



**Air and Radiation Administration
CP Crane, LLC
Air Quality Requirements
Response to Comments**

Environmental Integrity Project (EIP) Comments

1. The final CPCN must account for all potential sources of emissions identified as project components within the Revised Environmental Review Document and must ensure that emissions are limited below major source thresholds.

EIP specifically notes that the following new components do not have any air quality requirements nor are they included in the major New Source Review analysis as having any air emissions

- A natural gas compression station with associated treatment, piping, and regulation equipment
- Water treatment and wastewater handling facilities
- Liquid ULSD oil handling, piping and storage

Commenters are concerned because it appears that not all potential emissions from the Repower Project are being accounted for in the analysis of the project, which could affect whether CP Crane is properly seeking a permit as a ‘minor modification’ under the federal Clean Air Act (“CAA”).

MDE Response:

In making a determination of federal New Source Review (NSR) applicability for either Prevention of Significant Deterioration (PSD) or Non-Attainment NSR, it is incumbent upon the applicant to establish the potential to emit (PTE) for all emission units for which there is a federal or state regulatory requirement. The CP Crane’s application appropriately addressed the applicability of NSR regulations in a manner consistent with COMAR 26.11.17 and based on the design data best defined for the proposed project at the time of the application. The application addresses known emission sources that require a permit. However, there are certain installations which are part of the project which are not sources of air emissions or deemed to be insignificant sources or activities such as the following:



Maryland

Department of the Environment

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

- CP Crane's proposed natural gas compressors will be electrically powered. These compressors will emit no regulated air pollutants.
- Air emissions (primarily VOCs being the NSR pollutant of interest) from the water treatment and wastewater handling facilities and the liquid ULSD handling, piping and storage facilities are expected to be insignificant.
- The insignificantly small VOC emissions that may result from miscellaneous activities will not change the NSR applicability analysis.

2. **Potential emissions must be calculated at conservative emission rates, including an assessment of all load scenarios for combustion turbine emissions.**

The PTE analysis must present the worst-case emissions for the expected operation of the facility unless emissions are properly limited by the conditions of the CPCN.

Commenters are concerned that potential emissions may be undercounted by failing to include operations at below 50% load. The EPA has noted, within its compilation of emission factors for stationary gas turbines, that reduced loads can lead to lower thermal efficiencies and more incomplete combustion, with higher VOC and CO emissions for gas turbines operating at low loads. Yet CT emissions at lower than 50% load have not been considered within the PTE analysis for the CP Crane Repower Project. The CPCN must either explicitly prohibit low-load operations (with the exception of startup or shutdown periods) or low-load emission scenarios must be accounted for within the PTE analysis.

MDE Response:

CP Crane's application provides detailed emissions calculations and air dispersion modeling analyses that indicate the proposed combustion turbines will be operated in a load range of 50% to 100% (base load). MDE considers this approach to represent a conservative analysis because the primary equipment for the project includes three General Electric LM6000 combustion turbines. With the availability of three combustion turbines it would not be cost effective or practical for the PJM system to request that CP Crane activate two turbines to operate at 50% or less when one turbine would suffice.



Environmental Action Center

3. The application and record lack adequate information, Documentation, and Discussion of at least the following fourteen (14) permits, approvals, and licenses the applicant must obtain to construct and operate the Repowering Project.

- **State Permit to Operate**
- **State Part 70 (Title V Operating Permit)**

MDE Response:

Of the 14 permits referenced, only two relate to air quality. The following conditions in the CPCN address the timing for which the Permittee must apply for the State Permit to Operate and the Part 70 (Title V) operating permit:

B-I-5 Permits, Approvals and Registrations - At least 60 days prior to the anticipated date of start-up of the CP Crane Project, CP Crane shall submit to MDE-ARA an application for a State Permit to Operate [COMAR 26.11.02.14D]

B-I-6 Permits, Approvals and Registrations - CP Crane shall submit a complete Part 70 (Title V Operating Permit) application to MDE-ARA no later than 12 months after the date the CP Crane Project commences operations [COMAR 26.11.03.02B(4)]

4. The Record lacks explanation of the minimal carbon monoxide ("CO") emission reductions projected from this project. The Intervenor asks for clarification: If the facility is reducing output by more than 50% but not significantly reducing emissions of CO, a pollutant of concern, how can this serve the public interest? How will human health risk be reduced?

MDE Response:

Coal-fired boilers emit CO at a lower rate per unit of electrical output than do natural gas- and diesel fuel-fired CTs. Even given this fact, CP Crane's proposed Repowering Project will result in a net reduction of CO emissions—along with larger emission reductions for each of the other primary criteria pollutants. As to human health risk, the proposed Repowering Project has demonstrated compliance with applicable air quality regulations. Maximum air quality impacts resulting from the Repowering Project's CO emissions have been conservatively predicted to be less than 27 percent of the National Ambient Air Quality Standards (NAAQS) for CO, which EPA developed considering possible health risks to sensitive individuals.



5. The Record lacks compliance information.

The record does not contain a copy of, or any information regarding the June 2018 Settlement Agreement between MDE and the applicant.

MDE Response:

There is no regulatory requirement for inclusion of the aforementioned Settlement Agreement be submitted as part of the application for the CP Crane Repowering Project. Nonetheless, a copy of the June 2018 Settlement Agreement is attached. Currently, CP Crane is in compliance with the terms and conditions of the Settlement Agreement.

6. The Record lacks the following:

A discussion of how the repowering project may contribute to existing air pollution problems in Baltimore City and contribute to localized pollution hotspots.

MDE Response:

The Project Assessment Report (PAR) for the Modification of the CP Crane Generating Station provides an in-depth review of the potential air quality impacts associated with the project. Chapter 4, in particular, provides a detailed discussion of the proposed equipment and an emission characterization of all of the emission sources. (See PAR Tables 4-2 and 4-3). Upon outlining all applicable federal and State regulatory requirements, a determination was made as to whether each emission source was capable of complying with the applicable regulatory requirement. Finally, based on the projected air emissions associated with each emission source, MDE-ARA performed an independent air quality modeling analysis based on federal guidance found in Appendix W to 40 CFR Part 51 (The Guideline on Air Quality Models). The PAR made the following conclusion regarding air quality impacts:

"The air quality modeling analyses conducted by CP Crane have been independently verified by PPRP and MDE-ARA. Based on the air quality modeling analyses, the proposed CP Crane Repowering Project demonstrates compliance with all applicable NAAQS, and the results indicate that the proposed Project will not adversely impact air quality in the region."



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7. Permitting this facility would increase greenhouse gas emissions.

MDE Response:

The netting analysis in Table 4-7 in the Project Assessment Report for the Modification of the CP Crane Generating Station shows that there will be a net emissions decrease of 576,499 tons CO_{2e} [greenhouse gases] as a result of the Crane Repowering Project. To put the annual reduction of greenhouse gases in perspective, this is roughly equivalent to removing 175,000 gasoline engine Toyota Camrys driving an average of 12,000 miles per year from road service. (see <https://calculator.carbonfootprint.com/calculator.aspx?tab=4>).

8. MDE and the applicant proposed Crane as a repowering plant using air quality analysis that compared toxic emissions and greenhouse gasses to a decommissioned old coal fired plant rather than to a baseline of no plant emissions at all.

MDE Response:

Maryland has a federally approved program for both Prevention of Significant Deterioration (PSD) and non-attainment – New Source Review (NA-NSR) (COMAR 26.11.17). As discussed in detail in Section 4.4 of the Project Assessment Report, the applicability of PSD and/or NA-NSR to a new or modified source is contingent on whether emissions associated with the project will result in a significant net emissions increase of a criteria pollutant (e.g NO_x, SO₂, PM, etc.) in an area of attainment or a non-attainment precursor pollutant such as nitrogen oxides volatile organic compounds which contribute to ozone formation. By state rule, the CP Crane Repowering Project must establish if the proposed project will trigger PSD or NA-NSR requirements by determining if emissions associated with project will result in a significant net emissions increase, in particular nitrogen oxides. The project netting analysis was presented in PAR Table 4-7 which confirms that the Repowering Project will have a smaller environmental footprint than the coal fired utility boilers which are being replaced.