



June 28, 2021

E-mail

Sarah France
Director of Regulatory Affairs
The Willamette Valley Company, LLC
P.O. Box 2280
Eugene, OR 97402

Re: Cleaner Air Oregon Emissions Inventory Submittal

Dear Sarah France:

LRAPA has completed a review of the updated Cleaner Air Oregon Emissions Inventory (CAO EI) submitted by the facility on April 30, 2021, which aimed to address the issues detailed in a letter sent from LRAPA to the facility on February 22, 2021.

During the review of the information received, LRAPA cataloged the following list of concerns that will need clarification or additional information:

Process	Comments
Coatings – Blend	The default tank opening size in the CAO EI is listed as one (1) square foot, but during the LRAPA site visit it was noted that there were mixing vats operating with larger openings. Please revisit this assumption and clarify.
Overall – Fill Calculations	The CAO EI references using Equation 8.4-1 from the following guidance: Methods for Estimating Air Emissions from Paint, Ink, and Other Coating Manufacturing Facilities (Volume II) issued by the US EPA in February 2005. The use of this equation requires certain assumptions, one of which is that solvents are all added at the same time, even if in reality they are sequenced. The emissions in the CAO EI appear to be calculated as if each individual component is added separately, instead of calculating the total vapor pressure of the material loaded and the vapor molecular weight of the material as detailed in the guidance. Please revisit these calculations, verify the assumptions, and provide justification if there is a continued desire to use an alternative approach to Equation 8.4-1.
Overall – Fill Calculations	The filling calculations include loading events, but Equation 8.4-1 already incorporates yearly throughput in the calculation. Please justify the need to include loading events in the filling calculations.

Process	Comments
Overall	Many of the emissions calculations are contingent on the vapor pressure of individual TACs, but the CAO EI is lacking information on how these vapor pressures are calculated. Assuming there is separate spreadsheet calculating the individual TAC vapor pressures, LRAPA requests that this spreadsheet be submitted along with the updated CAO EI.
Overall	Since many of the emissions calculations in the EI are dependent on temperature, further discussion is necessary to establish expectations on what temperatures should be used to for both daily and yearly emissions.

LRAPA also identified the following list of errors in the emissions inventory file that will need to be addressed and/or corrected:

Process	Comments
Rail Loadout Fugitive MDI	The total TAC for both the 2018 Actual and Requested PTE are summed incorrectly.
Raytech 51 Tank	The following were errors noted in the use of AP-42 Chapter 7 calculations: <ul style="list-style-type: none"> • The liquid weight fraction (Z_{li}) totals to 1.0. The liquid mole fraction (x_i), vapor mole fraction (y_i), and the vapor weight fraction (Z_{vi}) do not total to 1.0. Based on the reference, fraction parameters should total to 1.0. • The vented vapor saturation factor (K_s) calculation is using liquid molecular weight (M_v) and tank roof height (H_r) rather than the vapor pressure at average daily liquid surface temperature (P_{va}) and the vapor space outage (H_{vo}) • The liquid bulk temperature (T_b) calculation is using the average daily minimum ambient temperature (T_{an}) rather than the average daily total insolation factor (I) • The average vapor temperature (T_v) calculation is using the average daily minimum ambient temperature (T_{an}) rather than the average daily total insolation factor (I) and the average daily ambient temperature range (ΔT_a) rather than the tank roof surface solar absorptance (α_r)

The updated CAO EI and responses to the inquiries of this letter are due to LRAPA by **July 16, 2021**. LRAPA proposes that a meeting be scheduled before the due date to discuss the items detailed in this letter to assure that all outstanding issues are adequately addressed. Please let me know if you need any further information or assistance.

Sincerely,

Kathleen H Eagleson

Katie Eagleson, PE
Environmental Engineer

cc: Max Hueftle, LRAPA (via email)
Meagan Tkach, The Willamette Valley Company, Inc. (via email)
Andrew Rogers, Maul Foster & Alongi, Inc (via email)