylene emissions under CAS No. 1330-20-7, *Xylene (mixture)*, including *m-xylene*, *o-xylene*, and *p-xylene*

3. Propane Combustion

Revise PAHs (excluding naphthalene) DEQ ID and Chemical Name to 401 and Polycyclic Aromatic Hydrocarbons (PAHs), respectively.

4. Storage Tank Emissions Estimates

- a. The requested Potential to Emit (PTE) throughput for RFO storage tanks (TEU ID *TEY-2H*) is less than the actual throughput from the 2019 calendar year. Please revise the requested PTE activity level.
- b. TANKS modeling uses tank IDs that do not match TEU IDs in the Emissions Inventory. Please verify the cross-reference values DEQ has proposed in Table 1 – see attached. Revise TEU IDs in tab 2 of the Emissions Inventory as needed.
- c. The Emissions Inventory submitted on December 16, 2019 included methylene chloride (CAS No. 75-09-2) emissions estimates from storage tanks. The revised Emissions Inventory dated July 15, 2020 did not include methylene chloride emissions. Please justify this change or revise the Emissions Inventory to include methylene chloride emissions from storage tanks.
- d. The sample short-term storage tank emissions estimate provided (*Sample Calc T-01 2019 ST* tab) for tank T01 (TEU ID *TEU-2A*) shows a total maximum short-term VOC emission rate of 0.74 lb/hr. However, the daily emission rate reported in the Emissions Inventory for tank TEU-2A is 0.59 lb/day. Please explain the difference between these estimates.
- e. Please remove emissions of chemicals that are not reportable TACs (e.g., propane).

5. Product Load In and Load Out

Please include emissions estimates for used oil load in/out and final product load out activities.

Confidential or trade secret information submitted to DEQ

DEQ is requesting that you submit the above additional information to complete your Toxic Air Contaminant Emissions Inventory. If you think that any of that information is confidential, trade secret or otherwise exempt from disclosure, in whole or in part, you must comply with the requirements in OAR 340-214-0130 to identify this information. This includes clearly marking each page of the writing with a request for exemption from disclosure and stating the specific statutory provision under which you claim exemption. Emissions data is not exempt from disclosure.

Submittal Deadlines

Please communicate any questions or clarifications regarding the above comments proactively in order to provide timely submittals. Please submit the revised Emissions Inventory by March 19, 2021. DEQ remains available during this timeframe to discuss the submittal with you and answer any questions you may have. Failure to provide additional information or corrections required by DEQ by this date may result in a violation of OAR 340-245-0030(1) and OAR 340-245-0040(1).

Please contact me directly at 503.229.5247, billings.kenzie@deq.state.or.us, and we look forward to your continued assistance with this process.

Sincerely,

Kenzie Billings
DEQ CAO Project Manager

Cc: David Archuleta, ORRCO
Jonathan Bouselaire, ORRCO
Scott Briggs, ORRCO
Eric Moody, ORRCO
Mark Bailey, DEQ
Keith Johnson, DEQ
Frank Messina, DEQ
Thomas Rhodes, DEQ

Table 1: TEU ID, TANKS Modeling ID, and Process Flow Diagram Cross Reference

Emissions Inventory Spreadsheet			Process Flow Diagram
<i>Emissions Units & Activities tab</i>	<i>Tanks 2019 tab</i>		
<i>TEU ID</i>	<i>TANKS Modeling ID</i>	<i>TEU ID</i>	
TEU-1A	N/A	N/A	boiler
TEU-1B	N/A	N/A	boiler
TEU-2A	TEU-2A	T-01	1, 3, 4
TEY-2NH	TEU-2NH	T-05	5A, 5B
TEY-2H	TEU-2H	T-06	6A, 6B, 7A, 7B
TEU-2L1	TEU-L1	T-08	LT-1
TEU-2L2	TEU-L2	T-09	LT-2
TEU-2AF	TEU-AF	T-15	15
TEU-2D	TEU-2D	T-16	16A, 16B
TEU-2R	TEU-2R	T-17	R-1, R-2, R-3
TEU-2F	TEU-2F	T-20	F-tank
TEU-2PWA	TEU-PWA	T-31	2
TEU-2PWB	TEU-PWB	T-32	11
TEU-2PWC	TEU-PWC	T-33	CT-1
TEU-2PWD	TEU-PWD	T-34	CT-2