

**Initial Recommended Licensing Conditions**  
**PSC Case No. 9482**  
**CP Crane, LLC**

**A. CPCN GENERAL REQUIREMENTS**

A-1 Except as otherwise provided for in the following provisions, the application for the Certificate of Public Convenience and Necessity (CPCN) is considered to be part of this CPCN for CP Crane, LLC (CP Crane) to modify the Charles P. Crane Generating Facility (CP Crane Project). In the application, estimates of dimensions, volumes, emission rates, operating rates, feed rates and hours of operation are not deemed to constitute enforceable numeric limits except to the extent that they are necessary to make a determination of applicable regulations. Construction and operation of the CP Crane Project shall be undertaken in accordance with the following:

- CPCN application dated May 31, 2018;
- CPCN application supplement dated June 21, 2018;
- CPCN application second supplement dated August 31, 2018; and
- CP Crane responses to data requests filed by the Power Plant Research Program (PPRP).

If there are any inconsistencies between any of the prior applications or supplements, the conditions in this CPCN shall take precedence. If CPCN conditions incorporate federal or state laws through paraphrased language, where there is any inconsistency between the paraphrased language and the actual state or federal laws being paraphrased, the applicable federal or state laws shall take precedence.

A-2 All provisions of this CPCN that apply to CP Crane shall apply to all subsequent owners and/or operators of the facility. In the event of any change in control or ownership, CP Crane shall notify the succeeding owner/operator of the existence of the requirements of this CPCN by letter and shall send a copy of that letter to the Maryland Public Service Commission (PSC) and the Maryland Department of the Environment (MDE).

A-3 If any provision of this CPCN shall be held invalid for any reason, the remaining provisions shall remain in full force and effect and such invalid provision shall be considered severed and deleted from this CPCN.

A-4 Representatives of the Maryland PSC shall be afforded access to the CP Crane Generating Station at any reasonable time to conduct inspections and evaluations necessary to assure compliance with the CPCN. CP Crane shall provide such assistance as reasonably may be necessary to conduct such inspections and evaluations by representatives of the PSC effectively and safely.

A-5 Representatives of MDE and the Baltimore County Health Department shall be afforded access to the CP Crane Project facility at any reasonable time to conduct inspections and evaluations necessary to assure compliance with the CPCN requirements. CP Crane

shall provide such assistance as reasonably may be necessary to conduct such inspections and evaluations effectively and safely, which may include but need not be limited to the following:

- a) Inspecting construction authorized under this CPCN;
- b) Sampling any materials stored or processed on site, or any waste or discharge into the environment;
- c) Inspecting any monitoring or recording equipment required by this CPCN or applicable regulations;
- d) Having access to or copying any records required to be kept by CP Crane pursuant to this CPCN or applicable regulations;
- e) Obtaining any photographic documentation and evidence; and
- f) Determining compliance with the conditions and regulations specified in the CPCN.

**B. AIR QUALITY REQUIREMENTS**

**I. GENERAL**

- B-I-1 The Maryland Department of the Environment – Air and Radiation Administration (MDE-ARA) shall have concurrent jurisdiction with the PSC to enforce the air quality conditions of the CPCN.
- B-I-2 The CPCN serves as the air quality construction permit for the CP Crane Project. The CPCN expires if the CP Crane project modification is not completed within a reasonable period of time as specified under Condition B-I-4.
- B-I-3 For air permitting purposes, the CP Crane Project shall be defined as the following equipment:
- a) Three General Electric model LM6000 natural gas (with ULSD as backup fuel) combustion turbines (CTs), each with a nominal generating capacity of 50 MW; and
  - b) One Cummins model KTA50G9 diesel-fired black-start generator rated at 1500 kW.
- B-I-4 In accordance with COMAR 26.11.02.04B, the air quality provisions expire if, as determined by MDE-ARA:
- a) Substantial construction or modification is not commenced within 18 months after the date of issuance of the CPCN final order;
  - b) Construction or modification is substantially discontinued for a period of 18 months after the construction or modification has commenced; or

- c) Construction is not completed within a reasonable period after the date of issuance of the CPCN final order.
- 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)].
- B-I-7 All records and logs required by this CPCN shall be maintained at the facility for at least 5 years (unless otherwise noted) after the completion of the calendar year in which they were collected. These data shall be readily available for inspection by representatives of MDE-ARA.

## II. DEFINITIONS

- B-II-1 "Commence" as applied to the construction of the Project means that the owner or operator either has:
  - a) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or
  - b) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual on-site construction of the source to be completed within a reasonable time.
- B-II-2 "Excess emissions" means an emission rate which exceeds any applicable emission standard unless the emission rate is in compliance with an approved plan for compliance, departmental order, consent order, or condition of a permit.
- B-II-3 "Malfunction" is defined as any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process that operates in an abnormal or unusual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

## III. FACILITY-WIDE CONDITIONS

- B-III-1 The CP Crane Project is subject to all applicable federally enforceable State air quality requirements including, but not limited to, the following regulations:
  - a) **Testing and Monitoring** - Requires CP Crane to follow test methods described in COMAR 26.11.01.04C to determine compliance. MDE-ARA may require CP Crane to install, use, and maintain monitoring equipment or employ other methods as specified by MDE-ARA to determine the quantity or quality, or both, of emissions discharged into the atmosphere and to maintain records and make reports on these emissions to MDE-ARA in a manner and on a schedule approved by MDE-ARA or the control officer; [COMAR 26.11.01.04]

- b) **Emission Statements** - Requires CP Crane to submit a certified, facility-wide emission statement to MDE-ARA by April 1<sup>st</sup> of each year; [COMAR 26.11.01.05-1]
- c) **Malfunctions and Other Temporary Increases of Emissions** - Requires CP Crane to report the onset and the termination of the occurrence of excess emissions, expected to last or actually lasting for one hour or more to MDE-ARA by telephone. Telephone reports shall include all information required by COMAR 26.11.01.07C(2); [COMAR 26.11.01.07]
- d) **Particulate Matter From Confined Sources** - Prohibits CP Crane from causing or permitting particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess of 0.03 gr/SCFD (68.7 mg/dscm); [COMAR 26.11.06.03B(2)(a)]
- e) **Particulate Matter From Unconfined Sources** - Prohibits CP Crane from causing or permitting emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by MDE-ARA, the installation and use of hoods, fans, and dust collectors to enclose, capture, and vent emissions. In making this determination, MDE-ARA shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision; [COMAR 26.11.06.03C]
- f) **Particulate Matter from Materials Handling and Construction** - Prohibits CP Crane from causing or permitting any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne; [COMAR 26.11.06.03D]
- g) **Control of NSPS Sources** - Prohibits CP Crane from constructing, modifying, or operating, or causing to be constructed, modified, or operated, a New Source Performance Standard (NSPS) source as defined in COMAR 26.11.01.01B(23), which results or will result in violation of the provisions of 40 CFR §60, as amended; [COMAR 26.11.06.12]
- h) **Acid Rain Rule** - CP Crane shall comply with all applicable requirements of the Acid Rain Program; [40 CFR §72 and §75]
- i) **Cross-State Air Pollution Rule (CSAPR)** - CP Crane shall comply with all applicable requirements of the Cross-State Air Pollution Rule (CSAPR); AND [40 CFR §97 Subparts AAAAA, BBBBB, and CCCCC]
- j) **Mandatory Greenhouse Gas (GHG) Reporting** - Requires CP Crane to report GHG emissions [40 CFR 98, Subpart C].

B-III-2 The CP Crane Project is subject to all applicable State-only air quality requirements including, but not limited to, the following regulations:

- a) **Fee Schedule** – Requires CP Crane to pay annual Title V operating permit fees; [COMAR 26.11.02.19A]
- b) **Nuisance** – Prohibits CP Crane from operating or maintaining the facility in such a manner that a nuisance or air pollution is created; [COMAR 26.11.06.08]
- c) **Odors** – Prohibits CP Crane from causing or permitting the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created; [COMAR 26.11.06.09]
- d) **Emission Certification** – Requires CP Crane to certify the actual emissions of regulated air pollutants from all installations at the plant or facility. Certification shall be on a form obtained from MDE-ARA and shall be submitted to MDE-ARA not later than April 1 of the year following the year for which certification is required. An emission certification submitted pursuant to this section and which contains all information required by COMAR 26.11.01.05-1 for NO<sub>x</sub> and VOC, satisfies the requirements of COMAR 26.11.01.05-1; and [COMAR 26.11.02.19D]
- e) **Maryland CO<sub>2</sub> Budget Trading Program** – CP Crane shall comply with all applicable requirements of the Maryland CO<sub>2</sub> Budget Trading Program. [COMAR 26.09]

B-III-3 CP Crane shall provide MDE-ARA with the manufacturer, make, and model, vendor specifications, or other details requested by MDE-ARA upon selection of the black start generator no later than 15 days prior to startup.

#### IV. COMBUSTION TURBINES

##### Emission Unit Numbers: CT1, CT2, and CT3

Three General Electric model LM6000 natural gas combustion turbines (CTs), each with a nominal generating capacity of 50 MW, and each with water injection to reduce nitrogen oxide (NO<sub>x</sub>) emissions.

##### Applicable Requirements

B-IV-1 Only pipeline quality natural gas shall be used as fuel in the CTs except that ultra low sulfur diesel (ULSD) may be used when natural gas supply is unavailable.

B-IV-2 The CTs are subject to all applicable federally enforceable State air quality requirements including, but not limited to, the following regulations:

- a) **Continuous Emission Monitoring Requirements** - Requires CP Crane to operate all continuous emission monitors (CEMS) under the requirements of COMAR 26.11.01.11. This requirement is applicable to the NO<sub>x</sub> and CO<sub>2</sub> CEMS that are planned to be installed at each CT exhaust stack; [COMAR 26.11.01.11]
- b) **Visible Emissions** – Except as provided in COMAR 26.11.09.05A(3), prohibits CP Crane from causing or permitting the discharge of emissions from any fuel

burning equipment, other than water in an uncombined form, which is visible to human observers; [COMAR 26.11.06.01, COMAR 26.11.09.05A(2)]

- c) **Control of NO<sub>x</sub> Emissions for Major Stationary Sources** – Requires CP Crane to meet an hourly average NO<sub>x</sub> emission rate of not more than 42 parts per million (ppm) for the combustion turbine with a capacity factor of greater than 15%, when burning process gas and 65 ppm dry vol @ 15% O<sub>2</sub> when burning ULSD or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive; and [COMAR 26.11.09.08G(2)]
- d) **Control of NO<sub>x</sub> Emissions for Major Stationary Sources, Reporting Requirements** – Requires CP Crane when using a CEMS to demonstrate compliance with the NO<sub>x</sub> emission standards in COMAR 26.11.09.08 to submit quarterly emission reports to MDE-ARA on or before the thirtieth day of the month following the end of each calendar quarter. [COMAR 26.11.09.08K]

B-IV-3 The CTs are subject to 40 CFR §60 Subpart KKKK - Standards of Performance for Stationary Combustion Turbines; 40 CFR §60.4300, et seq., which contain various requirements for emission limitations, monitoring, testing, recordkeeping, and reporting for NO<sub>x</sub> and SO<sub>2</sub>, specified in Table B-1 and the following additional requirements:

- a) NO<sub>x</sub> limits:
  - i. Natural gas firing: 25 ppm at 15 percent O<sub>2</sub> based on a 3-hour block average (excluding startup and shutdown);
  - ii. ULSD fuel firing: 74 ppm at 15 percent O<sub>2</sub> based on a 3-hour block average (excluding startup and shutdown);
- b) SO<sub>2</sub> limit: 0.0015% Sulfur by weight;
- c) Compliance with the NO<sub>x</sub> emission standard shall be demonstrated by use of a certified NO<sub>x</sub> CEM;
- d) Compliance with the SO<sub>2</sub> emission standard (40 CFR §60.4365) shall be demonstrated by either of the following:
  - i. The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for natural gas is 20 grams of sulfur or less per 100 standard cubic feet and has potential sulfur emissions of less than 26 ng SO<sub>2</sub> / J (0.060 lb SO<sub>2</sub>/MMBTU) heat input; or
  - ii. Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO<sub>2</sub>/J (0.060 lb SO<sub>2</sub>/MMBTU) heat input. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR §75 is required.

- e) Monitoring of Operations (40 CFR §60.4340(a)-(b)) – CP Crane shall install, calibrate, maintain, and operate a continuous NO<sub>x</sub> emissions monitoring system as described in the Quality Assurance Procedures under 40 CFR §75 is required;
- f) Monitoring of Operations (40 CFR §60.4350) – CP Crane shall follow the calculation procedures set forth in 40 CFR §60.4350 for purposes of identifying Excess Emissions; and
- g) Monitoring of Operations (40 CFR §60.4360) CP Crane may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO<sub>2</sub>/J (0.060 lb SO<sub>2</sub>/MMBTU) heat input using one of the methods given in 40 CFR §60.4365. If CP Crane elects to comply with the minimum fuel sulfur content limit under 40 CFR §60.4330, CP Crane must monitor the total sulfur content of the combustion turbine’s fuel using the methods described in 40 CFR §60.4415 at a frequency described in 40 CFR §60.4370. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084-82, D4810-88 (1999), D5504-01, or D6228-98 (2003), or Gas Processors Association Standard 2377-86, may be used to assess compliance with the applicable fuel sulfur limit.

B-IV-4 The CTs are subject to 40 CFR 60, Subpart TTTT – Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units, 40 CFR §60.5508, et seq., which establishes the following CO<sub>2</sub> emission standard (Table 2 of Subpart TTTT) for reconstructed stationary combustion turbines which combust at least 90% natural gas on a heat input basis on a 12-month rolling average basis: 120 lbs CO<sub>2</sub>/MMBtu; **and which establishes the following CO<sub>2</sub> emission standard (Table 2 of Subpart TTTT) for reconstructed stationary combustion turbines which combust 90% or less natural gas on a heat input basis on a 12-operating month rolling average basis: 120 lbs CO<sub>2</sub>/MMBtu to 160 lbs CO<sub>2</sub>/MMBtu as determined by the procedures in 40 CFR § 60.5525**

B-IV-5 The CTs are subject to all applicable provisions of the Acid Rain program under 40 CFR §72, including, but not limited to:

- a) Subpart A §72.30(b)(2)(i) requires CP Crane to submit an application for an Acid Rain Permit for the CT units;
- b) Subpart A §72.9(b)(1) requires CP Crane, to the extent applicable, to comply with monitoring requirements in 40 CFR 75;
- c) Subpart A §72.9(c) requires CP Crane to hold allowances in the source’s compliance account not less than the total annual emissions of SO<sub>2</sub> for the previous year and comply with applicable Acid Rain limits for SO<sub>2</sub>;
- d) Subpart A §72.9(e) requires CP Crane to submit a proposed offset plan if emission limitations are exceeded; and

- e) Subpart A §72.9(f) requires CP Crane, unless otherwise provided, to retain required documents for a period of 5 years from the date that the document was created. Documents may include, but are not limited to, certificates of representation, emissions monitoring information, copies of reports, compliance certifications, and other documentation pertaining to the Acid Rain program.

### **Operational and Emission Limits**

B-IV-6 Operational Restriction – The aggregated hours of operation for the three CTs shall not exceed 7100 hours/year, including a maximum of 710 hours of burning ULSD fuel.

B-IV-7 Emissions Limits – The CTs shall comply with the emissions limits below, excluding startup and shutdown, on a 3-hour block average basis.

**Table B-1**

Pollutant	Natural Gas	ULSD
NO <sub>x</sub>	COMAR: 42 ppm @ 15% O <sub>2</sub> Subpart KKKK: 25 ppm @ 15% O <sub>2</sub>	COMAR: 65 ppm @15% O <sub>2</sub> Subpart KKKK: 74 ppm @ 15% O <sub>2</sub>
SO <sub>x</sub>	COMAR: 65 ppm @ 15% O <sub>2</sub> Subpart KKKK: 0.5 gr/100 scf	Subpart KKKK 0.0015% S by wt

### **Compliance Demonstration**

#### **Testing and Monitoring Requirements**

B-IV-8 At least 30 days prior to conducting any compliance stack test, CP Crane shall submit a test protocol to MDE-ARA for review and approval.

- a) Compliance stack testing shall be conducted in accordance with MDE-ARA Technical Memorandum (TM) 91-01, "Test Methods and Equipment Specifications for Stationary Sources" (January 1991), as amended by Supplement 3 (October 1 1997), 40 CFR §60, or subsequent test protocols approved by MDE-ARA; and
- b) Test ports shall be located in accordance with TM 91-01 (January 1991), or subsequent or alternative measures approved by MDE-ARA.

B-IV-9 Initial compliance performance testing of each CT shall be conducted within 180 days after initial startup to quantify pollutant emissions and demonstrate compliance with the NO<sub>x</sub> emissions limits specified in the CPCN. Testing shall be conducted for both natural gas and ULSD while the CTs are operating at 90% or higher capacity. Subsequent and continuous compliance with the emission limits specified in the CPCN for compliance with NO<sub>x</sub> shall be demonstrated by installing and operating certified CEMS. The CEMS shall comply with applicable performance specifications in 40 CFR Part 60 Appendix B, Quality Assurance Procedures in 40 CFR Part §60 Appendix F, and applicable requirements in 40 CFR 75.

- B-IV-10 Unless otherwise approved by MDE-ARA, CP Crane shall install on each CT a CO<sub>2</sub> CEMS or calibrated in-line fuel flow-meter as specified under 40 CFR §75.10(3) to measure CO<sub>2</sub> emissions associated with the production of electricity. Emissions of CO<sub>2</sub> from the CTs are to be monitored and recorded hourly utilizing a data handling acquisition system (DHAS) installed, calibrated, and maintained in accordance with 40 CFR §75. [40 CFR 75.10(3)]
- B-IV-11 CP Crane shall install a fuel flow meter as specified under 40 CFR 75 and continuously monitor the fuel flow for each CT. The total fuel usage per month shall be recorded.
- B-IV-12 Methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions from the CTs shall be calculated in accordance with the methodology and emission factors noted in 40 CFR 98, Subpart D. On a monthly basis, fuel consumption, coupled with the appropriate emission factors and global warming potentials (25 for CH<sub>4</sub> and 298 for N<sub>2</sub>O), shall be used to calculate the CH<sub>4</sub> and N<sub>2</sub>O emissions on a CO<sub>2</sub>e basis. These emission rates, summed with the monthly CO<sub>2</sub> emissions based on CEMS, shall be used to establish GHG emissions from the CTs on a CO<sub>2</sub>e basis.
- B-IV-13 The CTs are subject to all applicable monitoring provisions of the Acid Rain program under 40 CFR 75, including, but not limited to:
- a) Subpart A §75.4(b) which generally requires CP Crane, in accordance with 40 CFR §75.20, to ensure that all applicable monitoring systems for NO<sub>x</sub>, CO<sub>2</sub>, and volumetric flow required under 40 CFR 75 are installed and all certification tests completed no later than the earlier of 90 unit operating days or 180 calendar days after the date the unit commences commercial operations;
  - b) Subpart B §75.10 which generally requires CP Crane to measure, as applicable, NO<sub>x</sub> and CO<sub>2</sub> emissions; to ensure that CEMS required by 40 CFR 75 meet the equipment, installation, and performance specifications in 40 CFR 75; and to maintain the CEMS according to the quality assurance and quality control procedures in this part;
  - c) Subpart F §75.53(a) which generally requires CP Crane to prepare a monitoring plan with sufficient information on applicable continuous opacity or emissions monitoring systems to demonstrate that all NO<sub>x</sub> and CO<sub>2</sub> emissions, as required, are monitored and reported;
  - d) Subpart F §75.57(a) which requires CP Crane to keep a file for each affected unit of all measurements, data, reports, and other information required by 40 CFR 75 in a form suitable for inspection for at least three years from the date of each record;
  - a) Subpart F §75.57(b)-(f) which require CP Crane to record the following: SO<sub>2</sub> emissions, NO<sub>x</sub> emissions, CO emissions, opacity, and other information as specified; and

- e) Subpart G §75.60(a) and (b) which generally require CP Crane to comply with all reporting requirements, with all signatory requirements of 40 CFR §72.21 of this chapter for all submissions, and with all required certifications and reports.

B-IV-14 Initial compliance with the visible emission limitation in COMAR 26.11.09.05A(2) shall be demonstrated using EPA Method 9 within 180 days of startup of the first CT.  
[COMAR 26.11.09.05A(2) and (5)]

### **Recordkeeping and Reporting Requirements**

B-IV-15 Final results of each compliance stack test shall be submitted to MDE-ARA within 60 days after completion of the test. [COMAR 26.11.01.05B and C]

B-IV-16 Unless otherwise approved by MDE-ARA, CP Crane shall submit electronic quarterly reports from the DHAS to the EPA Clean Air Markets Division System as specified in 40 CFR §75.64. [40 CFR §75.64]

B-IV-17 CP Crane shall submit a Quarterly CEMS Summary Reports as required by COMAR 26.11.01.11E(2)(c), as well as CEMS System Downtime Reports as required by COMAR 26.11.01.11E(1). [COMAR 26.11.01.11E]

B-IV-18 CP Crane shall submit to MDE-ARA reports of excess emissions and monitor downtime associated with the CTs, in accordance with 40 CFR §60.7(c). Excess emissions as defined in 40 CFR §60.4380 (NO<sub>x</sub>) and 40 CFR §60.4385 (SO<sub>2</sub>) must be reported for all periods of unit operation, including startup, shutdown, and malfunction. [40 CFR §60.4375]

B-IV-19 CP Crane shall maintain annual fuel use records on site for not less than three years, and make these records available to MDE-ARA upon request. [COMAR 26.11.09.08K]

B-IV-20 CP Crane shall submit a quarterly report to MDE-ARA to be postmarked by the 30th day of the month following the end of each calendar quarter that includes the following information:

- a) All instances of deviations from permit requirements for the CTs;
- b) The downtime or malfunction of any CEMS equipment. The report shall include the date and time of each period during which the CEMS was inoperative and the nature of the monitoring system repairs or adjustments completed;
- c) The monthly and consecutive rolling 12-month total fuel use and hours of operation for each CT;
- d) The monthly (in tons per month) and consecutive rolling 12-month (tons per year) total emissions of NO<sub>x</sub>, SO<sub>2</sub>, and CO<sub>2</sub>e separately for each CT.

B-IV-21 If CP Crane elects to demonstrate compliance with the SO<sub>2</sub> emissions limit in 40 CFR §60.4330 using methods described in §60.4415(a), submit periodic representative fuel sampling records.

## V. DIESEL-FIRED BLACK START GENERATOR

### Emission Unit Number: EG1

One ULSD-fired 1,500 kW black start generator.

### Applicable Requirements

B-V-1 The black start generator is subject to all applicable federally enforceable State air quality requirements including, but not limited to, the following regulations:

- a) **Visible Emissions During Idle Mode** – Prohibits CP Crane from causing or permitting the discharge of emissions from any internal combustion engine, operating at idle, greater than 10 percent opacity; [COMAR 26.11.09.05E(2)]
- b) **Visible Emissions During Operating Mode** - Prohibits CP Crane from causing or permitting the discharge of emissions from any internal combustion engine, operating at other than idle conditions, greater than 40 percent opacity; [COMAR 26.11.09.05E(3)]
- c) **Exceptions to Visible Emissions Standards for Internal Combustion Engines:**
  - (i) Standards do not apply for a period of two consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system; [COMAR 26.11.09.05E(4)(a)]
  - (ii) Standards do not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
    - (1) Engines that are idled continuously when not in service: 30 minutes;
    - (2) All other engines: 15 minutes; [COMAR 26.11.09.05E(4)(b)]
  - (iii) COMAR 26.11.09.05E(2) and (3) do not apply while maintenance, repair, or testing is being performed by qualified mechanics; [COMAR 26.11.09.05E(4)(c)]
- d) **Control of Sulfur Oxides From Fuel Burning Equipment** – Prohibits CP Crane from burning, selling, or making available for sale distillate fuel oils with a sulfur content of greater than 0.3 percent; [COMAR 26.11.09.07A(2)(c)]
- e) **Control of NO<sub>x</sub> Emissions for Major Stationary Sources – Fuel Burning Equipment with a Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less** - Requires CP Crane to comply with the requirements of COMAR 26.11.09.08G, including providing certification of the capacity factor of the equipment to MDE-ARA in writing, conducting an annual combustion analysis for each installation if the equipment operates more than 500 hours during a calendar year, and attending operator training programs sponsored by MDE-ARA, EPA, or equipment vendors every three years; [COMAR 26.11.09.08G]

- f) **Control of NO<sub>x</sub> Emissions for Major Stationary Sources** - Requires CP Crane, for all fuel burning equipment with a capacity factor (as defined in 40 CFR §72.2) of 15 percent or less, to comply with the following requirements:
  - (i) Provide certification of the capacity factor of the equipment to MDE in writing; and
  - (ii) Require each operator of an installation to attend operator training programs on combustion optimization that are sponsored by MDE-ARA, the EPA, or equipment vendors, at least once every three years. [COMAR 26.11.09.08G(1)]

B-V-2 The black start generator is subject to all applicable State-only air quality requirements including, but not limited to, the following regulations and operational limitations:

- a) **Distributed Generation** - Requires CP Crane to comply with NESHAP ZZZZ and NSPS IIII to comply with this requirement. [COMAR 26.11.36]

### Operational and Emission Limits

B-V-3 The black start generator is subject to NSPS 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. CP Crane shall meet the monitoring, compliance, testing, notification, reporting, and recordkeeping requirements of 40 CFR §60.4200 to 40 CFR §60.4219 and related applicable provisions of 40 CFR §60.7 and 40 CFR §60.8. The diesel fuel combusted in the black start generator shall meet the requirements of 40 CFR §60.4207.

CP Crane shall meet the following emissions limits for the black start generator:

- a) Under 40 CFR §60.4202 and 40 CFR §89.112, Table 1, emissions from the 1,500 kW black start generator shall not exceed 9.2 g/kW-hr NO<sub>x</sub>, 1.3 g/kW-hr non-methane hydrocarbons (NMHC), 11.4 g/kW-hr CO, and 0.54 g/kW-hr PM filterable.

B-V-4 The black start generator is subject to the following requirements under 40 CFR Part 60 Subpart IIII:

- a) CP Crane shall purchase an engine certified to the emission standards in 40 CFR §60.4204(b) or 40 CFR §60.4205(b) or (c), as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications; [40 CFR §60.4211(c)]
- b) CP Crane shall operate and maintain the black start generator according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine; [40 CFR §60.4206]
- c) The black start generator may be operated for the purpose of maintenance checks and readiness testing limited to 100 hours per year, provided that those tests are

recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine; [40 CFR §60.4211(f)]

- d) There are no restrictions on hours of operation on the use of the black start generator for allowable emergency situations; [40 CFR §60.4211(f)]
- e) CP Crane shall install and operate a non-resettable hour meter prior to startup of the engine. [40 CFR §60.4209(a)]

B-V-5 The black start generator is subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The black start generator shall meet the requirements of this Subpart by complying with all the applicable requirements of NSPS Subpart IIII under 40 CFR §63.6590(c)(1).

B-V-6 The black start generator shall be fueled with ULSD fuel only with a sulfur content not to exceed 15 parts per million by weight (ppmw).

#### **Notification Requirements**

B-V-7 CP Crane shall furnish written notification to MDE-ARA and EPA of the following events related to the installation of the black start generator: [40 CFR §60.7(a)]

- a) The date construction commenced within 30 days after such date; and
- b) The actual startup date within 15 days after such date.

#### **Recordkeeping and Reporting Requirements**

B-V-8 CP Crane shall maintain records on site of the hours of operation of the black start generator, including date, time, and duration and an explanation of reasons for operation of the engine.

B-V-9 CP Crane shall comply with all applicable reporting and recordkeeping requirements for the black start generator specified in 40 CFR §60.4214.

B-V-10 CP Crane shall maintain fuel supplier certifications for each fuel delivery that documents the sulfur content of the ULSD is 15 ppm sulfur by weight or less. Fuel supplier certification shall include the following information:

- a) The name of the oil supplier; and
- b) The sulfur content of the oil.

B-V-11 CP Crane shall comply with the following recordkeeping and reporting requirements for the black start generator: [COMAR 26.11.09.08(G)]

- a) Provide certification of the capacity factor of the equipment to MDE-ARA in writing as part of the April 1 certification report;

- b) Maintain the results of the combustion analyses (if applicable) at the site for at least two years and make this data available to MDE-ARA and the EPA upon request; and
- c) Maintain records of training program attendance for each operator at the site, and make these records available to MDE-ARA upon request.

B-V-12 CP Crane shall maintain annual fuel use records for the black start generator on site for not less than three years, and make these records available to MDE-ARA upon request.  
[COMAR 26.11.09.08K]

## **VI. NOTIFICATION REQUIREMENTS**

B-VI-1 All air quality notifications and reports required by this CPCN shall be submitted to:  
Administrator, Compliance Program  
Air and Radiation Administration  
1800 Washington Boulevard  
Baltimore, Maryland 21230

B-VI-2 All notifications and reports required by 40 CFR 60 Subpart KKKK, Subpart IIII, Subpart TTTT, and 40 CFR 63 Subpart ZZZZ shall be submitted to:  
Director, Air Protection Division  
U.S. EPA – Region 3  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

**C. CONSTRUCTION DEWATERING**

- C-1. At least 30 days prior to the start of construction dewatering activities, CP Crane shall file a Notice of Exemption with the MDE-Water Supply Program confirming that the amount of water to be withdrawn will not exceed 5,000 gallons per day (gpd) as an annual average.
- C-2. CP Crane shall ensure that it manages water withdrawn during construction in a way that complies with all applicable federal, State, and local regulations, including compliance with relevant MDE-Water and Science Administration discharge permitting requirements. CP Crane shall coordinate with MDE's Oil Control Program as appropriate regarding impacts of the proposed construction activities on the ongoing hydrocarbon remediation at the Crane site. Prior to the start of construction dewatering activities, CP Crane shall submit to PPRP and the PSC documentation describing how the water resulting from construction dewatering will be treated, stored, and disposed.

**D. TERRESTRIAL AND AQUATIC ECOLOGY**

- D-1. Construction and operation of the Crane repowering project shall be undertaken in accordance with this CPCN and shall comply with all applicable local, State, and federal laws and regulations, including but not limited to the following:
- a) Nontidal Wetlands – COMAR 26.23.01 applies to activities conducted in nontidal wetlands and wetland buffer.
  - b) Waterway Construction – COMAR 26.17.04 applies to regulations governing construction activities in nontidal waters and floodplains.
  - c) Water Quality and Water Pollution Control – COMAR 26.08.01 through COMAR 26.08.04 apply to discharges to surface water and maintenance of surface water quality.
  - d) Erosion, Sediment, and Stormwater Control – COMAR 26.17.01 applies to the preparation, submittal, review, approval, and enforcement of erosion, sediment, and stormwater control plans, including any dewatering plans and associated water recycling plans.
  - e) Oil Pollution Control – 40 CFR Part 112 and COMAR 26.10.01.12 apply to the procedures of oil spill control.
  - f) Forest Conservation – Maryland's Forest Conservation Act, Md. Code, Sections 5-1601 through 5-1613 of the Natural Resources Article.
  - g) Land Use Ordinance for Baltimore County, Maryland – Relevant portions of the ordinance that address site planning, forest conservation, floodplain management, sediment and erosion control, Critical Area development requirements, and stormwater management.

- D-2. All direct or indirect impacts (temporary or permanent) to wetlands and to streams and their 100-year floodplains shall be assessed, and where possible quantified, by CP Crane prior to the start of any construction activities.
- a) CP Crane shall apply for and obtain permits from MDE for all construction in or disturbance to permanent and intermittent streams ditches, floodplains, and non-tidal wetlands or their regulatory buffers, including but not limited to culverts to be installed in streams or ditches for access roads or other purposes.
  - b) All culverts in ditches or streams shall be inspected annually for structural damage and erosion at the outfall point. Structural damage or erosion below the outfall invert will be corrected as soon as practicable.
- D-3. CP Crane shall notify and consult with DNR Wildlife and Heritage Services (WHS) to determine appropriate actions if rare, threatened, or endangered species are encountered during planning, construction, or maintenance of this facility.
- D-4. CP Crane shall employ erosion and sediment control best management practices (BMPs) presented in the MDE document titled 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control, and as otherwise may be approved or required by Baltimore County. All portions of the Project site that are disturbed during construction shall be stabilized as soon as practicable after the cessation of construction activities within that portion of the site, followed by seed application, in accordance with the above cited document. In no instance shall non-native species be seeded or otherwise planted in these areas.
- D-5. CP Crane shall ensure that the project undertaken in accordance with this CPCN shall comply to all requirements of Baltimore County's Critical Area Program. Any change to the size, scope, footprint, or use associated with the project, the repowering of the Crane Station by retiring two coal-fired units and adding three natural gas combustion turbines, shall require additional review by the Critical Area Commission in accordance with COMAR 27.02.04 and COMAR 27.02.05.

**E. STORMWATER MANAGEMENT/EROSION AND SEDIMENT CONTROL**

- E-1. CP Crane shall provide PPRP and the PSC Engineering Staff with copies of all plans that CP Crane submits to Baltimore County in connection with the Project for grading the site, and all permits received for such grading, within fifteen (15) calendar days of submitting such plans or receiving such permits. Grading and associated stormwater controls shall be designed to minimize hydrological changes to off-site streams and wetlands and to maintain the existing flow regime to these streams and wetlands. In addition, CP Crane shall demonstrate compliance with applicable sections of the Baltimore County Chesapeake Bay Critical Area law, section 33. In no case shall such plans include removal of topsoil from the site.
- E-2. Soil inside the Project Limits of Construction should be effectively managed for compaction according to the guidance provided in the NRCS Soil Quality – Agronomy Technical Note No. 17 “Soil Compaction: Detection, Prevention and Alleviation”. Ripping (to a minimum depth of 12”) and compost amendment shall be performed in

compacted areas (e.g. graded areas, staging areas, or heavily trafficked areas) to ensure planting success and the proper post-construction runoff characteristics.

- E-3. The CPCN is not an authorization to discharge stormwater or wastewater to waters of the State. If required by MDE, CP Crane shall obtain a discharge permit from MDE under the National Pollutant Discharge Elimination System (NPDES) for the facility.

## **F. FUEL AND HAZARDOUS MATERIALS**

- F-1. CP Crane shall provide secondary containment for each of the onsite diesel storage tanks. All piping associated with the diesel storage tanks shall either be above ground or shall have secondary containment. Electric equipment that contains dielectric or fuel oil located in the substation and switchyards shall have secondary containment.
- F-2. CP Crane shall prepare a Spill Prevention, Control and Countermeasures (SPCC) Plan, and have the plan reviewed and certified by a Professional Engineer in the State of Maryland as specified in 40 CFR 112.3. The SPCC Plan shall address onsite storage of diesel fuel and any other aboveground storage of petroleum products.

## **G. NOISE LEVELS**

- G-1. CP Crane shall monitor noise levels at the boundaries of the CP Crane site, after the facility is operational, to verify results of the predictive analysis. The scope of work for the noise monitoring shall be provided to PPRP and the PSC for review and approval within one year after the effective date of this CPCN. Measurements shall be taken while the facility is in full operation, to represent maximum noise emissions. CP Crane shall provide results within six (6) months after the facility begins commercial operation.
- G-2. Construction and operation of the proposed Project shall comply with the Maryland noise regulations in COMAR 26.02.03. If the post-construction noise monitoring indicates that the facility is not operating in compliance with those standards, CP Crane shall work with PPRP and the PSC to incorporate appropriate noise mitigation to ensure regulatory compliance.

## **H. TRAFFIC**

- H-1. CP Crane shall comply with all permit requirements and restrictions for use, crossing, and occupancy of State and Baltimore County roads, and obtain appropriate approvals, as necessary.

## **I. CULTURAL RESOURCES**

- I-1. In the event that relics from unforeseen archeological sites are revealed and identified during construction, CP Crane, in consultation with and as approved by the Maryland Historical Trust, shall develop and implement a plan for avoidance and protection, data recovery, or destruction without recovery of such relics or sites.

## **J. GENERAL AND MISCELLANEOUS PROVISIONS**

- J-1. Informational copies of the required reports regarding change of ownership, cultural resources, and noise studies as described in the Licensing Conditions of Case 9482 (A-2, C-2, E-1, G-1) shall be sent to PPRP by e-mail (and by mail if requested) at:

Director  
Power Plant Assessment Program  
Department of Natural Resources  
Tawes State Office Bldg., B-3  
580 Taylor Avenue  
Annapolis, Maryland 21401  
e-mail: [pprp.dnr@maryland.gov](mailto:pprp.dnr@maryland.gov)