AIR AND RADIATION ADMINISTRATION
DRAFT PART 70 OPERATING PERMIT

DOCKET # 24-039-0017

COMPANY: Crisfield Energy Center

LOCATION: 4079 Crisfield Hwy
Crisfield, Maryland 21817

CONTENTS:

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
AIR QUALITY PERMITS PROGRAM

TITLE V – PART 70 OPERATING PERMIT PROGRAM OVERVIEW

Title V of the Clean Air Act (amended) requires each state to implement a federally enforceable operating permit program for major sources of air pollution. This program, the Part 70 Permit Program, also known as the Title V Permit Program, is designed to provide a comprehensive administrative document (a Part 70 Operating Permit) that identifies all air emissions sources at a given facility and the federal air quality regulations applicable to those sources. The permit establishes the methodology by which the owner/operator will demonstrate compliance, and includes testing, monitoring, record-keeping, and reporting requirements for each emissions source.

A Part 70 Operating Permit does not authorize new construction, and does not add any new emissions limitations, standards, or work practices on an affected facility. There may, however, be additional testing, record keeping, monitoring, and reporting requirements. A Part 70 Operating Permit is a five-year renewable permit. A responsible official for each facility subject to a Part 70 Operating Permit is required to annually certify compliance with each applicable requirement for that facility.

When an application for a Part 70 Operating Permit is received, the Department will complete a technical review of the application and will prepare a draft Part 70 Operating Permit and Fact Sheet. The Fact Sheet will explain the basis and technical analysis used by the Department to develop the federally enforceable permit conditions, including the required testing, monitoring, record keeping, and reporting provisions for each emissions unit at the permitted facility. The Fact Sheet will also include a description of the facility operations and the current compliance status with applicable requirements. If there are any discrepancies between the Part 70 Operating Permit application and the draft permit, the Fact Sheet will contain a discussion of the inconsistencies and the final resolution.

Public Participation Process

The Part 70 Operating Permit Program provides the public, adjacent states, and EPA the opportunity to review and submit comments on draft permits. The public may also request a public hearing on the draft permit.

The purpose of a public hearing is to give interested parties the opportunity to submit comments for the record which are germane to the draft federally enforceable permit conditions. Comments made at the hearing, or in writing to the Department during the comment period, should address errors and deficiencies in the permit such as unidentified emissions units, incorrect or deficient regulation citation, deficient record keeping, monitoring, reporting or testing requirements and unresolved compliance issues. After the public comment period has closed, the Department will review the formal testimony as part of the final review and prepare a Response to Comments document which will be sent to the EPA along with the draft Part 70 Operating Permit and Fact Sheet.

Testimony on state-only requirements will be kept on file at the Department as part of the formal record, however, state-only rules and regulations are not federally enforceable, and therefore are not within the scope of the EPA review. The Department will keep a record of the identity of the commenters, their statements, a summary of the issues raised during the public comment period, and the Response to Comments document for at least five years.

Citizen Petition to EPA to Object to Permit Issuance

Interested parties may petition the EPA to object to the Part 70 Permit if the EPA has not already objected, within 60 days after the 45-day EPA review period has ended. The petition period will be posted on the EPA website. The EPA will only consider objections to the federally enforceable provisions of the draft permit which were raised with reasonable specificity during the public comment period, unless: (1) the petitioner demonstrates that it was impractical to raise the objections within the public comment period, or (2) the grounds for the objection arose after the comment period. If the EPA agrees with the petition, the Department will reopen, revise, or revoke the permit as determined.

Applicant Objection to Permit Issuance and Recourse

If the applicant objects to the federally enforceable permit conditions contained in the issued Part 70 Operating Permit, the applicant has 15 days from receipt of the issued permit to request a contested case hearing. More information on that can be found in 40 CFR, Part 70, and COMAR 26.11.03.11.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

NOTICE OF INTENT TO ISSUE PART 70 OPERATING PERMIT, OPPORTUNITY TO SUBMIT WRITTEN COMMENTS OR TO REQUEST A PUBLIC HEARING

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of the application for a renewal Part 70 Operating Permit submitted by the Calpine Mid-Atlantic Generation, LLC, Crisfield Energy Center. The facility consists of four (4) General Motors – Electro-Motive Division, nominal 26 MMBtu/hour (2.5MW) internal combustion engines, fired with No. 2 fuel oil only.

The applicant is represented by:

Mr. Paul Ostberg, Environmental Manager
Crisfield Energy Center
4079 Crisfield Highway, Route 413
Crisfield, MD 21817

The Department has prepared a draft Part 70 Operating Permit for review and is now ready to receive public comment. A docket containing the application, draft permit, and supporting documentation is available for review on the Department's website, under the Air Quality Permitting Page's Title V link under "Draft Title V Permits" and may be viewed here:

https://tinyurl.com/DraftTitleV

Interested persons may submit written comments or request a public hearing on the draft permit. Written comments must be received by the Department no later than 30 days from the date of this notice. Requests for a public hearing must be submitted in writing and must also be received by the Department no later than 30 days from the date of this notice.

Comments and requests for a public hearing will be accepted by the Department if they raise issues of law or material fact regarding applicable requirements of Title V of the Clean Air Act, and/or regulations implementing the Title V Program in Maryland found in COMAR.

A Request for public hearing shall include the following:

1) The name, mailing address, and telephone number of the person making the request;

2) The names and addresses of any other persons for whom the person making the request if representing; and

3) The reason why a hearing is requested, including the air quality concern that forms the basis for the request and how this concern relates to the person making the request.

All written comments and requests for a public hearing should be directed to the attention of Ms. Shannon Heafey via email at Shannon.heafey@maryland.gov or by post at Air Quality Permits Program, Air and Radiation Administration, 1800 Washington Boulevard Suite 720, Baltimore, Maryland 21230-1720. Further information may be obtained by calling Ms. Shannon Heafey at (410) 537-4433.

CALPINE MID-ATLANTIC GENERATION, LLC CRISFIELD ENERGY CENTER
4079 CRISFIELD HIGHWAY, ROUTE 413
CRISFIELD, MARYLAND 21817
DRAFT PART 70 OPERATING PERMIT NO. 24-039-0017
FACT SHEET

BACKGROUND

Calpine Mid-Atlantic Generation, LLC operates the Crisfield Energy Center located at 4079 Crisfield Highway in Somerset County. The Primary SIC for this plant is 4911. The Crisfield Energy Center consists of four-(4) identical internal combustion engines, each nominally rated at 26 MMBtu/hr. heat input (2.5 MW). Each unit is capable of operating on only No. 2 fuel oil. The engines are used during peak electric demand periods that usually occur in the summer and winter months.

The following table summarizes the actual emissions from Crisfield Energy Center based on its Annual Emission Certification Reports:

Table 1: Actual Emissions

Year	NO_X (TPY)	SO_X (TPY)	$PM_{10}/PM_{2.5}$ (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2022	40.98	0.011	0.63/0.60	0.03	1.15	0.011
2021	23.07	0.0046	0.35/0.31	0.017	0.65	0.0061
2020	5.5	0.009	0.086/0.081	0.0041	0.16	0.0015
2019	10.99	0.0043	0.36/0.34	2.92	0.31	0.0071
2018	83.4	0.03	2.77/2.66	22.12	2.34	0.022

Somerset County is located in the Ozone Transport Region. The major source threshold for triggering Title V permitting requirements in Somerset county is 50 tons per year for VOC, 100 tons for NO_X, and 100 tons per year for any other criteria pollutants and 10 tons for a single HAP or 25 tons per year for total HAPS. Since the potential, NO_X emission from the facility are greater than the major source threshold, Crisfield Energy Center is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

On October 30, 2023, the Department received the Crisfield Energy Center's Part 70-permit renewal application, which was submitted by Calpine Mid-Atlantic Generation, LLC. An administrative completeness review was conducted and the application was deemed to be complete. The completeness determination letter was sent on November 20, 2023 granting the facility an application shield.

CHANGES AND MODIFICATIONS TO THE PART 70 OPERATING PERMIT

The following changes and/or modifications have been incorporated into the renewal Title V – Part 70 Operating Permit for the Crisfield Energy Center:

No changes since the last renewal.

New Source Performance Standards (NSPS) – 40 CFR Part 60

The internal combustion engines are not subject to the requirements of 40 CFR Part 60, Subpart IIII for Stationary Compression Ignition Internal Combustion Engines. These engines were manufactured and installed prior to April 1, 2006

National Emission Standard for Hazardous Air Pollutants (NESHAP) – 40 CFR Part 63

The Crisfield Energy Center is not a major HAP emissions source. Instead it is an area HAP emission source and is subject to the following MACT:

Subpart ZZZZ — Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions:

COMPLIANCE ASSURANCE MONITORING (CAM)

Calpine Mid-Atlantic Generation LLC conducted a Compliance Assurance Monitoring (CAM) analysis for the Crisfield Energy Center and determined that the facility is not subject to the (CAM) Rule 40 CFR Subpart 64. Emission sources that are subject to NESHAP or NSPS emission limits or standards promulgated after November 15, 1990 are exempt from CAM requirements per 40 CFR 64.2(b)(i).

CAM is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act for large emission units that rely on air pollution control (APC) equipment to achieve compliance. The CAM approach establishes monitoring for the purpose of: (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that the cause or causes of the excursions are corrected. In order for a unit to be subject to CAM, the unit must be located at a major source, be subject to an emission limitation or standard; use a control device to achieve compliance; have post-control emissions of at least 100% of the major source amount (for initial CAM submittals); and must not otherwise be

exempt from CAM. Applicability determinations are made on a pollutant-by-pollutant basis for each emission unit.

Units C1-C4 is equipped with catalytic converters for CO control to achieve the emission rates required by NESHAP Subpart ZZZZ. As the emission rates for Subpart ZZZZ were promulgated by EPA after November 15, 1990, under Section 112 of the Clean Air Act, CAM requirements do not apply to these catalytic converters.

GREENHOUSE GAS (GHG) EMISSIONS

Crisfield Energy Center emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from internal combustion engines contained within the facility premises applicable to Crisfield Energy Center. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. While there may be no applicable requirements as a result of PSD, emission certifications reports for the years 2020, 2021, and 2022, showed that Crisfield Energy Center is not a major source (threshold: 100,000tpy CO_2e) for GHG's (see Table 2 shown below). The Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit.

The following table summarizes the actual emissions from Crisfield Energy Center based on its Annual Emission Certification Reports:

Table 2: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2020 tpy CO_2e	2021 tpy CO_2e	2022 tpy CO_2e
Carbon dioxide CO_2	1	284.76	1,187.05	2,100.55
Methane CH_4	0.065	0.001	0.004	0.0065
Nitrous Oxide N_2O	298	NR	NR	NR
Total GHG CO_2e		**1,328.478**	**1,187.05**	**2,100.56**

EMISSION UNIT IDENTIFICATION

Crisfield Energy Center has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Table 3: Emission Unit Identification

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
C1	9-0021	Four (4) General Motors – Electro-Motive Division, nominal 26 MMBtu/hour (2.5MW) internal combustion engines, fired with No. 2 fuel oil only	May 1968
C2	9-0022		
C3	9-0023		
C4	9-0024		

AN OVERVIEW OF THE PART 70 PERMIT

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record

keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

Emission Unit(s): C1, C2, C3 & C4: Internal Combustion Engines

C1, C2, C3 & C4 - Four (4) General Motors – Electro-Motive Division, nominal 26 MMBtu/hr. (2.5 MW) internal combustion engines, fired on No. 2 fuel oil only. [**9-0021 thru 9-0024**]. Catalytic converters were installed to control carbon monoxide emissions from the internal combustion engines.

The four (4) internal combustion engines are not subject to the requirements of NSPS Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The engines were manufactured and installed prior to April 1, 2006.

The four (4) internal combustion engines are subject to the requirements of NESHAP ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The facility is an area source of HAP and the engines were manufactured and installed prior to June 12, 2006.

Compliance Status

Full compliance inspection conducted on July 6, 2022. None of the units were operating at the time of inspection due to limited demand. At the time of the July 2022 inspection, the units operated about 50 hours total through June. The units operated 545 hours in 2021. Logbooks are kept for each engine detailing maintenance and combustion optimization activities conducted.

The annual Method 9 observations were conducted on December 20, 2023 on all four engines resulting visible emissions between 5% - 15 %.

Per the July 6, 2022 inspection report, the last delivery of Ultra Low Sulfur Diesel was in February 2022. A sample was taken after the delivery and it showed a sulfur content of 7.6 ppm.

Combustion analysis for each engine was not conducted in 2021 due to low hours of operation. The units operated between 35-51 days and between 99-153 hours.

The initial CO MACT stack testing was performed on the units October 12, 2013. Subsequent (every 3 years or 8760 hours) CO MACT stack testing was conducted on July 15 & 18, 2016 (C1 & C3) and July 28, 2016 (C2 & C4). The most recent testing was completed on October 11-12, 2022. The results of this test are as follows:

	CO (ppm)	% Reduction	Catalyst Temp (°F)	Catalyst ΔP	Limits
C1	1.7	97	706	7.9”	23 ppm CO or 70% reduction. Catalyst temp range: 450 – 1350 °F. Catalyst Δp: ±2” from stack test results.
C2	1.3	98	693	6.6”	
C3	1.4	97	690	6.6”	
C4	1.6	98	701	7.7”	

The results show that all units meet both the CO emission limit and the percent reduction limit.

The catalyst records are monitored continuously and records once per minute. These values are compiled on spreadsheet and the data reduced to the required 4-hr rolling averages. Maintenance records show that the units undergo regular maintenance and at least one annual inspection.

Applicable Standards and Limits

A. Control of Visible Emissions

COMAR 26.11.09.05E. - Stationary Internal Combustion Engine Powered Equipment.

"(2) Emissions During Idle Mode. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(3) Emissions During Operating Mode. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(4) Exceptions.

(a) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
(b) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
(i) Engines that are idled continuously when not in service: 30 minutes;
(ii) All other engines: 15 minutes.
(c) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics."

Compliance Demonstration
The Permittee shall demonstrate compliance with the opacity limitation by conducting an annual EPA Method 9 observation for 15 minutes per unit during non-idle mode. It will be acceptable to observe all four stacks in succession during the 15-second observation intervals, as allowed in Method 9. The Permittee shall keep a copy of the visible emissions readings and the certification of the visible emission reader(s) for at least five years on site and make available to the Department upon request. [**Reference: COMAR 26.11.03.06C**]

B. Control of Sulfur Oxides
COMAR 26.11.09.07 - Control of Sulfur Oxides From Fuel Burning Equipment.
"A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:
(**1**) In Areas I, II, V, and VI: (**c**) Distillate fuel oils, 0.3 percent."

§63.6604 - What fuel requirements must I meet if I own or operate an existing stationary CI RICE?
"(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. "

40 CFR 80.510 - What are the standards and marker requirements for NRLM diesel fuel and ECA marine fuel
"(b) Beginning June 1, 2010. Except as otherwise specifically provided in this subpart, all NR and LM diesel fuel is subject to the following per-gallon standards:
(1) Sulfur content.
(i) 15 ppm maximum for NR diesel fuel.

(ii) 500 ppm maximum for LM diesel fuel.
(2) Cetane index or aromatic content, as follows:
(i) A minimum cetane index of 40; or
(ii) A maximum aromatic content of 35 volume percent."

Compliance Demonstration
The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil. **[Reference: COMAR 26.11.03.06C]** The Permittee shall maintain records of fuel supplier's certification and shall make records available to the Department upon request. The Permittee shall report fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C].**

Rationale for Periodic Monitoring: This strategy to certify sulfur content in oil is similar to the requirements for boilers under New Source Performance Standards.

C. Control of Nitrogen Oxides
COMAR 26.11.09.08G. - Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent.
"(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
(a) Provide certification of the capacity factor of the equipment to the Department in writing;
(b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
(c) Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
(d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
(e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."
Note: COMAR 26.11.09.08B(5)(a) states that "for the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation".

Compliance Demonstration

For internal combustion engines that operate more than 500 hours during a calendar year, the Permittee shall perform a combustion analysis and optimize combustion. **[Reference: COMAR 26.11.03.06C]**.
The Permittee shall:
(1) Maintain the results of the combustion analysis at the site for at least 5 years and make these results available to the Department and the EPA upon request. [**Reference: COMAR 26.11.09.08G(1)(c) & COMAR 26.11.03.06C].**
(2) Retain records of training program attendance for each operator at the site for at least 5 years and make these records available to the Department upon request. **[Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C].**
(3) Retain records of hours of operation on a monthly basis for all internal combustion engines. At the end of each month, the Permittee shall calculate the total hours for the prior rolling 12-month period. **[Reference: COMAR 26.11.03.06C].**
The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. [**Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]**

Discussion: *Capacity factors*
The engines at Crisfield Energy Center always operate with a capacity factor less than 15% (2.85% in 2022 based on the annual gross generation). The hours of operation are managed by economic dispatch from the PJM interconnector grid. Crisfield Energy Center is not able to unilaterally decide to operate an engine and the cost to generate electricity by these engines also prohibits the units from running with any frequency except for times of peak demands or emergencies. These engines will never operate with a capacity factor greater than 15% unless there is a PJM grid emergency with possibility of brown outs or worse.

D. Operational Limit
The Permittee shall only burn No. 2 fuel oil unless the Permittee applies for and receives an approval or permit from the Department to burn an alternate fuel. [**Reference: COMAR 26.11.02.09A]**

Compliance Demonstration
The Permittee shall report the type of fuel used in the engines to the Department in the annual emission certification report due on April 1 of each year.
[Reference: COMAR 26.11.02.19C]

E. Control of Carbon Monoxide

National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines (RICE).

§63.6603 - What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you.

Table 2d to Subpart ZZZZ of Part 63 is revised to read as follows:
As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each	You must meet the following requirement, except during periods of startup	During periods of startup you must
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	Not applicable
	b. Reduce CO emissions by 70 percent or more.	Not applicable

Compliance Demonstration

The Permittee must conduct subsequent performance test every 8760 operating hours or 3 years whichever comes first**. [Reference: §63.6612, Table 4 & §63.6615, Table 3]**

The Permittee shall install a continuous parameter monitoring system (CPMS) to continuously monitor catalyst inlet temperature. The CPMS must collect data at least once every 15 minutes with data reduced to 4-hour rolling averages. The temperature sensor must have a minimum tolerance of 2.8°C (5°F) or 1% of the measurement range, whichever is larger. Conduct CPMS audit at least annually. Measure and record the pressure drop across the catalyst once per month. Prepare a site-specific monitoring plan. **[Reference: §63.6625, §63.6630 & §63.6640]**

The Permittee shall keep the following records for at least five (5) years:

- Records of the catalyst pressure drop and the catalyst inlet temperature during the initial performance test.

- Copies of submitted notifications, occurrence and duration of each malfunction, performance tests, required maintenance, actions taken during periods of malfunction to minimize air emissions, previous version of the CPMS performance evaluation plan, catalyst inlet temperature, 4-hour rolling averages of catalyst inlet temperature, pressure drops across catalyst.

[Reference: §63.6612, §63.6625 & §63.6655]

The Permittee shall submit the following:

- Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).
- Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[Reference: §63.6645]

- Submit a compliance report semiannually according to the requirements in §63.6650(b).

COMPLIANCE SCHEDULE

Crisfield Energy Center is currently in compliance with all applicable air quality regulations.

TITLE IV – ACID RAIN

Not Applicable.

TITLE VI – OZONE DEPLETING SUBSTANCES

Crisfield Energy Center shall comply with the standards for recycling and emission reductions pursuant to 40 CFR Part 82, Subpart F.

SECTION 112(r) – ACCIDENTAL RELEASE

Crisfield Energy Center is not subject to the requirements of Section 112(r).

PERMIT SHIELD

Crisfield Energy Center did not request a permit shield.

INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) Containers, reservoirs, or tanks used exclusively for:

(a) No. 1 Storage of lubricating oils;

(b) No. 1 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

STATE ONLY ENFORCEABLE REQUIREMENTS

This section of the permit contains state-only enforceable requirements. The requirements in this section will not be enforced by the U.S. Environmental Protection Agency. The requirements in this section are not subject to COMAR 26.11.03 10 - Public Petitions for Review to EPA Regarding Part 70 Permits.

Applicable Regulations:

(A) **COMAR 26.11.06.08** – Nuisance.
"An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be consumed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution."

(B) **COMAR 26.11.06.09** - Odors.
"A person may not cause or permit 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."

CALPINE MID-ATLANTIC GENERATION, LLC CRISFIELD ENERGY CENTER
4079 CRISFIELD HIGHWAY, ROUTE 413
CRISFIELD, MARYLAND 21817
DRAFT PART 70 OPERATING PERMIT NO. 24-039-0017

SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

Calpine Mid-Atlantic Generation, LLC operates the Crisfield Energy Center located at 4079 Crisfield Highway in Somerset County. The Primary SIC for this plant is 4911. The Crisfield Energy Center consists of four-(4) identical internal combustion engines, each nominally rated at 26 MMBtu/hr heat input (2.5 MW). Each unit is capable of operating on only No. 2 fuel oil.

2. FACILITY INVENTORY LIST

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
C1	9-0021	Four (4) General Motors – Electro-Motive Division, nominal 26 MMBtu/hour (2.5MW) internal combustion engines, fired with No. 2 fuel oil only	May 1968
C2	9-0022		
C3	9-0023		
C4	9-0024		

SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct.
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide

TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;

b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;

c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or

d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.

b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to

the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.

c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.

d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.

b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.

c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:

(1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any

new applicable requirements of the Clean Air Act that will apply if the change occurs;

(2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.

d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).

e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.

f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.

g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

a. A minor permit modification is a Part 70 permit revision that:

(1) Does not result in a violation of any applicable requirement of the Clean Air Act;

(2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:

(a) Adding new requirements,

(b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or

(c) Changing from one approved test method for a pollutant and source category to another;

(3) Does not require or modify a:

(a) Case-by-case determination of a federally enforceable emissions standard,

(b) Source specific determination for temporary sources of ambient impacts, or

(c) Visibility or increment analysis;

(4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:

(a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and

(b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act

(5) Is not a Title I modification; and

(6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.

b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

(1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;

(2) The proposed minor permit modification;

(3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:

(a) The proposed change meets the criteria for a minor permit modification, and

(b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;

(4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

(1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.

(2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):

(a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.

(b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.

e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

a. An application for an administrative permit amendment shall:

(1) Be in writing;

(2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and

(3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.

b. An administrative permit amendment:

(1) Is a correction of a typographical error;

(2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;

(3) requires more frequent monitoring or reporting by the Permittee;

(4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);

(5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);

(6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);

(7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or

(8) Incorporates any change to a term or condition specified as State-only enforceable if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.

c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.

d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.

e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:

(1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(2) The change is not subject to any requirements under Title IV of the Clean Air Act;

(3) The change is not a Title I modification; and

(4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.

b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.

c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.

d. The Permittee shall keep a record describing:

(1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and

(2) The emissions resulting from those changes.

e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.

f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.

g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.

h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:

(1) The change is not a Title I modification;

(2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;

(3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(4) The change does not violate an applicable requirement of the Clean Air Act;

(5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

(6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or

condition has been established to limit emissions allowable under this permit;

(7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and

(8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.

b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:

(1) A description of the proposed change;

(2) The date on which the change is proposed to be made;

(3) Any change in emissions resulting from the change, including the pollutants emitted;

(4) Any new applicable requirement of the Clean Air Act; and

(5) Any permit term or condition that would no longer apply.

c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.

d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.

e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.

f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.

h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.

b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.

c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;

f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;

g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.

h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required b y (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;

b. Have access to and make copies of records required by the permit;

c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and

d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the

Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

a. Enforcement action,

b. Permit revocation or revision,

c. Denial of the renewal of a Part 70 permit, or

d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;

c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;

d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or

e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any 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.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;

c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;

d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.

e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

a. 40 CFR 60, appendix A

b. 40 CFR 51, appendix M
c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

8. EMISSIONS CERTIFICATION REPORT

[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and [COMAR 26.11.02.19D]

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;

b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:

(1) Familiar with each source for which the certifications forms are submitted, and

(2) Responsible for the accuracy of the emissions information;

c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:

(1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;

(2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;

(3) Amounts, types and analyses of all fuels used;

(4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;

(5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

(a) Significant maintenance performed,
(b) Malfunctions and downtime, and
(c) Episodes of reduced efficiency of all equipment;

(6) Limitations on source operation or any work practice standards that significantly affect emissions; and

(7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

a. The compliance certification shall include:

(1) The identification of each term or condition of this permit which is the basis of the certification;

(2) The compliance status;

(3) Whether the compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of each source, currently and over the reporting period; and

(5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate

the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

a. The location as specified in this permit, and the date and time that samples and measurements are taken;

b. All pertinent operating conditions existing at the time that samples and measurements are taken;

c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;

d. The identity of the Permittee, individual, or other entity that performed the analysis;

e. The analytical techniques and methods used; and

f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

a. All calibration and maintenance records;

b. All original data collected from continuous monitoring instrumentation;

c. Records which support the annual emissions certification; and

d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repairs, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

d. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.155.

e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Table IV – 1	
1.0	**Emissions Unit Number(s): C1, C2, C3, & C4 - Internal Combustion Engines** **C1, C2, C3 & C4** - Four (4) General Motors – Electro-Motive Division, 26 MMBtu/hr (2.5 MW) internal combustion engines, fired on No. 2 fuel oil only. [**9-0021 thru 9-0024**] Catalytic converters were installed to control carbon monoxide emissions from the internal combustion engines.

Table IV – 1	
1.1	**Applicable Standards/Limits:** A. Control of Visible Emissions **COMAR 26.11.09.05E**. - Stationary Internal Combustion Engine Powered Equipment. "(2) Emissions During Idle Mode. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. (3) Emissions During Operating Mode. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. (4) Exceptions. (a) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. (b) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service: 30 minutes; (ii) All other engines: 15 minutes. (c) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics." B. Control of Sulfur Oxides **COMAR 26.11.09.07** - Control of Sulfur Oxides From Fuel Burning Equipment. "**A**. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (**1**) In Areas I, II, V, and VI: (**c**) Distillate fuel oils, 0.3 percent." **§63.6604 -** What fuel requirements must I meet if I own or operate an existing stationary CI RICE? “(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. “ **40 CFR 80.510** - What are the standards and marker requirements for NRLM diesel fuel and ECA marine fuel.

Table IV – 1	
	"(b) Beginning June 1, 2010. Except as otherwise specifically provided in this subpart, all NR and LM diesel fuel is subject to the following per-gallon standards: (1) Sulfur content. (i) 15 ppm maximum for NR diesel fuel. (ii) 500 ppm maximum for LM diesel fuel. (2) Cetane index or aromatic content, as follows: (i) A minimum cetane index of 40; or (ii) A maximum aromatic content of 35 volume percent." C. Control of Nitrogen Oxides **COMAR 26.11.09.08G**. - Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent. "(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall: (a) Provide certification of the capacity factor of the equipment to the Department in writing; (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually; (c) Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request; (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (e) Maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request." **Note: COMAR 26.11.09.08B(5)(a)** states that "for the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation". D. Operational Limit The Permittee shall only burn No. 2 fuel oil unless the Permittee applies for and receives an approval or permit from the Department to burn an alternate fuel. [**Reference: COMAR 26.11.02.09A]** E. Control of Carbon Monoxide

Table IV – 1

National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines (RICE).

§63.6603 - What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you.

Table 2d to Subpart ZZZZ of Part 63 is revised to read as follows:
As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each	You must meet the following requirement, except during periods of startup	During periods of startup, you must
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	Not applicable
	b. Reduce CO emissions by 70 percent or more.	Not applicable

1.2 **Testing Requirements:**

A. Control of Visible Emissions
See Monitoring Requirements

B. Control of Sulfur Oxides
See Monitoring Requirements

C. Control of Nitrogen Oxides
See Monitoring Requirements

D. Operational Limit
See Reporting Requirements.

Table IV – 1	
	E. Control of Carbon Monoxide The Permittee must conduct subsequent performance test every 8760 operating hours or 3 years whichever comes first**. [Reference: §63.6612, Table 4 & §63.6615, Table 3]**
1.3	**Monitoring Requirements:** A. Control of Visible Emissions The Permittee shall demonstrate compliance with the opacity limitation by conducting an annual EPA Method 9 observation for 15 minutes per unit during non-idle mode. It will be acceptable to observe all four stacks in succession during the 15-second observation intervals, as allowed in Method 9. [**Reference: COMAR 26.11.03.06C**] B. Control of Sulfur Oxides The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil. **[Reference: COMAR 26.11.03.06C]** C. Control of Nitrogen Oxides For internal combustion engines that operate more than 500 hours during a calendar year, the Permittee shall perform a combustion analysis and optimize combustion. **[Reference: COMAR 26.11.03.06C]**. D. Operational Limit. See Reporting Requirements. E. Control of Carbon Monoxide The Permittee shall install a continuous parameter monitoring system (CPMS) to continuously monitor catalyst inlet temperature. The CPMS must collect data at least once every 15 minutes with data reduced to 4-hour rolling averages. The temperature sensor must have a minimum tolerance of 2.8°C (5°F) or 1% of the measurement range, whichever is larger. Conduct CPMS audit at least annually. Measure and record the pressure drop across the catalyst once per month. Prepare a site-specific monitoring plan. **[Reference: §63.6625, §63.6630 & §63.6640]**
1.4	**Record Keeping Requirements:** **Note:** All records must be maintained for a period of at least 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Table IV – 1	
	A. Control of Visible Emissions The Permittee shall keep a copy of the visible emissions readings and the certification of the visible emission reader(s) for at least five years on site and make it available to the Department upon request. [**Reference: COMAR 26.11.03.06C**] B. Control of Sulfur Oxides The Permittee shall maintain records of fuel supplier's certification and shall make records available to the Department upon request. **[Reference: COMAR 26.11.09.07C].** C. Control of Nitrogen Oxides The Permittee shall: (1) Maintain the results of the combustion analysis at the site for at least 5 years and make these results available to the Department and the EPA upon request. [**Reference: COMAR 26.11.09.08G(1)(c) & COMAR 26.11.03.06C].** (2) Retain records of training program attendance for each operator at the site for at least 5 years and make these records available to the Department upon request. **[Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C].** (3) Retain records of hours of operation on a monthly basis for all internal combustion engines. At the end of each month, the Permittee shall calculate the total hours for the prior rolling 12-month period. **[Reference: COMAR 26.11.03.06C].** D. Operational Limit. See Reporting Requirements. E. Control of Carbon Monoxide The Permittee shall keep the following records for at least five (5) years: ➢ Records of the catalyst pressure drop and the catalyst inlet temperature during the initial performance test. ➢ Copies of submitted notifications, occurrence and duration of each malfunction, performance tests, required maintenance, actions taken during periods of malfunction to minimize air emissions, previous version of the CPMS performance evaluation plan, catalyst inlet temperature, 4-hour rolling averages of catalyst inlet temperature, pressure drops across catalyst. **[Reference: §63.6612, §63.6625 & §63.6655]**
1.5	**Reporting Requirements:**

Table IV – 1	
	A. Control of Visible Emissions See Record Keeping Requirements. B. Control of Sulfur Oxides The Permittee shall report fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C].** C. Control of Nitrogen Oxides The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. [**Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]** D. Operational Limit. The Permittee shall report the type of fuel used in the engines to the Department in the annual emission certification report due on April 1 of each year. **[Reference: COMAR 26.11.02.19C]** E. Control of Carbon Monoxide The Permittee shall submit the following: ➢ Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1). ➢ Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2). **[Reference: §63.6645]** ➢ Submit a compliance report semiannually according to the requirements in §63.6650(b).

SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) Containers, reservoirs, or tanks used exclusively for:

(a) No. 1 Storage of lubricating oils;

(b) No. 1 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

Applicable Regulations:

(A) **COMAR 26.11.06.08** – Nuisance.
"An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be consumed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution."

(B) **COMAR 26.11.06.09** - Odors.
"A person may not cause or permit 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."

RENEWAL APPLICATION FOR
CALPINE MID-ATLANTIC GENERATION, LLC'S
TITLE V AIR OPERATING PERMIT
CRISFIELD ENERGY CENTER
UNITS C1-C4

Submitted to:

Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Prepared by:

Calpine Mid-Atlantic Generation, LLC
6 Hillman Drive, Suite 201
Chadds Ford, PA 19317

OCTOBER 2023

TABLE OF CONTENTS

TABLE OF APPENDICES

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard ● Baltimore MD 21230
(410) 537-3000 ● 1-800-633-6101 ● http://www.mde.state.md.us

PART 70 PERMIT APPLICATION FOR RENEWAL

AIR AND RADIATION MANAGEMENT ADMINISTRATION

Facilities required to obtain a Part 70 permit under COMAR 26.11.03.01 must complete and return this form. Applications are incomplete unless all applicable information required by COMAR 26.11.03.03 and 26.11.03.13 is supplied. Failure to supply additional information required by the Department to enable it to act on the application may result in loss of the application shield and denial of this application.

Owner and Operator:

Name of Owner or Operator: Calpine Mid-Atlantic Generation, LLC		
Street Address: 6 Hillman Drive, Suite 201		
City: Chadds Ford	State: PA	Zip Code: 19317
Telephone Number (302) 761-7008		Fax Number (856) 293-8653

Facility Information:

Name of Facility: Crisfield Energy Center		
Street Address: 4079 Crisfield Hwy., Route 413		
City: Crisfield	State: MD	Zip Code: 21817
Plant Manager: Paul Ostberg	Telephone Number: (856) 293-8725	Fax Number:
24-Hour Emergency Telephone Number for Air Pollution Matters: (609) 437-3553 – Jim Blizzard (Cell)		

List, on a separate page, the names and telephone numbers of other facility owners and persons with titles.

Other Contacts for Crisfield Generating Station

Jan Stavinoha, Manager EHS
Calpine Corporation
6 Hillman Drive
Suite 201
Chadds Ford PA 19317
PH: (713) 570-4814
FX: (302) 295-5081

Sarah Deater, EHS Specialist
Calpine Corporation
4001 East Main Street
Millville NJ 08332
PH: (302) 761-7008

SECTION 1. CERTIFICATION STATEMENTS

1. Compliance Status with Applicable Enhanced Monitoring and Compliance Certification Requirements

The emissions units identified in this application are in compliance with applicable enhanced monitoring and compliance certification requirements.

2. Certification of Current Compliance with All Applicable Federally Enforceable Requirements

Except for the requirements identified in Section 7 of this application, for which compliance is not achieved, I hereby certify, based on information and belief formed after reasonable inquiry, that the facility is currently in compliance with all applicable federally enforceable requirements and agree that the facility will continue to comply with those requirements during the permit term.

You must complete a Section 7 form for each non-complying emissions unit.

3. Statement of Compliance with Respect to All New Applicable Requirements Effective During the Permit Term

I hereby state, based on information and belief formed after reasonable inquiry, that the facility agrees to meet, in a timely manner, all applicable federally enforceable requirements that become effective during the permit term, unless a more detailed schedule is expressly required by the applicable requirement.

4. Risk Management Plan Compliance

I hereby certify that, based on information and belief formed after reasonable inquiry, that a Risk Management Plan as required under §112(r) of the Clean Air Act:

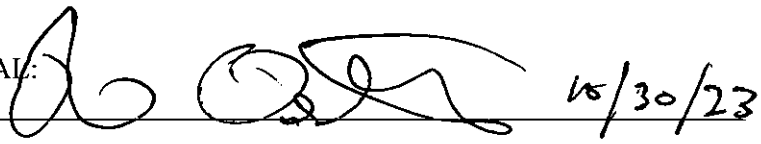
[ ] has been submitted;

[ ] will be submitted at a future date; or

[X] does not need to be submitted.

5. Statement of Truth, Accuracy, and Completeness

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

RESPONSIBLE OFFICIAL:
X  10/30/23

SIGNATURE DATE

Paul Ostberg
PRINTED NAME

General Manager
TITLE

SECTION 2. FACILITY DESCRIPTION SUMMARY

1. Major Activities of Facility

Briefly describe the major activities, including the applicable SIC Code(s) and end product(s).

Calpine Mid-Atlantic Generation, LLC. operates the Crisfield Energy Center located at 4079 Crisfield Highway in Somerset County. The Primary SIC code for this plant is 4911. The Crisfield Energy Center consists of four identical internal combustion engines, each nominally rated at 26 MMBtu/hr heat input. Each unit is capable of operation on only No. 2 fuel oil.

2. Facility-Wide Emissions

A. This facility is required to obtain a Part 70 Operating Permit because it is: Check appropriate box:

- ☐ Actual Major
- ☒ Potential Major
- ☐ Solid Waste Incineration Unit Requiring Permit Under § 129(e) of CAA

B. List the actual facility-wide emissions below: (From 2022 Emission Certification)

PM_{10} 0.63 tpy NO_X 40.98 tpy VOC 1.15 tpy SO_X 0.01 tpy CO 0.03 tpy
HAPs 0.01 tpy (See Appendix E for full calculations of HAPs)

3. Include With the Application:

Flow Diagrams showing all emissions units, emission points, and control devices; Emissions Certification Report (copy of the most recent submitted to the Department.)

See Appendices A, B, and C.

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: C1 1a. Date of installation (month/year): May 1968	2. MDE Registration No.:(if applicable) 9-0021

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):
Crisfield #1 (C1) is a General Motors – Electro-Motive Division, 26 MMBtu/hr internal combustion engine.
C1 runs on No. 2 fuel oil only.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: **NOT APPLICABLE**

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

	Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1.	No. 2 Fuel Oil	0.00086	46,612 gal.
2.			
3.			

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: X (note: before control device)

B. Actual Emissions: NOx 10.27 SOx 0.003 VOC 0.29 PM10 0.16 HAPs 0.00274

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: C2 1a. Date of installation (month/year): May 1968	2. MDE Registration No.:(if applicable) 9-0022

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):
Crisfield #2 (C2) is a General Motors – Electro-Motive Division, 26 MMBtu/hr internal combustion engine.

C2 runs on No. 2 fuel oil only.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: **NOT APPLICABLE**

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

	Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1.	No. 2 Fuel Oil	0.00086	46,327 gal.
2.			
3.			

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: X (note: before control device)

C. Actual Emissions: NOx 10.26 SOx 0.003 VOC 0.29 PM10 0.16 HAPs 0.00273

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: C3 1a. Date of installation (month/year): May 1968	2. MDE Registration No.:(if applicable) 9-0023

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):
Crisfield #3 (C3) is a General Motors – Electro-Motive Division, 26 MMBtu/hr internal combustion engine.
C3 runs on No. 2 fuel oil only.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: **NOT APPLICABLE**

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

	Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1.	No. 2 Fuel Oil	0.00086	47,679 gal.
2.			
3.			

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: X (note: before control device)

D. Actual Emissions: NOx 10.51 SOx 0.003 VOC 0.30 PM10 0.16 HAPs 0.00281

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: C4 1a. Date of installation (month/year): May 1968	2. MDE Registration No.:(if applicable) 9-0024

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):
Crisfield #4 (C4) is a General Motors – Electro-Motive Division, 26 MMBtu/hr internal combustion engine.
C4 runs on No. 2 fuel oil only.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: **NOT APPLICABLE**

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

	Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1.	No. 2 Fuel Oil	0.00086	45,274 gal.
2.			
3.			

6. Emissions in Tons:

A. Actual Major: _____ Potential Major: X (note: before control device)

E. Actual Emissions: NOx 9.98 SOx 0.003 VOC 0.28 PM10 0.15
HAPs 0.00267

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: C1, C2, C3, & C4 **General Reference:** Part 70 Op. Permit No. 24-039-0017 Section IV Table IV-1(1.1)(A)(2)-(3)

Briefly describe the Emission Standard/Limit or Operational Limitation:
Opacity is limited to 10% while operating at idle mode and 40% while operating during non-idle mode.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:_____
- ☒ Annual Compliance Certification: Due April 1. Last submitted 1/30/23.
- ☒ Semi-Annual Monitoring Report: Submitted 7/28/23

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: Conduct an annual EPA Method 9 observation for 15 minutes per unit during non-idle mode.

Testing: Reference Not Applicable Describe: Not Applicable

Record Keeping: Reference COMAR 26.11.03.06C Describe: Keep a copy of the visible emissions readings and the certification of the visible emission reader(s) for at least 5 years on site and make available to the Department upon request.

Reporting: Reference Not Applicable Describe: Not Applicable

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: __C1, C2, C3, & C4_____ **General Reference:** _Part 70 Op. Permit No. 24-039-0017 Section IV Table IV-1(1.1)(A)(4)

Briefly describe the Emission Standard/Limit or Operational Limitation:
Opacity standard does not apply for a period of 2 consecutive minutes after a period of idling 15 consecutive minutes for cleaning the exhaust system or during a cold or warm start-up for either 30 or 15 minutes (depending on whether the engines are idled when not in service), or during periods of maintenance, repair, or testing by qualified mechanics.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:_____
- ☒ Annual Compliance Certification:_ Due April 1. Last submitted 1/30/23.
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference __COMAR 26.11.03.06C_ Describe: Conduct an annual EPA Method 9 observation for 15 minutes per unit during non-idle mode. All four stacks in succession during the 15-second observation intervals is allowed._____

Testing: Reference __Not Applicable_ Describe: Not Applicable _____
_____
_____
_____

Record Keeping: Reference COMAR 26.11.03.06C Describe: Keep a copy of the visible emissions readings and certification of the visible emission reader(s) for at least 5 years on site and make available to the Department upon request.

Reporting: Reference __Not Applicable____ Describe: Not Applicable_____
_____
_____
_____

Frequency of submittal of the compliance demonstration: _Annually_____

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: __C1, C2, C3, & C4_____ **General Reference:** _Part 70 Op. Permit No. 24-039-0017 Section IV Table IV-1(1.1)(B)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Sulfur content in No. 2 distillate fuel must be < 0.3%.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:_____
- ☒ Annual Compliance Certification:_ Due April 1. Last submitted 1/30/23.
- ☒ Semi-Annual Monitoring Report: __Submitted 7/28/23_____

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: Obtain a fuel oil supplier certification indicating that the fuel oil complies with the 15 ppm sulfur content restriction.

Testing: Reference __ Not Applicable_ Describe: Not Applicable _____
_____
_____
_____

Record Keeping: Reference COMAR 26.11.09.07C Describe: Maintain records of fuel supplier's certification and make records available to the Department upon request.

Reporting: Reference COMAR 26.11.09.07C Describe: Report fuel supplier certification to the Department upon request.

Frequency of submittal of the compliance demonstration: _Annually_____

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: __C1, C2, C3, & C4_____ **General Reference:** _Part 70 Op. Permit No. 24-039-0017 Section IV Table IV-1(1.1)(B), §63.6604

Briefly describe the Emission Standard/Limit or Operational Limitation:

Non-road diesel fuel as of June 1, 2010 must meet the following standards:

S content ≤ 15 ppm, Cetane index ≥ 40, Aromatic Content ≤ 35 % by volume.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:_____
- ☒ Annual Compliance Certification:_ Due April 1. Last submitted 1/30/23.
- ☒ Semi-Annual Monitoring Report: __Submitted 7/28/23_____

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: Obtain a fuel oil supplier certification indicating that the fuel oil complies with the sulfur content restriction.

Testing: Reference __Not Applicable_ Describe: Not Applicable _____
_____
_____
_____

Record Keeping: Reference COMAR 26.11.09.07C Describe: Maintain records of fuel supplier's certification and make records available to the Department upon request.

Reporting: Reference COMAR 26.11.09.07C Describe: Report fuel supplier certification to the Department upon request.

Frequency of submittal of the compliance demonstration: _Annually_____

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: __C1, C2, C3, & C4_____ **General Reference:** _Part 70 Op. Permit No. 24-039-0017 Section IV Table IV-1(1.1)(C)

Briefly describe the Emission Standard/Limit or Operational Limitation:
_Owner must provide certification in writing of the capacity factor at 15% or less to the Department. If the units operate more than 500 hours in a calendar year, a combustion analysis and optimization must be performed at least once annually. Each operator must attend operator training programs at least once every 3 years on combustion optimization that are sponsored by the Department, EPA, or equipment vendors.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:_____
- ☒ Annual Compliance Certification:_ Due April 1. Last submitted 1/30/23.
- ☒ Semi-Annual Monitoring Report: __Submitted 7/28/23_____

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: For internal combustion engines operating more than 500 hours during a calendar year, a combustion analysis and optimization must be performed._____

Testing: Reference __Not Applicable_ Describe: Not Applicable _____
_____
_____
_____

Record Keeping: Reference COMAR 26.11.09.08G(1)(c), COMAR 26.11.09.08G(1)(e), and COMAR 26.11.03.06C Describe: Maintain results of the combustion analysis and retain records of training program attendance for each operator. These records must be kept for at least 5 years and be furnished to the Department and EPA (for combustion analysis) upon request. Retain records of hours of operation on a monthly basis for all IC engines. Calculate the total hours for the prior rolling 12-month period at the end of each month.

Reporting: Reference __COMAR 26.11.09.08G(1)(a) and COMAR 26.11.03.06C Describe: Provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report.

Frequency of submittal of the compliance demonstration: _Annually_____

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: C1, C2, C3, & C4 **General Reference:** Part 70 Op. Permit No. 24-039-0017 Section IV Table IV-1(1.1)(D)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Units C1, C2, C3, and C4 are restricted to the use of No. 2 distillate fuel only.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:_____
- ☒ Annual Compliance Certification: Due April 1. Last submitted 1/30/23.
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference Not Applicable Describe: Not Applicable

Testing: Reference Not Applicable Describe: Not Applicable

Record Keeping: Reference Not Applicable Describe: Not Applicable

Reporting: Reference COMAR 26.11.02.19C Describe: Report the type of fuel used in the engines to the Department in the annual emission certification report due on April 1 of each year.

Frequency of submittal of the compliance demonstration: Annually

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: __C1, C2, C3, & C4_____ **General Reference:** _ Permit No. 039-0017-9-2001 Section IV Table IV-1(1.1)(E)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Units C1, C2, C3, and C4 must limit concentration of CO to 23 ppmvd @ 15% O_2 or reduce CO emissions by 70% or more.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:_____
- ☒ Annual Compliance Certification:_ Due April 1. Last submitted 1/30/23.
- ☒ Semi-Annual Monitoring Report: __ Submitted 7/28/23_____

Methods used to demonstrate compliance:

Monitoring: Reference §63.6630, §63.6625, §63.6640 Describe: Install a CPMS to continuously monitor catalyst inlet temperature. The CPMS must collect data at least once every 15 minutes with data reduced to 4-hour rolling averages. The temperature sensor must have a minimum tolerance of 2.8° C (5°F) or 1% of the measurement range, whichever is larger. Conduct CPMS audits at least annually. Measure the pressure drop across the catalyst once per month. Prepare a site-specific monitoring plan.

Testing: Reference __ §63.6612, Table 4 and §63.6615, Table 3_ Describe: Conduct subsequent performance tests every 8,760 operating hours or 3 years, whichever comes first.

Record Keeping: Reference __ §63.6612, §63.6625, §63.6655_ Describe: Record the catalyst pressure drop once per month. Maintain records of the catalyst pressure drop and inlet temperature from the initial performance test. Keep copies of submitted notifications, occurrence and duration of each malfunction, performance tests, required maintenance, actions taken during periods of malfunction to minimize air emissions, previous version of the CPMS performance evaluation plan, catalyst inlet temperature, 4-hour rolling averages of catalyst inlet temperature, pressure drops across catalyst. Records will be kept for at least 5 years.

Reporting: Reference __§63.6645 Describe: Submit a Notification of Intent at least 60 days prior to a performance test. Submit a Notification of Compliance status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2). Submit a compliance report semiannually according to requirements in §63.6650(b).

Frequency of submittal of the compliance demonstration: _Semi-annually_

SECTION 3C. OBSOLETE, EXTRANEOUS, OR INSIGNIFICANT PERMIT CONDITIONS

List permit to construct conditions which should be considered to be obsolete, extraneous, or environmentally insignificant.

Emissions Unit No.: NOT APPLICABLE **Permit to Construct No.** NOT APPLICABLE

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion
NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: NOT APPLICABLE

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

NOT APPLICABLE

SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN ALTERNATE OPERATING SCENARIO

Scenario No.: __NOT APPLICABLE_

Emissions Unit No.: NOT APPLICABLE **General Reference:** NOT APPLICABLE

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

__NOT APPLICABLE_____

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference NOT APPLICABLE Describe: NOT APPLICABLE_____

Testing: Reference NOT APPLICABLE Describe: NOT APPLICABLE_____

Record Keeping: Reference NOT APPLICABLE Describe: _NOT APPLICABLE_____

Reporting: Reference NOT APPLICABLE Describe: __NOT APPLICABLE _____

Frequency of submittal of the compliance demonstration: _NOT APPLICABLE_____

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. :	2. Emissions Point No.:
C1	C1

3. Type and Description of Control Equipment:
Catalytic Converter for compliance with NESHAP Subpart ZZZZ

4. Pollutants Controlled:	Control Efficiency:
CO	70%

5. Capture Efficiency:

NOT APPLICABLE

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. :	2. Emissions Point No.:
C2	C2

3. Type and Description of Control Equipment:
Catalytic Converter for compliance with NESHAP Subpart ZZZZ

4. Pollutants Controlled:	Control Efficiency:
CO	70%

5. Capture Efficiency:

NOT APPLICABLE

1. Associated Emissions Units No. :	2. Emissions Point No.:
C3	C3

3. Type and Description of Control Equipment:
Catalytic Converter for compliance with NESHAP Subpart ZZZZ

4. Pollutants Controlled:	Control Efficiency:
CO	70%

5. Capture Efficiency:

NOT APPLICABLE

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. :	2. Emissions Point No.:
C4	C4

3. Type and Description of Control Equipment:
Catalytic Converter for compliance with NESHAP Subpart ZZZZ

4. Pollutants Controlled:	Control Efficiency:
CO	70%

5. Capture Efficiency:

NOT APPLICABLE

SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations.

Pollutant	NO_x	SO_2	PM_{10}	VOC	CO	HAPs
CAS Number	N/A	N/A	N/A	N/A	N/A	N/A
Emissions Unit # **C1**	364	0.17	6.5	10.2	29	0.17
Emissions Unit # **C2**	364	0.17	6.5	10.2	29	0.17
Emissions Unit # **C3**	364	0.17	6.5	10.2	29	0.17
Emissions Unit # **C4**	364	0.17	6.5	10.2	29	0.17
Emissions Unit #						
Emissions Unit #						
Emissions Unit #						
Emissions Unit #						
Emissions Unit #						
Emissions Unit #						
Emissions Unit #						
Emissions Unit #						
Emissions Unit #						
Emissions Unit #						
Emissions Unit #						
Fugitive Emissions	0	0	0	0	0	0
Total	1,456	0.68	26	41	116	0.68

SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement:

NOT APPLICABLE

2. Brief Description:

_____

_____

_____

3. Reasons for Proposed Exemption or Justification of Non-applicability:

_____

_____

_____

_____

_____

SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS

1. Emissions Unit #	Anticipated Compliance Date
NOT APPLICABLE	
Applicable Federally Enforceable Requirement being Violated: NOT APPLICABLE	

2. Description of Plan to Achieve Compliance:

_____

_____

_____

_____

_____

_____

Certified Progress Reports for sources in noncompliance shall be submitted at least quarterly to the Department.

This Page Intentionally Left Blank.

STATE-ONLY ENFORCEABLE REQUIREMENTS

Facility Information:

Name of Facility: Crisfield Energy Center	County Somerset
Premises Number: SIC Code 4911	
Street Address: 4079 Crisfield Highway, Route 413 Crisfield, MD 21817	
24-hour Emergency Telephone Number for Air Pollution Matters: (609) 437-3553 – Jim Blizzard (Cell)	
Type of Equipment (List Significant Units): C1, C2, C3, & C4	
Calpine Mid-Atlantic Generation, LLC. operates the Crisfield Emergy Center located at 4079 Crisfield	
Highway in Somerset County. The Primary SIC code for this plant is 4911. The Crisfield Energy Center	
consists of four identical internal combustion engines, each nominally rated at 26 MMBtu/hr heat input. Each	
unit is capable of operation on only No. 2 fuel oil.	

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: 9-0021, 9-0022, 9-0023, 9-0024

Emissions Unit No.: C1, C2, C3, & C4 **General Reference:** Part 70 Oper. Permit No. 24-039-00017

Briefly describe the requirement and the emissions limit (if applicable):

COMAR 26.11.06.08: An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created.

Methods used to demonstrate compliance:

Best operations and maintenance practices

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: 9-0021, 9-0022, 9-0023, 9-0024

Emissions Unit No.: C1, C2, C3, & C4 **General Reference:** Part 70 Oper. Permit No. 24-039-00017

Briefly describe the requirement and the emissions limit (if applicable):

COMAR 26.11.06.09: A person may not cause or permit the discharge in to the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.

Methods used to demonstrate compliance:

Best operations and maintenance practices

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION INSIGNIFICANT ACTIVITIES LIST

III. Check-off List of Emissions Units and Activities Exempt from the Part 70 Permit Application

Insignificant Activities

Place a check mark beside each type of emissions unit or activity that is located at the facility. Where noted, please indicate the number of that type of emissions unit or activity located at the facility.

(1) No. ___ Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

(2) No. ___ Fuel-burning equipment using solid fuel and having a heat input of less than 350,000 Btu (0.37 gigajoule) per hour;

(3) No. ___ Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts)of power output

(4) ___ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(5) ___ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(6) No. ___ Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

(7) ___ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;

(8) ___ Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;

(9) ___ Confection cookers where the products are edible and intended for human consumption;

(10) ___ Die casting machines;

(11) ___ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;

(12) ___ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(13) ___ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

(14) ___ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;

(15) ___ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;

✔ (16) Containers, reservoirs, or tanks used exclusively for:

(a) ___ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;

(b) ___ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;

(c) ___ Storage of butane, propane, or liquefied petroleum, or natural gas;

(d) No. ___ Storage of lubricating oils:

(e) No. ___ Unheated storage of VOC with an initial boiling point of 300 °F (

(f) No. 1 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,

(g) No. ___ Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;

(h) No. ___ The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(17) ___ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;

(18) Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride,

or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:

(a) ___ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;

(b) ___ Magnesium or any alloy containing over 50 percent magnesium;

(c) ___ Lead or any alloy containing over 50 percent lead;

(d) ___ Tin or any alloy containing over 50 percent tin;

(e) ___ Zinc or any alloy containing over 50 percent zinc;

(f) ___ Copper;

(g) ____ Precious metals;

(19) ____ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;

(20) ___ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;

(21) ____ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;

(22) ___ Potable water treatment equipment, not including air stripping equipment;

(23) ___ Firing and testing of military weapons and explosives;

(24) ___ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;

(25) ____ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

(26) ____ Grain, metal, or mineral extrusion presses;

(27) ____ Breweries with an annual beer production less than 60,000 barrels;

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION INSIGNIFICANT ACTIVITIES LIST

(28)___ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

(29)____ Laboratory fume hoods and vents;

(30) No. ___ Sheet-fed letter or lithographic printing press(es) with a cylinder width of less than 18 inches;

For the following, attach additional pages as necessary:

(31) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. ___ _____

No. ___ _____

No. ___ _____

No. ___ _____

No. ___ _____

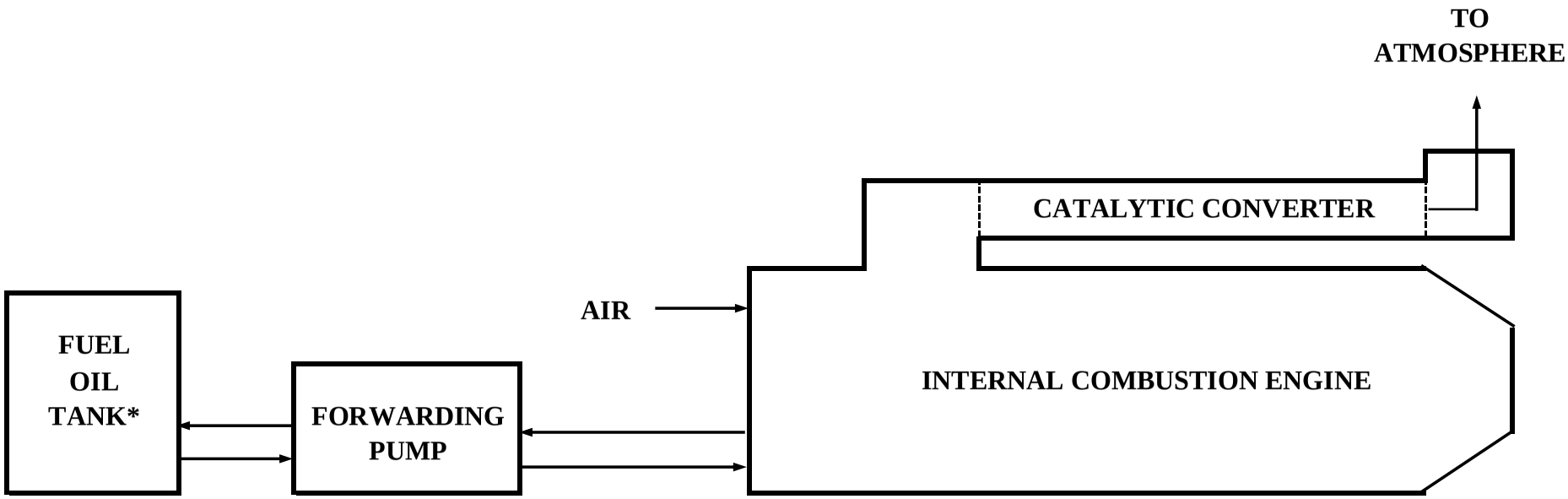
(32) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. ___ _____

No. ___ _____

No. ___ _____

APPENDIX A - CRISFIELD ENERGY CENTER FLOW DIAGRAM



*** A single fuel oil tank serves Units 1-4.**

PROCESS SCHEMATIC
UNITS 1, 2, 3 AND 4
CALPINE MID-ATLANTIC GENERATION
CRISFIELD ENERGY CENTER
CRISFIELD, MARYLAND

APPENDIX B – 2022 EMISSIONS CERTIFICATION REPORT

CERTIFICATION BY RESPONSIBLE OFFICIAL

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Paul Ostberg, General Manager
Name and Title (Print/Type)

Signature

3/30/23
Date

EQUIPMENT INVENTORY
EMISSIONS CERTIFICATION REPORT

24-039-00017 Facility ID

Crisfield Energy Center Facility Name

Equipment Inventory

Equipment Name	Registration No.	S / F	Fuel			Throughput		Actual Operating Schedule			Estimation Methods
			Type	Amount	Units	Amount	Units	hrs/day	days/wk	days/yr	
Diesel Generator (Unit 1)	9-0021	S	No. 2	46,611.79	gal	46,611.79	gal	4	2	56	C3
Diesel Generator (Unit 2)	9-0022	S	No. 2	46,326.64	gal	46,326.64	gal	4	3	56	C3
Diesel Generator (Unit 3)	9-0023	S	No. 2	47,679.41	gal	47,679.41	gal	4	2	57	C3
Diesel Generator (Unit 4)	9-0024	S	No. 2	45,274.16	gal	45,274.16	gal	4	2	56	C3
Total Usage				185,892.00	gal	185,892.00	gal				

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard, Suite 715 • Baltimore, Maryland 21230-1720
(410) 537-3000 • 1-800-633-6101 • http://www.mde.state.md.us
Air and Radiation Management Administration
Air Quality Compliance Program
(410) 537-3220

FORM 1:

GENERAL FACILITY INFORMATION
EMISSION CERTIFICATION REPORT

Calendar Year: 2022

A. FACILITY IDENTIFICATION				**Do Not Write in This Space**
Facility Name: **Calpine Mid-Atlantic Generation, LLC - Crisfield Energy Center**				Date Received Regional
Address: **4079 Crisfield Highway (Route 413)**				Date Received State
City **Crisfield** County **Somerset** Zip Code **21817**				AIRS Code
B. Briefly describe the major function of the facility				FINDS Code
Electric Generation				SIC Code
				Facility Number:
				TEMPO ID:
C. SEASONAL PRODUCTION (% if applicable)				Reviewed by:
Winter *(Dec-Feb)*	Spring *(Mar-May)*	Summer *(Jun-Aug)*	Fall *(Sep-Nov)*	
Unit 1 - 45.7	*Unit 1 - 0.5*	*Unit 1 - 24.9*	*Unit 1 - 28.9*	
Unit 2 - 46.5	*Unit 2 - 0.5*	*Unit 2 - 25.8*	*Unit 2 - 27.2*	
Unit 3 - 46.9	*Unit 3 - 0.5*	*Unit 3 - 24.3*	*Unit 3 - 28.3*	
Unit 4 - 47.9	*Unit 4 - 0.5*	*Unit 4 - 20.6*	*Unit 4 - 31.0*	Name Date

D. Explain any increase or decrease of emissions from previous calendar year for each registration at this facility.

Total facility operating hours were approximately 72% higher than that of 2021; resulting in similar increase of the emissions.

E. CONTROL DEVICE INFORMATION (for NOx and VOC sources only)

Control Device	Capture Efficiency	Removal Efficiency
NA	**NA**	**NA**

I am familiar with the facility and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of **12** pages (including attachments), and certify that the information is correct to the best of my knowledge.

Paul Ostberg	General Manager	3/30/23
Name (Print/Type)	Title	Date
Signature		**(856) 293-8725** Telephone

1/9/08

CRITERIA POLLUTANTS
EMISSIONS CERTIFICATION REPORT

24-039-00017 Facility ID
Crisfield Energy Center Facility Name
Criteria Pollutants

Equipment Name	Registration No.	S / F	Fuel Type	VOC		(TOSD)	NOx		(TOSD)	SOx		CO		Lead		Estimation Methods
				tons/yr	lbs/day	lbs/day	tons/yr	lbs/day	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	
Diesel Generator (Unit 1)	9-0021	S	No. 2	0.29	10.32	10.32	10.27	366.95	366.95	0.003	0.10	0.01	0.31	NA	NA	C3, C1 (CO)
Diesel Generator (Unit 2)	9-0022	S	No. 2	0.29	10.26	10.26	10.21	364.70	364.70	0.003	0.10	0.01	0.35	NA	NA	C3, C1 (CO)
Diesel Generator (Unit 3)	9-0023	S	No. 2	0.30	10.37	10.37	10.51	368.77	368.77	0.003	0.10	0.01	0.20	NA	NA	C3, C1 (CO)
Diesel Generator (Unit 4)	9-0024	S	No. 2	0.28	10.02	10.02	9.98	356.42	356.42	0.003	0.10	0.01	0.23	NA	NA	C3, C1 (CO)
Total Emissions				1.15	40.97	40.97	40.98	1,456.85	1,456.85	0.01	0.40	0.03	1.09	NA	NA	

PARTICULATE MATTER
EMISSIONS CERTIFICATION REPORT

24-039-00017 Facility ID

Crisfield Energy Center Facility Name

Particulate Matter (PM) Pollutant

Equipment Name	Registration No.	S / F	Fuel Type	PM - Filterable		PM 10 - Filterable		PM 2.5 - Filterable		PM - Condensable		Estimation Methods
				tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	
Diesel Generator (Unit 1)	9-0021	S	No. 2	0.32	11.40	0.16	5.66	0.15	5.41	0.02	0.87	C3
Diesel Generator (Unit 2)	9-0022	S	No. 2	0.32	11.33	0.16	5.63	0.15	5.38	0.02	0.87	C3
Diesel Generator (Unit 2)	9-0022	S	No. 2	0.33	11.46	0.16	5.69	0.15	5.44	0.03	0.88	C3
Diesel Generator (Unit 2)	9-0022	S	No. 2	0.31	11.08	0.15	5.50	0.15	5.26	0.02	0.85	C3
Total Emissions				1.27	45.27	0.63	22.47	0.60	21.48	0.10	3.47	

CALENDAR YEAR: 2022

REPORTABLE TOXIC AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

24-039-00017 Facility ID

Crisfield Energy Center Facility Name

Reportable Toxics Pollutant

Equipment Name	Registration No.	S / F	Fuel Type	Pollutant	CASRN	Actual Emissions			Control Device	Efficiency (%)	Estimation Method
						tons/yr	lbs/day	lbs/hr			
Diesel Generator (Unit 1)	9-0021	S	No. 2	Benzene	71-43-2	2.49E-03	8.90E-02	2.12E-02	NA	NA	C3
Diesel Generator (Unit 1)	9-0021	S	No. 2	Formaldehyde	50-00-0	2.53E-04	9.05E-03	2.15E-03	NA	NA	C3
Diesel Generator (Unit 2)	9-0022	S	No. 2	Benzene	71-43-2	2.48E-03	8.84E-02	2.12E-02	NA	NA	C3
Diesel Generator (Unit 2)	9-0022	S	No. 2	Formaldehyde	50-00-0	2.52E-04	8.99E-03	2.15E-03	NA	NA	C3
Diesel Generator (Unit 3)	9-0023	S	No. 2	Benzene	71-43-2	2.55E-03	8.94E-02	2.12E-02	NA	NA	C3
Diesel Generator (Unit 3)	9-0023	S	No. 2	Formaldehyde	50-00-0	2.59E-04	9.09E-03	2.15E-03	NA	NA	C3
Diesel Generator (Unit 4)	9-0024	S	No. 2	Benzene	71-43-2	2.42E-03	8.64E-02	2.11E-02	NA	NA	C3
Diesel Generator (Unit 4)	9-0024	S	No. 2	Formaldehyde	50-00-0	2.46E-04	8.79E-03	2.15E-03	NA	NA	C3

Pollutant Totals		tons/yr	lbs/day	lbs/hr
Benzene	71-43-2	0.0	0.35	0.08
Formaldehyde	50-00-0	0.00	0.04	0.009
Total Toxics	-	0.01	0.39	0.09

FORM 5

BILLABLE TOXIC AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

24-039-00017 Facility ID

Crisfield Energy Center Facility Name

Billable TAPs Pollutant

Chemical Name	CAS Number	Actual Emissions			Estimation Method
		tons/yr	lbs/day	lbs/hr	
carbon disulfide	75-15-0				
carbonyl sulfide	463-58-1				
chlorine	7782-50-5				
cyanide compounds	57-12-5				
hydrochloric acid	7647-01-0				
hydrogen fluoride	7664-39-3				
methyl chloroform	71-55-6				
methylene chloride	75-09-2				
perchloroethylene	127-18-4				
phosphine	7803-51-2				
titanium tetrachloride	7550-45-0				

NA

*if any amount of emissions are reported for these compounds, please also include the emissions broken down by equipment number in Form 4

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above.
See Attachment 1 for minimum reporting values.
This form to include only the eleven chemicals identified.

GREENHOUSE GASES
EMISSIONS CERTIFICATION REPORT

24-039-00017 Facility ID
Crisfield Energy Center Facility Name
Greenhouse Gases Pollutant

Equipment Name	Registration No.	S / F	Fuel Type	CO_2		CH_4		N_2O		HFCs		PFCs		SF_6		Estimation Methods
				tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	
Diesel Generator (Unit 1)	9-0021	S	No. 2	526.71	18,811.19	0.03	0.92	NA	NA	NA	NA	NA	NA	NA	NA	C3
Diesel Generator (Unit 2)	9-0022	S	No. 2	523.49	18,696.11	0.03	0.92	NA	NA	NA	NA	NA	NA	NA	NA	C3
Diesel Generator (Unit 3)	9-0023	S	No. 2	538.78	18,904.47	0.03	0.93	NA	NA	NA	NA	NA	NA	NA	NA	C3
Diesel Generator (Unit 4)	9-0024	S	No. 2	511.60	18,271.36	0.03	0.90	NA	NA	NA	NA	NA	NA	NA	NA	C3
Total Emissions				2,100.58	74,683.12	0.10	3.67	NA	NA	NA	NA	NA	NA	NA	NA	

Operating Hour and Fuel Usage Information														
Month	**Unit 1**			**Unit 2**			**Unit 3**			**Unit 4**			**Total #2**	
	hrs	**Days**	**#2 Oil**	**hrs**	**Days**	**#2 Oil**	**hrs**	**Days**	**#2 Oil**	**hrs**	**Days**	**#2 Oil**	**Oil Used**	Max hrs.
			gal			**gal**			**gal**			**gal**	**Month**	Ops/mnth
Jan	29.7	6.0	5,716	29.7	6.0	5,716	30.5	7.0	5,869	29.7	6.0	5,716	23016.0	30.5
Feb	7.0	2.0	1,412	7.0	2.0	1,412	7.0	2.0	1,412	4.4	2.0	888	5124.0	7.0
Mar	1.2	1.0	273	1.2	1.0	273	1.2	1.0	273	1.2	1.0	273	1092.0	1.2
Apr	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
May	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Jun	6.5	2.0	1,325	6.6	2.0	1,345	6.6	2.0	1,345	4.2	2.0	856	4872.0	6.6
Jul	15.8	7.0	3,178	17.8	7.0	3,580	16.2	7.0	3,258	11.8	7.0	2,373	12390.0	17.8
Aug	36.4	10.0	7,600	36.1	10.0	7,537	35.7	10.0	7,454	31.2	10.0	6,514	29106.0	36.4
Sep	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Oct	43.0	11.0	8,708	39.3	11.0	7,959	43.0	11.0	8,708	45.8	11.0	9,275	34650.0	45.8
Nov	25.1	10.0	4,255	24.3	10.0	4,119	25.1	10.0	4,255	25.1	10.0	4,255	16884.0	25.1
Dec	70.8	7.0	14,145	72.0	7.0	14,385	75.6	7.0	15,104	75.7	7.0	15,124	58758.0	75.7
Total Hrs.	**235.5**	**56.0**		**234.0**	**56.0**		**240.9**	**57.0**		**229.1**	**56.0**			240.9
# Weeks		**24.0**			**17**			**24**			**24**			
Total Fuel			**46,612**			**46,327**			**47,679**			**45,274**	**185892.0**	
Grnd Ttl Fuel													**185892.0**	
Grnd Ttl Hrs.													**939.5**	

Seasonal Throughput	Winter (Dec-Feb)	Spring (Mar-May)	Summer (June-Aug)	Fall (Sept-Nov)		
Unit 1	45.6%	0.5%	24.9%	28.9%	100%	4.205357
Unit 2	46.5%	0.5%	25.9%	27.2%	100%	
Unit 3	46.9%	0.5%	24.3%	28.3%	100%	
Unit 4	47.9%	0.5%	20.6%	30.9%	100%	

Operating Schedule (Actual)

	Unit 1	**Unit 2**	**Unit 3**	**Unit 4**
hrs/day	4.2	4.2	4.2	4.1
Days/week	2.3	3.3	2.4	2.3
week/yr	24.0	17.0	24.0	24.0
Days/yr	56.0	56.0	57.0	56.0
%	25.1	24.9	25.6	24.4

SCC # 2-02-004-01

Fuel Usage	Crisfield #1 235.5 hrs/yr			Crisfield #2 234 hrs/yr			Crisfield #3 240.9 hrs/yr			Crisfield #4 229.1 hrs/yr		
	#2 Oil gal	Heat Val BTU/gal	Total MMBTU	#2 Oil gal	Heat Val BTU/gal	Total MMBTU	#2 Oil gal	Heat Val BTU/gal	Total MMBTU	#2 Oil gal	Heat Val BTU/gal	Total MMBTU
Jan	5,716	136,544	780	5,716	136,544	780	5,869	136,544	801	5,716	136,544	780
Feb	1,412	137,870	195	1,412	137,870	195	1,412	137,870	195	888	137,870	122
Mar	273	137,870	38	273	137,870	38	273	137,870	38	273	137,870	38
April	0	137,870	0	0	137,870	0	0	137,870	0	0	137,870	0
May	0	137,870	0	0	137,870	0	0	137,870	0	0	137,870	0
June	1,325	137,870	183	1,345	137,870	185	1,345	137,870	185	856	137,870	118
July	3,178	137,870	438	3,580	137,870	494	3,258	137,870	449	2,373	137,870	327
Aug	7,600	137,870	1,048	7,537	137,870	1,039	7,454	137,870	1,028	6,514	137,870	898
Sept	0	137,870	0	0	137,870	0	0	137,870	0	0	137,870	0
Oct	8,708	137,870	1,201	7,959	137,870	1,097	8,708	137,870	1,201	9,275	137,870	1,279
Nov	4,255	138,024	587	4,119	138,024	569	4,255	138,024	587	4,255	138,024	587
Dec	14,145	138,024	1,952	14,385	138,024	1,985	15,104	138,024	2,085	15,124	138,024	2,087
Total	**46,612**		**6,422**	**46,327**		**6,382**	**47,679**		**6,569**	**45,274**		**6,237**

Fuel Sulfur Content

0.00086 %S

Typical Ozone Season Day Calculation

TOSD (lb/day) = MMBTU/yr / days/yr x EF

MMBTU = Total MMBTU for emission unit during the year
EF = Emission factor in lbs/MMBTU

	Unit #1	Unit #2	Unit #3	Unit #4
NO_X	366.95	364.70	368.77	356.42
VOC	10.32	10.26	10.37	10.02

2022

TPY

			Criteria Pollutants				Primary PM			Filterable PM				GHGs		
Unit	MMBTU	10^3 Gals	VOC	NOx	CO	SO2	Pri-PM	Pri-PM10	Pri-PM2.5	Fil-PM	Fil-PM10	Fil-PM2.5	Cond-PM	N2O	CH4	CO2
E.F. (lb/MMBtu) or (lb/Mgal)			0.09	3.2	See Stack Test	1.01S	9.55E+00	7.85E+00	7.55E+00	1.37E+01	6.80E+00	6.50E+00	1.05E+00		1.11E+00	2.26E+04
#1	6422	46.61	0.29	10.27	0.009	0.0028	0.22	0.18	0.18	0.32	0.16	0.15	0.024	NF	0.026	527
#2	6382	46.33	0.29	10.21	0.010	0.0028	0.22	0.18	0.17	0.32	0.16	0.15	0.024	NF	0.026	523
#3	6569	47.68	0.30	10.51	0.006	0.0029	0.23	0.19	0.18	0.33	0.16	0.15	0.025	NF	0.026	539
#4	6237	45.27	0.28	9.98	0.006	0.0027	0.22	0.18	0.17	0.31	0.15	0.15	0.024	NF	0.025	512
			1.15	**40.98**	**0.031**	**0.0111**	**0.89**	**0.73**	**0.70**	**1.27**	**0.63**	**0.60**	**0.098**		**0.10**	**2100.6**

lbs/Day

Unit	VOC	NOX	CO	SO2	Pri-PM	Pri-PM10	Pri-PM2.5	Fil-PM	Fil-PM10	Fil-PM2.5	Cond-PM		CH4	CO2
#1	10.32	366.95	0.31	0.10	7.95	6.53	6.28	11.40	5.66	5.41	0.87	NF	0.92	18811
#2	10.26	364.70	0.35	0.10	7.90	6.49	6.25	11.33	5.63	5.38	0.87	NF	0.92	18696
#3	10.37	368.77	0.20	0.10	7.99	6.57	6.32	11.46	5.69	5.44	0.88	NF	0.93	18904
#4	10.02	356.42	0.23	0.10	7.72	6.35	6.10	11.08	5.50	5.26	0.85	NF	0.90	18271
	40.97	**1456.85**	**1.09**	**0.40**	**31.56**	**25.94**	**24.95**	**45.27**	**22.47**	**21.48**	**3.47**		**3.67**	**74683**

Typical Ozone Season Day (Lbs/Day)

Unit	MMBtu/TOSD	10^3 gal/day	VOC	NOx	CO	SO2	Pri-PM	Pri-PM10	Pri-PM2.5	Fil-PM	Fil-PM10	Fil-PM2.5	Cond-PM
#1	114.67	0.83	10.32	366.95	0.31	0.10	7.95	6.53	6.28	11.40	5.66	5.41	0.87
#2	113.97	0.83	10.26	364.70	0.35	0.10	7.90	0.15	0.15	11.33	5.63	5.38	0.87
#3	115.24	0.84	10.37	368.77	0.20	0.10	7.99	0.15	0.15	11.46	5.69	5.44	0.88
#4	111.38	0.81	10.02	356.42	0.23	0.10	7.72	0.16	0.15	11.08	5.50	5.26	0.85
Total	455.3		40.97	1456.85	1.09	0.40							

LBS/HR

CH4	CO2
0.2197	4473.1483
0.2198	4474.2825
0.2197	4473.0375
0.2194	4466.1542
0.8785	**17886.6**

HAPS

Unit	Benzene			Formaldehyde		
	tons/yr	lbs/day	lb/hr	tons/yr	lbs/day	lb/hr
#1	0.0025	0.0890	0.0212	0.00025	0.00905	0.00215
#2	0.0025	0.0884	0.0212	0.00025	0.00899	0.00215
#3	0.0025	0.0894	0.0212	0.00026	0.00909	0.00215
#4	0.0024	0.0864	0.0211	0.00025	0.00879	0.00215
Total	0.0099	0.3533	0.0846	0.00101	0.03592	0.00860

To determine CO emission factor:

lb/MMBtu = ppmVd(raw) x (7.235e-08 lb/dscf CO / ppmVd CO x 9190 Fd for No. 2 oil in scf/MMBtu x (20.9/20.9-actual O2)

Results from October 28-29, 2019 Testing

	CO (ppmV)	% O2	lb/MMBtu
Gen 1	1.8	11.66	0.002707
Gen 2	2	11.87	0.003078
Gen 3	1.1	12.09	0.001735
Gen 4	1.4	11.55	0.002081

APPENDIX C – 2022 ANNUAL COMPLIANCE CERTIFICATION

NYSE CPN

CALPINE CORPORATION

CUMBERLAND ENERGY CENTER
4001 E. MAIN STREET
MILLVILLE, NJ 08332

January 30, 2023

Laramie Daniel, Compliance Program
Maryland Department of the Environment
Air and Radiation Management Administration
Air Quality Compliance Program
1800 Washington Blvd, Ste. 715
Baltimore, MD 21230-1720

Re: 2022 Annual Compliance Certification, Six-Month Monitoring Report
Crisfield Energy Center
Permit No. 24-039-0017

Enclosed please find the 2022 Annual Compliance Certification and Six-Month Monitoring Report for Calpine's Crisfield Energy Center as required by the facility's Title V Operating Permit. This compliance certification covers the 2021 operating year, January 1, 2022 – December 31, 2022. The monitoring report covers the period from July 1, 2022 – December 31, 2022. The facility maintained compliance with all Title V operating permit obligations during the period covered by this certification. Included in the submittal are the following:

- ARMA Form
- EPA Form SIXMON
- EPA Form A-COMP
- 2022 Capacity Factor Calculation
- EPA Form CTAC

If you have any questions please contact me at (302) 761-7008 or sarah.deater@calpine.com.

Thank you,

Sarah Deater
EHS Specialist
Calpine NJ and Southern Peakers

CC: electronic submittal to USEPA Region III: R3_APD_Permits@epa.gov
J. Blizzard, Calpine

ATTACHMENT A
ARMA FORM – SECTION III PLANT-WIDE CONDITIONS

CERTIFICATION OF PLANT-WIDE CONDITIONS
(SECTION III OF PART 70 OPERATING PERMIT)

Indicate compliance with the following requirements of Section III of your Part 70 Operating Permit in the space provided below:

1. Particulate Matter from Construction and Demolition

   In compliance, continuous.

2. Open Burning

   In compliance, continuous. No open burning conducted.

3. Air Pollution Episode (N/A)

   No plan requested.

4. Report of Excess Emissions and Deviations
   (All deviations from permit requirements should be clearly identified in quarterly monitoring reports.)

   In compliance, continuous, No excess emissions or deviations reported.

5. Accidental Release Provisions (if applicable)

   Not applicable.

6. General Testing Requirements

   In compliance, continuous. Records of testing kept.

7. Emissions Test Methods

   In compliance, continuous. Records of testing kept.

8. Emission Certification Report

   In compliance, continuous.

9. Compliance Certification Report

In compliance, continuous. Report submitted.

10. Certification by Responsible Official

In compliance, continuous. Report submitted.

11. Sampling and Emissions Testing Record Keeping

In compliance, continuous. MACT ZZZZ testing conducted/submitted.

12. General Record Keeping

In compliance, continuous. Records kept.

13. General Conformity (N/A except for federal facilities)

Not applicable, except for federal facilities.

14. Asbestos Provisions (if applicable)

In compliance, continuous. No renovation or demolition conducted.

15. Ozone Depleting Regulations (if applicable)

In compliance, continuous. Records kept when applicable.

16. Acid Rain Permit (if applicable)

Not applicable.

ATTACHMENT B
SIXMON FORM – SECTION IV MONITORING REQUIREMENTS

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 06/30/2015
(Approval extended during OMB review)

Federal Operating Permit Program (40 CFR Part 71)

6-MONTH MONITORING REPORT (SIXMON)

Section A (General Information)

Permit No. 24-039-0017

Reporting Period: Beg. 07 / 01 / 2022 End. 12 / 31 / 2022

Source / Company Name Crisfield Energy Center

Mailing Address: Street or P.O. Box 4079 Crisfield Highway, Route 413

City Crisfield State MD ZIP 21817 -

Contact person Sarah Deater Title EHS Specialist

Telephone (302) 761 - 7008 Ext.

Continued on next page

Section B (Monitoring Report)

Summarize all required monitoring, data, or analyses required by the permit for the reporting period. Describe and cross-reference the permit term and list the emission units (Unit IDs) where the monitoring was performed. Indicate whether a separate monitoring report is required, and if required, enter the date submitted. If submitted for the first time as an attachment to this form, assign an attachment ID, mark the attachment with that ID, and attach the report to this form.

Monitoring, Data, or Analysis (describe and cite): Section IV, Table IV-1, 1.3(A): Conduct an annual EPA Method 9 observation for 15 minutes per unit during non-idle mode.

Emission Units (Unit IDs): C1, C2, C3, C4

Separate Report? ___ Yes _X_ No Date____/___/_____ Attachment ID _____

Monitoring, Data, or Analysis (describe and cite): Section IV, Table IV-1, 1.3(B): Obtain a certification for the fuel supplier indicating that the fuel oil is in compliance with the limitation in the sulfur content of the fuel oil.

Emission Units (Unit IDs):C1, C2, C3, C4

Separate Report? ___ Yes _X_ No Date____/___/_____ Attachment ID _____

Monitoring, Data, or Analysis (describe and cite): Section IV, Table IV-1, 1.3(C): For internal combustion engines that operate more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion.

Emission Units (Unit IDs): C1, C2, C3, C4

Separate Report? ___ Yes _X_ No Date____/___/_____ Attachment ID _____

Monitoring, Data, or Analysis (describe and cite): Section IV, Table IV-1, 1.3(D): The Permittee shall install a continuous parameter monitoring system (CPMS) to continuously monitor catalyst inlet temperature. Measure and record pressure drop across catalyst once per month.

Emission Units (Unit IDs): C1, C2, C3, C4

Separate Report? ___ Yes _X_ No Date____/___/_____ Attachment ID _____

Monitoring, Data, or Analysis (describe and cite):

Emission Units (Unit IDs):

Separate Report? ___ Yes ___ No Date____/___/_____ Attachment ID _____

Section C (Deviations Already "Promptly" Reported)

Summarize all deviations from permit terms already reported on form **PDR** during the reporting period. Copy this page as many times as necessary to include all such deviations. Describe and cross- reference the permit terms and report the start and end dates and times of the deviations (mo/day/yr, hr:min). Use the 24-hour clock. Also specify the date when the written deviation report was submitted to the permitting authority (If written report required, but not submitted, leave the date field blank). Note that failure to submit a deviation report, or late submittal, is a deviation that must be reported in the Section D.

Permit Term for Which There was a Deviation: Emission Units (unit IDs): Deviation Start _____/_____/_________ ____:____ End:_____/_____/_________ ____:____ Date Written Report Submitted ____/____/________
Permit Term for Which There was a Deviation: Emission Units (unit IDs): Deviation Start _____/_____/_________ ____:____ End:_____/_____/_________ ____:____ Date Written Report Submitted ____/____/________
Permit Term for Which There was a Deviation: Emission Units (unit IDs): Deviation Start _____/_____/_________ ____:____ End:_____/_____/_________ ____:____ Date Written Report Submitted ____/____/________
Permit Term for Which There was a Deviation: Emission Units (unit IDs): Deviation Start _____/_____/_________ ____:____ End:_____/_____/_________ ____:____ Date Written Report Submitted ____/____/________

Section D (Deviations Reported Semiannually)

This section is for deviations reported for the first time in this six-month monitoring report. Describe and cross-reference the permit terms and emission units that apply to the deviation. Copy this page as many times as necessary to include all such deviations. Report the beginning and ending times (mo/day/yr, hr:min) for each deviation. Use the 24-hour clock. Briefly explain (if known) the probable cause of each deviation. If any corrective actions or preventative measures have been taken to avoid these in the future, briefly describe the measures, including when they occurred.

Permit Term (for Which There is a Deviation):

No Deviations during this period

Emission Units (unit IDs)

Deviation Start: ____/____/_____ ____ :____ End: ____/____/_____ ____:____

Probable Cause of Deviation:

Corrective Actions or Preventative Measures Taken:

Permit Term (for Which There is a Deviation):

Emission Units (unit IDs)

Deviation Start: ____/____/_____ ____:____ End: ____/____/_____ ____:____

Probable Cause of Deviation:

Corrective Actions or Preventative Measures Taken:

Permit Term (for Which There is a Deviation):

Emission Units (unit IDs)

Deviation Start: ____/____/_____ ____:____ End: ____/____/_____ ____:____

Probable Cause of Deviation:

Corrective Actions or Preventative Measures Taken:

ATTACHMENT C
A-COMP FORM – SECTION IV PLANT-SPECIFIC CONDITIONS

United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 06/30/2015

Federal Operating Permit Program (40 CFR Part 71)

ANNUAL COMPLIANCE CERTIFICATION (A-COMP)

A. GENERAL INFORMATION

Permit No. 24-039-0017

Reporting Period: Beg. 01 / 01 / 2022 End. 12 / 31 / 2022

Source / Company Name Crisfield Energy Center

Mailing Address: Street or P.O. Box 4079 Crisfield Highway, Route 413

City Crisfield State MD ZIP 21817 -

Contact person Sarah Deater Title EHS Specialist

Telephone (302) 761 - 7008 Ext.

Continued on next page

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): C1, C2, C3, C4

Permit Term (Describe requirements and cross-reference)
Section IV Table IV-1, 1.1A. COMAR 26.11.09.05E – Emissions limited to 10% opacity while operating in idle mode and 40% opacity during non-idle mode. Idling opacity does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. Idling opacity does not apply to emissions resulting directly from cold engine start-up and warm up for a maximum of 30 minutes for engines idled continuously when not in service or 15 minutes for all other engines. Opacity limits do not apply while maintenance, repair, or testing is being performed by qualified mechanics.

Compliance Methods for the Above (Description and Citation):
Annual visible emissions readings using EPA Method 9. Readings and Certification of reader maintained onsite for at least 5 years. (COMAR 26.11.03.06C)

Status (Check one): ___ Intermittent Compliance _X_ Continuous Compliance

---

Emission Unit ID(s): C1, C2, C3, C4

Permit Term (Describe requirements and cross-reference)
Section IV Table IV-1, 1.1B. COMAR 26.11.09.07A – Distillate fuel oil sulfur content is limited to 0.3%.

Compliance Methods for the Above (Description and Citation):
Fuel oil certification obtained and available upon request. (COMAR 26.11.03.06C, 26.11.09.07C)

Status (Check one): ___ Intermittent Compliance _X_ Continuous Compliance

---

Emission Unit ID(s): C1, C2, C3, C4

Permit Term (Describe requirements and cross-reference)
Section IV Table IV-1, 1.1C. COMAR 26.11.09.08G – Provide certification of the capacity factor (≤15%) in writing, perform combustion analysis and optimize combustion for equipment operating more than 500 hours during a calendar year, maintain results of combustion analysis onsite for at least 2 years and make available upon request, each operator must attend operator training programs at least once every 3 years on combustion optimization and maintain records of training.

Compliance Methods for the Above (Description and Citation):
Combustion analysis and optimization performed for engines operating more than 500 hours (COMAR 26.11.03.06C).
Records of combustion analysis and training maintained at the site for at least 5 years and available upon request (COMAR 26.11.09.08G(1)(c)&(e)).
Records of hours of operation on monthly basis maintained and total hours of 12 month rolling period calculated (COMAR 26.11.03.06C).
Certification of capacity factor provided in writing as part of annual certification report (COMAR 26.11.09.08G(1)(a)).

Status (Check one): ___ Intermittent Compliance _X_ Continuous Compliance

Emission Unit ID(s): C1, C2, C3, C4

Permit Term (Describe requirements and cross-reference)
Section IV Table IV-1, 1.1D. COMAR 26.11.02.09A – Fuel restricted to No. 2 fuel oil

Compliance Methods for the Above (Description and Citation):
Type of fuel used is reported in the annual emission certification report due April 1. (COMAR 26.11.02.19C).

Status (Check one): ___ Intermittent Compliance _X_ Continuous Compliance

C. DEVIATIONS FROM PERMIT TERMS AND CONDITIONS

Report all deviations from permit terms (whether reported previously or not) that occurred during the permit term. Cross-reference deviations already reported in the six-month report. Indicate whether each deviation is a Apossible exception@ to compliance.@ Start and end period of each deviation should be in mo/day/yr, hr:min format (24-hour clock). Also specify the date when the written deviation report was submitted (If written report required, but not submitted, leave the date field blank).

Permit Term for Which There was a Deviation:
No Deviations during this period

Emission Units (unit IDs):

Deviation Start _____/_____/_____ ____:____ End:_____/_____/_____ ____:____

Date Written Report Submitted ____/____/_____

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start _____/_____/_____ ____:____ End:_____/_____/_____ ____:____

Date Written Report Submitted ____/____/_____

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start _____/_____/_____ ____:____ End:_____/_____/_____ ____:____

Date Written Report Submitted ____/____/_____

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start _____/_____/_____ ____:____ End:_____/_____/_____ ____:____

Date Written Report Submitted ____/____/_____

ATTACHMENT D
2022 CAPACITY FACTOR CALCULATIONS

Calpine Corporation
Calculation of 2022 Capacity Factor
Crisfield Energy Center

Facility/Unit	2022 Operations Capacity Factor		
	Nameplate Capacity (MW)	Gross Generation (MWH)	2022 Capacity Factor[(1)] (%)
Crisfield #1 (C1)	2.5	626	2.86%
Crisfield #2 (C2)	2.5	621	2.84%
Crisfield #3 (C3)	2.5	638	2.92%
Crisfield #4 (C4)	2.5	609	2.78%

1. Capacity Factor is calculated as the annual gross generation in MWH divided by the product of the nameplate capacity in MW and 8760 hours (8784 hours for a leap year).

ATTACHMENT E
CTAC FORM – CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

United States Environmental Protection Agency

OMB No. 2060-0336,
Approval Expires 05/31/2019

Federal Operating Permit Program (40 CFR Part 71)
CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS (CTAC)

This form must be completed, signed by the "Responsible Official" designated for the facility or emission unit, and sent with each submission of documents (i.e., application forms, updates to applications, reports, or any information required by a part 71 permit).

A. Responsible Official

Name: (Last) Ostberg (First) Paul (MI) ____

Title General Manager

Street or P.O. Box 4001 E Main Street

City Millville State NJ ZIP 08332 - ____

Telephone (856) 293 - 8725 Ext. ____ Facsimile (____) ____ - ____

B. Certification of Truth, Accuracy and Completeness (to be signed by the responsible official)

I certify under penalty of law, based on information and belief formed after reasonable inquiry, the statements and information contained in these documents are true, accurate and complete.

Name (signed) 

Name (typed) Paul Ostberg Date: 1/30/23

APPENDIX D – FACILITY-WIDE POTENTIAL EMISSIONS CALCULATIONS

Potential Emissions for Crisfield

HAPs Emission factors are from AP-42 Table 3.4-3 and Table 3.4-4
NOx, CO, SOx, and VOC emission factors are from AP-42 Table 3.4-1.
PM10 emission factor is from AP-42 Table 3.4-2

Pollutant	EF (lb/MMBtu)		
NOx	3.2		
CO	0.85		
SOx	1.01S =	0.002	15 ppm Sulfur content in fuel (0.0015%, 40 CFR 63.6604, 40 CFR 80.510)
VOC	0.09		
PM10	0.0573		
HAPs	1.49E-03		HAPs include Benzene, Toluene, Xylenes, Formaldehyde, Acetaldehyde, Acrolein, and Naphthalene.

C1, C2, C3, C4 are rated at 26 MMBtu/hr.
Assume 8760 hr/yr operation.

For one engine:

NO_x = 26 MMBtu/hr x 3.2 lb NO_x/MMBtu x 8,760 hr/yr x ton/2000 lb
NO_x = 364.42 tpy
CO = 26 MMBtu/hr x 0.85 lb CO/MMBtu x 8,760 hr/yr x ton/2000 lb x (1-0.70 control efficiency)
CO = 29.04 tpy
SO_x = 26 MMBtu/hr x (1.01 x 0.0015%) lb SO_x/MMBtu x 8,760 hr/yr x ton/2000 lb
SO_x = 0.17 tpy
VOC = 26 MMBtu/hr x 0.09 lb VOC/MMBtu x 8,760 hr/yr x ton/2000 lb
VOC = 10.25 tpy
PM_{10} = 26 MMBtu/hr x 0.0573 lb PM_{10}/MMBtu x 8,760 hr/yr x ton/2000 lb
PM_{10} = 6.53 tpy
HAPs = 26 MMBtu/hr x1.49E-03 lb HAPs/MMBtu x 8,760 hr/yr x ton/2000 lb
HAPs = 0.17 tpy

Facility Total Potential Emissions:

NO_x	1,458	tpy
CO	116	tpy
SO_x	0.7	tpy
VOC	41	tpy
PM_{10}	26	tpy
HAPs	0.68	tpy

APPENDIX E – FACILITY-WIDE 2022 ACTUAL HAP EMISSIONS CALCULATIONS

Crisfield HAPs Calculations
Title V Renewal

HAPs Emission factors are from AP-42 Table 3.4-3 and Table 3.4-4

HAP	Emission Factor (lb/MMBtu)
Benzene	7.76E-04
Toluene	2.81E-04
Xylenes	1.93E-04
Formaldehyde	7.89E-05
Acetaldehyde	2.52E-05
Acrolein	7.88E-06
Naphthalene	1.30E-04

Unit	2022 MMBtu
1	6421.62
2	6382.32
3	6568.76
4	6237.35

Crisfield HAPs by unit

HAP	Unit 1 (tons)	Unit 2 (tons)	Unit 3 (tons)	Unit 4 (tons)
Benzene	2.49E-03	2.48E-03	2.55E-03	2.42E-03
Toluene	9.02E-04	8.97E-04	9.23E-04	8.76E-04
Xylenes	6.20E-04	6.16E-04	6.34E-04	6.02E-04
Formaldehyde	2.53E-04	2.52E-04	2.59E-04	2.46E-04
Acetaldehyde	8.09E-05	8.04E-05	8.28E-05	7.86E-05
Acrolein	2.53E-05	2.51E-05	2.59E-05	2.46E-05
Naphthalene	4.17E-04	4.15E-04	4.27E-04	4.05E-04
TOTAL	**4.79E-03**	**4.76E-03**	**4.90E-03**	**4.65E-03**

Facility Total **1.91E-02 tons**

APPENDIX F – COMPLIANCE ASSURANCE MONITORING APPLICABILITY STATEMENT

COMPLIANCE ASSURANCE MONITORING (CAM) APPLICABILITY FOR CRISFIELD ENERGY CENTER

Pursuant to requirements concerning enhanced monitoring and compliance certification under the Clean Air Act Amendments of 1990, the EPA has promulgated regulations codified at 40 CFR Part 64 to implement compliance assurance monitoring (CAM) for major stationary sources of air pollution. The CAM regulations require owners or operators of such sources to conduct monitoring that satisfies particular criteria to provide a reasonable assurance of compliance with applicable standards. The requirements of this part apply to all pollutant-specified emissions units at a major stationary source if the emissions unit satisfies the following criteria:

- The unit is subject to an emission limitation or standard for the applicable regulated air pollutant that does not apply solely under an emissions trading program.
- The unit uses a control device (as defined in 40 CFR § 64.1) to achieve compliance with the emission limitation or standard.
- The unit has the potential to emit (before the use of controls) emissions of the applicable air pollutant that are greater than 100 percent of the amount required for a source to be classified as a major source.

The CAM regulations do not apply to:

- Emission limits proposed after November 15, 1990 under Sections 111 or 112 of the Clean Air Act.
- Acid Rain Program requirements.
- Emission Trading Programs.
- Emission Caps.
- Emission limits for which Part 70 or 71 specifies a continuous compliance determination method.

Units C1-C4 have recently been equipped with catalytic converters for CO control to achieve the emission rates required by NESHAP Subpart ZZZZ. As the emission rates for Subpart ZZZZ were promulgated by the EPA after November 15, 1990 under Section 112 of the Clean Air Act, CAM requirements do not apply to these catalytic converters.