



June 18, 2014

Via Electronic Mail

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RE: Supplement to Comments on DEQ's Proposed Air Contaminant Discharge Permit for Cascade Kelly Holdings, LLC d/b/a Columbia Pacific Bio-Refinery, Permit No. 05-0023-ST-01; Expert Analysis of Potential to Emit

Dear Director Pedersen and Permit Coordinator:

I am writing on behalf of the Northwest Environmental Defense Center, Center for Biological Diversity, and Neighbors for Clean Air (the "Clean Air Groups") in supplement to comments submitted by the Clean Air Groups on the proposed permit for Cascade Kelly Holdings LLC d/b/a Columbia Pacific Bio-Refinery oil transloading operation at Port Westward, Permit No. 05-0023-ST-01 (the "Clatskanie Oil Terminal"). While the formal public comment period for this proposed permit has closed, the Clean Air Groups have been and continue to be engaged in investigation and study of the facility and the proposed permit. Results of expert analysis of potential emissions at the Clatskanie Oil Terminal were in process, but not complete until after expiration of the formal comment period. Therefore, we are hereby supplementing the Clean Air Groups' comments with additional expert analysis.

To summarize, the Clean Air Groups' comments questioned the potential to emit ("PTE") calculations in the permit application and pointed out that the Clatskanie Oil Terminal is likely a major source of air pollutants under both federal regulations and Oregon's State Implementation Plan ("SIP"), and therefore subject to prevention of significant deterioration ("PSD") permitting requirements. The comment noted that the current permit for the ethanol facility did not apply to the oil transloading operations and a new preconstruction permit is necessary for the new oil operation. The expert analysis prepared on behalf of the Clean Air Groups confirms this conclusion.

The information made available to the public (and apparently to DEQ) regarding current and potential emissions at the Clatskanie Oil Terminal is limited to what has been provided by Global Partners LP (Global) in the permit application and the DEQ permit review report and proposed permit. This is less than is required for a PSD permit application and it hampers the

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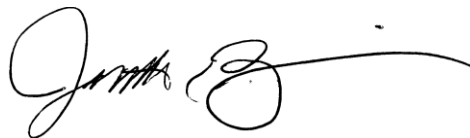
ability of the public and DEQ to make fully-informed decisions regarding this new major source of air pollutants.

Based on the limited information that has been provided, the Clean Air Groups' expert's analysis¹ indicates that the Clatskanie Oil Terminal is a major federal source of air pollutants. Upon completing analysis of the available information, Dr. Ranajit Sahu has concluded, based upon a range of potential capture efficiencies and an assumption of the maximum throughput to calculate a range of possible PTE values, that the Clatskanie Oil Terminal has a potential to emit Volatile Organic Compounds ("VOCs"), an ozone precursor, in an amount well over 100 tons per year, confirming the Clatskanie Oil Terminal's status as a major new source of air pollutants. (Further, the increase is well over the 40 tons per year threshold to be considered a major modification.) Attached is the spreadsheet provided by Dr. Sahu for your review. Please include this analysis in the administrative record of this matter.

Given this important information, the Clean Air Groups again urge DEQ to step back from the current permitting process and require a full application and analysis from Cascade Kelly Holdings LLC and Global Partners LP for a prevention of significant deterioration permit under the Clean Air Act and Oregon's SIP.

We would be happy to work with you and your staff to set up a meeting to discuss next steps. Moreover, if you or your staff have any questions regarding this analysis, please let me know and we will work with Dr. Sahu to respond to questions. Thank you for your consideration of these important issues.

Sincerely,



Janette K. Brimmer

cc: Brett Brownscombe, Governor's Office
Mark Riskedahl, Northwest Environmental Defense Center
John Krallman, Neighbors for Clean Air
Noah Greenwald, Center for Biological Diversity

¹ This analysis is preliminary and based on the limited information available to the public regarding the operations and equipment of the oil transloading facility. The analysis may be refined as more information becomes available.

VOC PTE for Existing CPBR Facility Handling Bakken Crude

[A] Assumptions: PTE is established based on maximum CURRENT barge load-out capacity
5000 bbl/hr [Form AQ307, DEQ Memo (Grunow) Feb 7, 2013]

Note: PTE could also be established based on incoming train unloading capacity but this is not known with specificity in currently available documents
 PTE could also be established knowing capacities of various pumps used to transfer crude from the railcars to the tanks or tanks to the barge, etc but these are also not known with enough specificity currently

Existing Tank Capacities		
Tank 04	248,300 gal	[from TANKS calculations by CBPR]
Tank 05	3,973,200 gal	[from TANKS calculations by CBPR]
Tank 06	3,973,200 gal	[from TANKS calculations by CBPR]

[B] Calculation of Overall Current Maximum Throughput

5000	bbl/hr	
43800000	bbl/yr	[Cross-checks same value by CPBR as "limited" T/put]
1839600000	gal/yr	
1839600	kgal/yr	

[C] Comparison with 2013 Reported Throughputs

Month	Received (bbl)	Shipped Barge (gal)	Shipped (bbl)	
13-Jan	513680	18718000	445667	
13-Feb	453838	18995356	452270	
13-Mar	392034	18899071	449978	
13-Apr	744439	26486146	630623	
13-May	827892	33405983	795381	
13-Jun	698923	30943969	736761	
13-Jul	278708	11726581	279204	
13-Aug	625118	25167002	599214	
13-Sep	674904	27499393	654747	
13-Oct	875588	34974562	832728	
13-Nov	798672	38456849	915639	
Total 11-month	6883796	285,272,912.00	6792212.19	
Scaled 12 month	7,509,596	266,554,912.00	7,409,686	[Approximately 7.5 million barrels/yr]

[D] VOC PTE Calculations

D1. Emissions from Barge Loading

	1735.71	tons/yr	[Uncontrolled]
Capture Efficiency (High)	0.95		[TCEQ, if Barge is Leak Tested]
Uncaptured Emissions	86.8	tons/yr	[Low-end VOC PTE]
Capture Efficiency (Low)	0.65		[TCEQ, if Barge is not Leak Tested]
Uncaptured Emissions	607.5	tons/yr	[High-end VOC PTE]

Emission Factor Calculation for Barge Unloading [per AP-42 Section 5.2, Equations 2, 3]

CL=CA+CG			
CA=	0.86	lb/1000 gal., uncleaned	
CG=1.84*(0.44*P-0.42)*(M*G/T)		lb/1000 gal	
P=	11	psia	
M=	65	lb/lb-mol	[AP-42, Table 7.1-2]
G=	1.02		
T=	525	R	
CL=	1.887	lb/1000 gal	[Uncontrolled emission factor]

[Note: This cross-checks well with similar calculations done in other instances:
 - Global New Windsor, NY
 - Tesoro Savage, Vancouver WA]

D2. Emissions from Existing John Zink VRU
 VRU (EP-22) **76.8** tpy [confirmed, same as May 2012 Application using same emission factor, but higher throughput]

D3. Tank Emissions (per tank) (Scaled from TANKS)

	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total	
Only TK05/06 Actual (lb)	2063	1064	622	1335	5084	
T/put used in TANKS (approx)	144386088	gal/yr			2.542	tpy
Vapor Pressure used in TANKS (approx)	7.5	psi				

Adjust Emissions for Higher VP	4126		1244	2670	14818	[P* scaled from VP of 7.5 to VP of 11 psia, per AP-42]
Adjust Emissions for T/put at capacity	919800000		6778		7.41	[Assume that half of Max T/put through any one tank]
Total Adjusted Emissions from TK05 and TK06	14.8	tpy				tpy/tank

D4. Other Sources - Neglected for this calculation
 - Smaller Tank 04
 - Fugitive Emissions from Valves, Pumps, Components, etc.

E. Summary of Facility VOC (PTE) Emissions

<i>Source</i>		<i>Low-Range</i>	<i>High-Range</i>	
D1. Barge Loading		86.8	607.5	tpy
D2. VRU		76.8	76.8	tpy
D3. Tanks 05/06		14.8	14.8	tpy
D4. Other Sources		-	-	tpy
Total Facility PTE		178.4	699.1	tpy

Conclusion: It is Highly Likely That The Existing CPBR is a Major Source of VOC Emissions

<https://www.tceq.texas.gov/assets/public/permitting/air/NewSourceReview/oilgas/marine-loading.pdf>

Capture / Collection techniques and efficiency:

- 65% capture/collection efficiency - if the barge is not leak-tested.
- 95% capture/collection efficiency - if the barge is leak tested based on NESHAPs Subpart BB requirements.
- 100% capture/collection efficiency - recognized only when a blower system is installed which will produce a vacuum in the barge/ship during all loading operations. The blower system should include a pressure/vacuum gauge on the suction side of the loading rack blower system adjacent to the barge/ship being loaded to verify a vacuum in that vessel. Loading shall not occur unless there is a vacuum of at least 1.5 inch water column being maintained by the vacuum-assisted vapor collection system when loading. The vacuum should be recorded every 15 minutes during loading. This information is referenced in the draft TCEQ Guidance Document entitled "Loading Operations" dated October 2000 and the previous version dated January 1995.

Assumed that there is no blower system, so capture is not 100%