Case No. 9482

Attachment 3

REDLINE Revised Environmental Review Document Page 3-19 and Air Construction Permit Application Pages 1-3, 3-7, and 3-8

Table 3.2-5. Contemporaneous Project Emissions

Description of Emissions	Emissions (tpy)				
	NO_x	CO	PM_{10}	$PM_{2.5}$	CO_2e
Baseline actual emissions	1,252.10	~~134.24~~ 122.14	~~83.16~~ 81.83	~~35.99~~ 35.4	816,777

Source: ECT, 2018.

The final step of NSR applicability is a netting analysis to determine the significant net emissions increase for those pollutants that cause a significant increase. For NSR to apply, there must be a significant net emissions increase for that pollutant; i.e., the sum of the emissions increase from proposed Project and any other contemporaneous increases or decreases from the entire facility must be above the SER for that pollutant.

As shown in Table 3.2-6 the proposed Project does not result a significant net emissions increase for any NSR pollutant. In fact, the Project's estimated maximum annual emissions are indicated to be much less that actual emissions from the existing coal-fired units.

Table 3.2-6. Netting Analysis

Description	Emissions (tpy)				
	NO_x	CO	PM_{10}	$PM_{2.5}$	CO_2e
Proposed Project (proposed increases)	151.02	113.31	22.77	22.77	181,027
Baseline actual emissions (Units 1 and 2) (proposed decreases)	1,252.10	~~134.24~~ 122.14	~~83.16~~ 81.83	~~35.99~~ 35.4	816,777
~~C~~Other contemporaneous emissions	0.00	0.00	0.00	0.00	0.00
NSR SERs	25	100	15	10	75,000
Net emissions increase/ decrease	**-1,101.88**	**~~-20.92~~ -8.82**	**~~-60.39~~ -59.06**	**~~-13.22~~ -12.65**	**-635,750**
Significant modification (Yes/No)	**No**	**No**	**No**	**No**	**No**

Source: ECT, 2018.

Table 1-1. Summary of NSR Applicability Analysis

Pollutant	Repowering Project Emissions (tpy)†	Baseline Actual Emissions (tpy)‡	Net Emissions Increases/Decreases (tpy)	SER (tpy)	Major Modification (Yes/No)
NO_x	151.02	1,252.10	-1,101.08	25	No
CO	113.31	~~134.24~~122.14	~~-20.92~~-8.82	100	No
PM	22.77	NA	NA	25	No
PM_{10}	22.77	~~83.16~~81.83	~~-60.39~~-59.06	15	No
$PM_{2.5}$	22.77	~~35.99~~35.4	~~-13.22~~-12.65	10	No
VOC	11.96	NA	NA	25	No
SO_2	2.21	NA	NA	40	No
Lead*	2.87E-03	NA	NA	0.6	No
H_2SO_4	3.38E-01	NA	NA	7	No
CO_2e	181,027	816,777	-635,750	75,000	No
Total HAP	1.82	—	—	25§	No
Maximum individual HAP	1.15 (formaldehyde)	—	—	10§	No

Note: NA = proposed emissions below respective SERs; netting analysis is not required.

*Lead emissions are calculated based on AP-42 factors.
†Includes emissions from the three CTs and newly installed black-start generator.
‡~~E~~Proposed emissions decreases from shutdown of coal Units 1 and 2.
§Major source thresholds for HAPs. Netting analysis is not conducted for HAPs.

Sources: CP Crane, Performance Data, 2018.
ECT, 2018.

The Repowering Project is located in an area classified as nonattainment for 8-hour ozone (2008) and SO_2 (2010). NO_x and VOCs are regulated as nonattainment in the ozone nonattainment areas, as they are classified as precursors to ozone formation in ambient air.

Under prevention of significant deterioration (PSD), if the Project's emissions increase and net emissions increase are both significant for any regulated air pollutant, then PSD permitting is required. Similarly, under nonattainment new source review (NNSR), if the Project's net emissions increase is significant for any NNSR-regulated air pollutant, applicable NNSR permitting is required. The Project will be considered a minor source with respect to NSR permitting requirements at Title 26, Subtitle 11, Chapter 17, of the Code of Maryland Regulations (COMAR) and Title V major source permitting requirements at COMAR 26.11.03. The Repowering Project does not result in significant net emissions increase of any NSR pollutant and is not subject to PSD or NNSR applicability, as described further in Section 3.0.

the 5-year period immediately preceding the date on which a complete application was submitted. In addition, the average rate must be adjusted downward to exclude emissions that exceeded any emissions limitation during the 24-month baseline period. Table 3-6 summarizes the baseline actual emissions based on the data provided by CP Crane for the pollutants that have proposed Project emissions above the SER.

Table 3-6. Baseline Actual Emissions

Parameter	NO_x	CO	PM_{10}	$PM_{2.5}$	CO_2e
Baseline actual emissions (tpy)	1,252.10	~~134.24~~122.14	~~83.16~~81.83	~~35.99~~35.4	816,777
24-month period	June 2013 through May 2015	~~October 2013 through September 20 15~~June 2013 through May 2015	June~~ly~~ 2013 through ~~June~~May 2015	June~~ly~~ 2013 through ~~June~~May 2015	June 2013 through May 2015

Source: CP Crane, 2018.
ECT, 2018.

Creditable means the increase or decrease has not been relied on in a previous permit action. Contemporaneous project emissions include the creditable emissions decreases that have occurred at the facility, which include the shutdown of existing coal-fired Unit 1 (MDE No. 3-0108) and Unit 2 (MDE No. 3-01109). Baseline actual emissions were based on ~~the worst-case~~a 24-month average annual emissions ~~between~~within the 5-year look-back period of June 2013 to May 2018. NO_x, CO, and GHG (CO_2e) emissions data for these years was provided by CP Crane. PM emissions were calculated based on the pound-per-million-British-thermal-units (lb/MMBtu) values from the stack test data provided by CP Crane and the actual monthly heat input (million British thermal units [MMBtu] per month) for Units 1 2. Per AP-42, particulate size fractions of 67 percent for PM_{10} and 29 percent for $PM_{2.5}$ were applied to total PM emissions. This results in a conservative netting analysis for PM_{10} and $PM_{2.5}$, as potential PM_{10} and $PM_{2.5}$ emissions from the three proposed CTs were not reduced based on these particulate size fractions.

Appendix B provides this information in more detail.

3.4 Netting Analysis

The final step of NSR applicability is netting analysis to determine a significant net emissions increase/decrease for those pollutants that caused a significant increase based on the Project. For NSR to apply, there has to be significant net emissions increase as well as significant emissions increase from the proposed Project. A significant net emissions increase is the sum of the emissions increases from the Project (Section 3.2), baseline actual emissions (Section 3.3), and any other increases and decreases at the entire facility that are contemporaneous and creditable during the contemporaneous period. There have been no permitting actions during the contemporaneous period (defined as 5 years prior to submittal of a complete application to the actual date when emissions occur).

As shown in Table 3-7 the Repowering Project does not result in a significant net emissions increase of any NSR pollutant.

Table 3-7. Netting Analysis

Description	NO_x	CO	PM_{10}	$PM_{2.5}$	CO_2e
Repowering Project (proposed increases) (tpy)	151.02	113.31	22.77	22.77	181,027
Baseline actual emissions (Units 1 and 2) (proposed decreases) (tpy)	1,252.10	~~134.24~~ 122.14	~~83.16~~ 81.83	~~35.99~~ 35.4	816,777
~~C~~Other contemporaneous emissions (tpy)	0.00	0.00	0.00	0.00	0.00
Net emissions increases/ decreases (tpy)	-1,101.08	~~-20.92~~ -8.82	~~-60.39~~ -59.06	~~-13.22~~ -12.65	-635,750
NSR SERs (tpy)	25	100	15	10	75,000
Major modification (Yes/No)	No	No	No	No	No

Source: ECT, 2018.