Reply to Attn of: 250

March 30, 2020

Director
Air Protection Division (3AP00)
U.S. Environmental Protection Agency Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Sir or Madam:

Enclosed please find a copy of the 2019 Annual Compliance Certification Report for NASA's Goddard Space Flight Center. The Compliance Certification Report identifies each term or condition of the Part 70 Operating Permit, compliance status (whether continuous or intermittent), methods used to determine compliance, and any other pertinent information required for compliance with the permit. This report is submitted in compliance with Section IV of the Part 70 Operating Permit Number 24-033-00675.

If you have any questions or comments concerning this matter, please call Ms. Kathleen Moxley at (301) 286-0717.

Sincerely,

Kimberly Finch, P.E.
Chief, Medical and Environmental Management Division

Enclosure

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Goddard Space Flight Center

Greenbelt, MD 20771

2019 Annual Compliance Certification

Prepared By:

613 Lynnhaven Parkway, Suite 100
Virginia Beach, VA 23452
Phone: 757-498-0100

Enclosure

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 01/30/2022

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) Kimberly (First) Finch

Title Chief, Medical and Environmental Management Division

Street or P.O. Box 8800 Greenbelt Road

City Greenbelt State MD ZIP 20771

Telephone (301) 286 - 7442 Facsimile (301) 286 - 1644

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) Kimberly Finch, P.E. Date: ____/____/____

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)

ANNUAL COMPLIANCE CERTIFICATION (A-COMP)

A. GENERAL INFORMATION

Permit No. 24-033-00675

Reporting Period: Beg 01 / 01 / 2019 End 12 / 31 / 2019

Source / Company Name NASA's Goddard Space Flight Center

Mailing Address: Street or P.O. Box Mail Code 250; 8800 Greenbelt Road

City Greenbelt State MD ZIP 20771 - _____

Contact person Kathleen M. Moxley Title Air Program Manager

Telephone (301) 286 - 0717 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): Facility Wide

Permit Term (Describe requirements and cross-reference)

1.1 Applicable Standards/Limits:

Applicable to facility-wide operations that are subject to COMAR 26.11.19.

Control of VOC

COMAR 26.11.19.02I(2), Good Operating Practices.

(a) "A person who is subject to this section shall implement good operating practices to minimize VOC emissions into the atmosphere."

(b) "Good operating practices shall, at a minimum, include the following:

(i) Provisions for training of operators on practices, procedures, and maintenance requirements that are consistent with the equipment manufacturers' recommendations and the source's experience in operating the equipment, with the training to include proper procedures for maintenance of air pollution control equipment;

(ii) Maintenance of covers on containers and other vessels that contain VOC and VOC-containing materials when not in use;

(iii) Minimize spills of VOC-containing cleaning materials;

(iv) Convey VOC-containing cleaning materials from one location to another in closed containers or pipelines;

(v) Minimize VOC emissions from cleaning of storage, mixing, and conveying equipment;

(vi) As practical, scheduling of operations to minimize color or material changes when applying VOC coatings or other materials by spray gun;

(vii) For spray gun applications of coatings, use of high volume low pressure (HVLP) or other high efficiency application methods where practical; and

(viii) As practical, mixing or blending materials containing VOC in closed containers and taking preventive measures to minimize emissions for products that contain VOC."

(c) "A person subject to this regulation shall:

(i) Establish good operating practices in writing;

(ii) Make the written operating practices available to the Department upon request; and

(iii) Display the good operating practices so that they are clearly visible to the operator or include them in operator training."

COMAR 26.11.19.02I(3), Equipment Cleanup.

(a) "A person subject to this section shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process and coating application equipment, including containers, vessels, tanks, lines, and pumps."

(b) "Reasonable precautions for equipment cleanup shall, at a minimum, include the following:

(i) Storing all wastes and waste materials, including cloth and paper that are contaminated with VOC, in closed containers;

(ii) Preparing written standard operating procedures for frequently cleaned equipment, including when practical, provisions for the use of low-VOC or non-VOC materials and procedures to minimize the quantity of VOC materials used;

(iii) Using enclosed spray gun cleaning, VOC-recycling systems and other spray gun cleaning methods where practical that reduce or eliminate VOC emissions; and

(iv) Using, when practical, detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and process equipment."

COMAR 26.11.19.02I(4), VOC Storage and Transfer.

(a) "A person subject to this section who stores VOCs shall, at a minimum, install conservation vents or other vapor control measures on storage tanks with a capacity of 2,000 gallons or more to minimize VOC emissions."

(b) "A person subject to this section shall, at a minimum, utilize vapor balance, vapor control lines, or other vapor control measures when VOCs are transferred from a tank truck into a stationary storage tank with a capacity greater than 10,000 gallons and less than 40,000 gallons that store VOCs or materials containing VOCs, other than gasoline, that have a vapor pressure greater than 1.5 psia."

COMAR 26.11.19.16C, Control of VOC Equipment Leaks – General Requirements. "A person subject to this regulation shall comply with all of the following requirements:

(1) Visually inspect all components on the premises for leaks at least once each calendar month.

(2) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date the leak was discovered, and the name of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.

(3) Take immediate action to repair all observed VOC leaks that can be repaired within 48 hours.

(4) Repair all other leaking components not later than 15 days after the leak is discovered. If a replacement part is needed, the part shall be ordered within 3 days after discovery of the leak, and the leak shall be repaired within 48 hours after receiving the part.

(5) Maintain a supply of components or component parts that are recognized by the source to wear or corrode, or that otherwise need to be routinely replaced, such as seals, gaskets, packing, and pipe fittings.

(6) Maintain a log that includes the name of the person conducting the inspection and the date on which leak inspections are made, the findings of the inspection, and a list of leaks by tag identification number. The log shall be made available to the Department upon request. Leak records shall be maintained for a period of not less than 2 years from the date of their occurrence."

COMAR 26.11.19.16D, Exceptions. "Components that cannot be repaired as required in this regulation because they are inaccessible, or

that cannot be repaired during operation of the source, shall be identified in the log and included within the source's maintenance schedule for repair during the next source shutdown."

1.2 **Testing Requirements**:

Control of VOC
See Section 1.4, Record Keeping Requirements.

1.3 **Monitoring Requirements**:

Control of VOC
See Section 1.4, Record Keeping Requirements.

1.4 **Record Keeping Requirements**:

Control of VOC
The Permittee shall maintain the following:
(a) All written descriptions of "good operating practices" designed to minimize emissions of VOCs; and
(b) VOC leak detection and repair logs that include identification of the persons who conducted the leak detection inspections, the dates on which the inspections were conducted, the findings during the inspections, a listing by tag identification number and a description of all leaks discovered, and the date and nature of all leak repairs effected.

1.5 **Reporting Requirements**:

Control of VOC
See Section 1.4, Record Keeping Requirements.

Compliance Methods for the Above (Description and Citation):

1.1 **Applicable Standards/Limits:**

Control of VOC
The Goddard Space Flight Center (GSFC)'s operations subject to COMAR 26.11.19 are vapor degreasing, solvent cleaning, aerospace coating, and equipment leaks.

The only vapor degreaser at GSFC is EU7-4 – ultrasonic vapor degreaser with a solvent capacity of 9.2 gallons, located in building 7. This unit did not operate in 2019.

The only industrial solvent cleaning operation is located within the Parts, Packaging, and Assemblies Technologies Shop (or Microelectronic Laboratory), in building 35. According to COMAR 26.11.19.09-1.A, industrial solvent cleaning does not include cleaning of electrical and electronic components, cleaning of high precision optics, and janitorial cleaning. Therefore, the industrial solvent cleaning operation is exempt from the requirements of COMAR 26.11.19.

There are two aerospace coating operations at GSFC. The first one is located within the Thermal Coating Laboratory, in building 4. The second one is located within the Advanced Composite Materials Laboratory, in building 5A. These units are being operated according to the requirements of their permit to construct (PTC) (PTC Nos. 033-0675-6-1101 & 033-0675-6-1323), which already include COMAR 26.11.19.02I and COMAR 26.11.19.16C as requirements. Therefore, the requirements of VOC control at the aerospace coating operations are being implemented.

The main sources of VOC equipment leaks are the E-85 and gasoline storage tanks and associated components, located at building 27. The tanks and associated components are being inspected monthly for leaks and a log of inspection is maintained. If leaks are discovered, they are repaired immediately and a log of the repair is maintained by the Motor Pool. Therefore, the requirements of VOC equipment leak detection and repair under COMAR 26.11.19.16 are being implemented.

1.2 **Testing Requirements**:

Control of VOC
See Section 1.4, Record Keeping Requirements.

1.3 **Monitoring Requirements**:

Control of VOC
See Section 1.4, Record Keeping Requirements.

1.4 **Record Keeping Requirements**:
All records are maintained onsite for a period of at least 5 years and are available to the Department upon request.

Control of VOC
(a) Description of good operating practices and maintenance plan and records designed to minimize emissions of VOCs are kept in building 4 and 5A for the surface coating operations.
(b) Records of leak detection and repair and monthly inspection of the E-85 and gasoline tanks and associated equipment are maintained by the Motor Pool.

1.5 **Reporting Requirements**:

Control of VOC
See Section 1.4, Record Keeping Requirements.

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

Emission Unit ID(s): EU24-1, EU24-2, EU24-3, EU24-4, EU24-5

Permit Term (Describe requirements and cross-reference)

2.1 **Applicable Standards/Limits:**

A. **Visible Emissions Limitations**
COMAR 26.11.09.05A(2) – Fuel Burning Equipment.
"In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity."

COMAR 26.11.09.05A(3) - Exceptions. "Section A(1) and (2) of this regulation do not apply to emissions during load changes, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."

40 CFR §60.43c - Standards for Particulate Matter
(1) The Permittee shall not cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. **[Reference: 40 CFR §60.43c(c)]**
(2) The opacity standard applies at all times, except during periods of startup, shutdown, or malfunction. **[Reference: 40 CFR §60.43c(d)]**

Note: Compliance with the "No Visible Emissions" requirements of COMAR 26.11.09.05A(2) and (3) will be used to show compliance with this NSPS standard.

40 CFR §60.47c(f) - Emission Monitoring for Particulate Matter**.**
An owner or operator of an affected facility that is subject to an opacity standard in §60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section. (3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under §60.48c(c). **[Reference: 40 CFR §60.47c(f)(3)]**

B. **Control of Sulfur Oxides**
(1) COMAR 26.11.09.07A(2)(b) - 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: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."
(2) The Permittee shall not cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph. **[Reference: 40 CFR §60.42c(d)]**
(3) The SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements in 40 CFR §60.42c apply at all times, including periods of startup, shutdown, and malfunction **[Reference: 40 CFR §60.42c(i)]**

Note: The monitoring, record keeping, and reporting requirements under NSPS Subpart Dc will be used to demonstrate compliance with COMAR 26.11.09.07A and NSPS sulfur in fuel standards.

C. **Control of Nitrogen Oxides**

COMAR 26.11.09.08E, Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less. "A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:
(1) Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each;
(2) Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;
(3) Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;
(4) Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

(5) Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

D. Operational Limitation

Conditions* (1) *through* (4) *apply* to *Emission Units EU24-1, EU24-2, EU24-3, EU24-4, and EU24-5.

(1) Each boiler is subject to a NO_x emission limit of 0.1 pounds per MMBtu for a 24-hour average when burning natural gas. **[Reference: MDE PTC 033-5-0808 through 5-0812, issued April 27, 2005]**
(2) The total 12-month rolling heat input consumed by the five (5) boilers shall not exceed 750,000 MMBtu. **[Reference: MDE PTC 033-5-0808 through 5-0812, issued April 27, 2005]**
(3) The combined average NO_x emissions from all five (5) boilers shall not exceed 0.1 pounds per MMBtu based on a calendar monthly average when burning a combination of any of the following fuels: natural gas, No.2 fuel oil, and/or landfill gas. **[Reference: MDE PTC 033-5-0808 through 5-0812, issued April 27, 2005]**
(4) The combined average SO_x emissions for the five (5) boilers is limited to less than 40 tons per year for a 12-month rolling average when burning a combination of any of the following fuels: natural gas, No.2 fuel oil, and/or landfill gas. **[Reference: MDE PTC 033-5-0808 through 5-0812, issued April 27, 2005]**

Condition* (5) *applies* to *Emission Units EU24-1, EU24-2, and EU24-4 only.

(5) Emission Units EU24-1, EU24-2, and EU24-4 are each individually subject to a NO_x emission limit of 0.1 pounds per MMBtu for a 24-hour average when burning landfill gas alone or in combination with natural gas. **[Reference: MDE PTC 033-5-0808 through 5-0812, issued April 27, 2005]**

2.2 Testing Requirements:

A. Visible Emissions Limitations

See Section 2.3, Monitoring Requirements.

B. Control of Sulfur Oxides

The performance test shall consist of the certification from the fuel supplier. **[Reference: 40 CFR §60.44c(h)]**

C. Control of Nitrogen Oxides

The Permittee shall perform a combustion analysis for each installation at least once each year. **[Reference: COMAR 26.11.09.08E(2)]**

D. Operational Limitations

The Permittee shall conduct a stack test of NO_x, SO_x, and PM on one of the boilers capable of burning all three fuels (ARMA Registration Nos.033-0675-5-0808, 5-0809, OR 5-0811) in Building 24 at least once within the first three years of issuance of the Title V Permit to Operate. The test shall measure emissions burning natural gas, landfill gas, and No. 2 fuel oil. The Permittee shall submit a test protocol to the Department 30 days prior to the proposed scheduled test date. The Permittee shall submit the stack test results to the Department 45 days after the performance test. **[Reference: COMAR 26.11.03.06C]**

Note: The Permittee does not need to operate on No.2 fuel oil solely for the purpose of conducting this test.

2.3 Monitoring Requirements:

A. Visible Emissions Limitations

The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions; and verify that there are no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation of stack emissions for a 6-minute period once for each 168 hours that the boiler burns oil or at a minimum of once per year.
[Reference: COMAR 26.11.03.06C]

Note: The Permittee does not need to operate on No.2 fuel oil solely for the purpose of conducting this test.

The Permittee shall perform the following, if visible emissions are observed:
(1) Inspect combustion control system and boiler operations;
(2) Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated;
(3) Document in writing the results of the inspections, adjustments, and/or repairs to the boiler; and
(4) After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions.
[Reference: COMAR 26.11.03.06C]

The Permittee shall use Method 9 of appendix A-4 of 40 CFR Part 60, Subpart Dc, to determine the opacity of stack emissions.
[Reference: 40 CFR §60.45c(a)(8)]

Note: The Permittee does not need to operate on No.2 fuel oil solely for the purpose of conducting this test.

B. Control of Sulfur Oxides

The Permittee shall obtain fuel supplier certifications to demonstrate compliance with SO_2 standards. **[Reference: 40 CFR §60.46c(e)]**

C. Control of Nitrogen Oxides

The Permittee shall optimize combustion based on the combustion analysis. **[Reference: COMAR 26.11.09.08E(2)]**

D. Operational Limitations

The Permittee shall:
(1) Measure the NO_x content of the flue gases from each boiler when burning natural gas or landfill gas for a 3 to 5-minute period

every 168 hours of operation;

(2) For any month that distillate fuel is burned in a boiler, measure the NO_x content of the flue gases from that boiler when burning distillate fuel for a 3 to 5-minute period every 168 hours of operation;

(3) Monthly calculate the heat input to the boilers at the end of each month for the prior rolling 12-month period;

(4) Monthly calculate the average NO_x emission rate using all measurements taken from all five boilers for each calendar month;

(5) Calculate the total annual SO_x emissions from all five boilers on a 12-month rolling basis; and

(6) Use an analyzer that is properly calibrated and maintained in accordance with the vendor specification for all measurements. The analyzer shall be the type approved by the Department.

[Reference: MDE PTC 033-5-0808 thru 5-0812, issued April 27, 2005]

2.4 **Record Keeping Requirements**:

Note: All records must be maintained for a period of at least five (5) years and be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C(5)(g)]**

A. **Visible Emissions Limitations**

(1) The Permittee shall maintain an operations manual and preventative maintenance plan and records of maintenance performed that relates to combustion performance. **[Reference: COMAR 26.11.03.06C]**

(2) The Permittee shall maintain records of the maintenance performed on the boiler that relate to preventing visible emissions. **[Reference: COMAR 26.11.03.06C]**

(3) The Permittee shall maintain a log of visible emission observations performed. **[Reference: COMAR 26.11.03.06C]**

B. **Control of Sulfur Oxides**

The Permittee shall keep records and submit reports to the Administrator (the Department) as required **[Reference: 40 CFR §60.48c(d)]**

The Permittee shall provide records of fuel supplier certifications which include the following information:

(1) The name of the oil supplier;

(2) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(3) The sulfur content or maximum sulfur content of the oil.

[Reference: 40 CFR §60.48c(f)(1)]

C. **Control of Nitrogen Oxides**

The Permittee shall maintain on site records of:

(1) The results of the annual combustion analysis

(2) Training program attendance for each operator.

[Reference: COMAR 26.11.09.08E(5)]

D. **Operational Limitations**

The Permittee shall maintain records of:

(1) NO_x content of the flue gases from each boiler when burning natural gas or landfill gas for a 3 to 5-minute period every 168 hours of operation.

(2) The calculated total rolling 12-month heat input to the five boilers.

(3) The average NO_x emission rate from all five (5) boilers on a calendar monthly basis.

(4) The average SO_x emissions from all five (5) boilers on a 12-month rolling basis.

[Reference: MDE PTC 033-5-0808 through 5-0812, issued April 27, 2005]

2.5 **Reporting Requirements**:

A. **Visible Emissions Limitations**

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

B. **Control of Sulfur Oxides**

The Permittee shall report and maintain records of the amounts of each fuel combusted during each day. **[Reference: 40 CFR §60.48c(g)(1)]**

The reporting period for the reports required under 40 CFR Part 60, Subpart Dc is each six-month period. All reports shall be submitted to the Administrator (The Department) and shall be postmarked by the 30th day following the end of the reporting period. **[Reference: 40 CFR §60.48c(j)]**

The report submitted shall include a certified statement signed by the Permittee that the records of fuel supplier certifications submitted represent all of the fuel oil combusted during the reporting period. **[Reference: 40 CFR §60.48c(e)(11)]**

C. **Control of Nitrogen Oxides**

The Permittee shall submit:

(1) The results of combustion analysis to the Department and the EPA upon request. **[Reference: COMAR 26.11.09.08E(3)]**

(2) A record of training program attendance for each operator to the Department upon request. **[COMAR 26.11.09.08E(5)]**

D. **Operational Limitations**

The Permittee shall report as part of the Annual Emission Certification the following:

(1) The calculated total rolling 12-month heat input to the five boilers.

(2) The average NO_x emission rate from all five (5) boilers on calendar monthly basis.

(3) The average SO_x emissions from all five (5) boilers on a 12-month rolling basis.

[Reference: MDE PTC 033-5-0808 thru 5-0812, issued April 27, 2005]

If there is an exceedance of any of the NO_x emission limits, the Permittee shall notify the Department within 7 days of the exceedance and shall submit a root cause analysis and preventative action report within 30 days.

Compliance Methods for the Above (Description and Citation):

2.1 Applicable Standards/Limits:

A. Visible Emissions Limitations

The GSFC Central Heating/Refrigeration Plant operating plans are to burn fuel oil only in the case of a natural gas outage. Under these conditions, no boiler is likely to reach 168 hours of operation on fuel oil. Therefore, visual emissions observations when the boilers are operating on fuel oil are scheduled to take place during the boiler calibration/combustion optimization.

Annual six-minute visual observation of EU24-2 was conducted while the boiler was burning No. 2 fuel oil on February 6, 2019. Annual six-minute visual observation of EU24-1 was conducted while the boiler was burning No. 2 fuel oil on September 12, 2019. No visual emissions were observed.

Note that annual six-minute visual observations of EU24-3, EU24-4, and EU24-5 were not conducted in 2019. These boilers were below 168 hours of operation.

B. Control of Sulfur Oxides

Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2020 (reporting period July 2019 – December 2019). These certifications demonstrate compliance with the SO_2 standards. The Semi-Annual Fuel Report referenced above certifies that the fuel delivered and burned during 2019 meets or exceeds the 0.3% maximum sulfur content limit and requirements identified in the Title V operating permit. GSFC does not sell or make available for sale any fuel. The fuel supplier certifications certify that all of the fuel oil delivered in 2019 is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel.

C. Control of Nitrogen Oxides

(1) The identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each installation were included within the Semi-Annual Fuel Reports, which were submitted to the Department on July 25, 2019 (reporting period January 2019 to June 2019) and January 27, 2020 (reporting period July 2019 to December 2019).
(2) A combustion analysis for each installation is performed for 3-5 minute periods at least once every 168 hours of operation, and combustion is optimized based on the analysis.
(3) The results of the combustion analyses are maintained onsite for at least 2 years and these data are available to the Department and EPA upon request.
(4) Each operator has attended an operator training program on combustion analysis, which is sponsored by the Department, EPA, or equipment vendors. The most recent training sessions occurred on November 28 and 29, 2017.
(5) Records of training program attendance for each operator are maintained onsite and these records are available to the Department upon request.

D. Operational Limitations

For Emission Units EU24-1, EU24-2, EU24-3, EU24-4, and EU24-5

(1) Combustion analysis of each boiler indicates that the NO_x emission limit of 0.1 lbs/MMBtu for a 24-hour average has not been exceeded, when burning natural gas, in the calendar year.
(2) Monthly calculations indicate that the total 12-month rolling sum of the heat input consumed by all five boilers has not exceeded 750,000 MMBtu within the calendar year.
(3) Combustion analysis of these units indicate that the combined average NO_x emissions from all five boilers has not exceeded the NO_x emission limit of 0.1 lbs/MMBtu based on a calendar monthly average when burning a combination of any of the following fuels: natural gas, No. 2 fuel oil, and/or landfill gas, within the calendar year.
(4) Monthly calculations indicate that the combined average SO_x emission for the five boilers was less than 40 tons per year for a 12-month rolling average, within the calendar year, when burning a combination of any of the following fuels: natural gas, No. 2 fuel oil, and landfill gas.

For Emission Units EU24-1, EU24-2, and EU24-4

Combustion analysis of each of these boilers indicates that EU24-1, EU24-2, and EU24-4 have not exceeded the NO_x emission limit of 0.1 lbs/MMBtu for a 24-hour average, within the calendar year, when burning landfill gas alone or in combination with natural gas.

2.2 Testing Requirements:

A. Visible Emissions Limitations

See Section 2.3, Monitoring Requirements.

B. Control of Sulfur Oxides

Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2020 (reporting period July 2019 – December 2019). These certifications demonstrate compliance with the SO_2 standards. The Semi-Annual Fuel Report referenced above certifies that the fuel delivered and burned during 2019 meets or exceeds the 0.3% maximum sulfur content limit and requirements identified in the Title V operating permit. GSFC does not sell or make available for sale any fuel. The fuel supplier certifications certify that all of the fuel oil delivered in 2019 is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel.

C. Control of Nitrogen Oxides

A combustion analysis for each installation is performed for 3-5 minute periods at least once every 168 hours of operation.

D. Operational Limitations

A stack test of VOC, NO_x, SO_x, and PM was performed on one of the boilers (EU24-4) burning all three fuels and an additional boiler

(EU24-5) burning natural gas and No. 2 fuel oil in the GSFC Central Heating/Refrigeration Plant on January 15 to 19, 2018. The tests measured emissions when burning natural gas, landfill gas, and No. 2 fuel oil. A test protocol was submitted to the Department at least 30 days prior to the test date, on November 2, 2017 and approved by the Department on November 30, 2017. The stack test results were submitted to the Department electronically within 45 days after the test date, on March 7, 2018.

2.3 Monitoring Requirements:

A. Visible Emissions Limitations

The GSFC Central Heating/Refrigeration Plant operating plans are to burn fuel oil only in the case of a natural gas outage. Under these conditions, no boiler is likely to reach 168 hours of operation on fuel oil. Therefore, visual emissions observations when the boilers are operating on fuel oil are scheduled to take place during the boiler calibration/combustion optimization.

Annual six-minute visual observation of EU24-2 was conducted while the boiler was burning No. 2 fuel oil on February 6, 2019. Annual six-minute visual observation of EU24-1 was conducted while the boiler was burning No. 2 fuel oil on September 12, 2019. No visual emissions were observed.

Note that annual six-minute visual observations of EU24-3, EU24-4, and EU24-5 were not conducted in 2019. These boilers were below 168 hours of operation.

B. Control of Sulfur Oxides

Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2020 (reporting period July 2019 – December 2019). These certifications demonstrate compliance with the SO_2 standards. The Semi-Annual Fuel Report referenced above certifies that the fuel delivered and burned during 2019 meets or exceeds the 0.3% maximum sulfur content limit and requirements identified in the Title V operating permit. GSFC does not sell or make available for sale any fuel. The fuel supplier certifications certify that all of the fuel oil delivered in 2019 is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel.

C. Control of Nitrogen Oxides

A combustion analysis for each installation is performed for 3-5 minute periods at least once every 168 hours of operation, and combustion is optimized based on the analysis.

D. Operational Limitations

(1) The NO_x content of the flue gases from each boiler is analyzed for a 3 to 5-minute period every 168 hours of operation when burning natural gas or landfill gas.
(2) The NO_x content of the flue gases from each boiler is analyzed for a 3 to 5-minute period every 168 hours of operation when burning distillate fuel for any month that distillate fuel is burned in a boiler.
(3) The heat input to the boilers is calculated monthly at the end of each month for the prior rolling 12-month period.
(4) The average NO_x emission rate using all measurements taken from all five boilers for each calendar month is calculated monthly.
(5) The total annual SO_x emissions from all five boilers on a 12-month rolling basis is calculated.
(6) All analyzers are the types approved by the Department and are properly calibrated and maintained in accordance with the vendor specification for all measurements.

2.4 Record Keeping Requirements:

All records are maintained onsite for a period of at least 5 years and are available to the Department upon request.

A. Visible Emissions Limitations

(1) All operations manuals are maintained onsite by the Facilities Management Division. A preventive maintenance plan and records of maintenance performed that relates to combustion performance are continuously maintained in the MAXIMO database.
(2) All records of maintenance performed on the boiler that relate to preventing visible emissions are continuously maintained in the MAXIMO database for a period of at least 5 years.
(3) Records of visible emissions inspections performed are collected annually and maintained onsite by the Facilities Management Division for a period of at least 5 years.

B. Control of Sulfur Oxides

Records of fuel supplier certifications are collected following the fuel deliveries and are maintained onsite by the Facilities Management Division.

C. Control of Nitrogen Oxides

Records of combustion analysis performed and training program attendance for each operator are collected upon completion and maintained onsite by the Facilities Management Division for a period of at least 5 years.

D. Operational Limitations

(1) Records of combustion analysis are maintained by the Facilities Management Division.
(2) The calculated total rolling 12-month heat input to the five boilers is maintained by the Medical and Environmental Management Division on a monthly basis.
(3) The average NO_x emission rate from all five boilers on a calendar monthly basis is calculated and maintained by the Medical and Environmental Management Division monthly.
(4) The average SO_x emissions from all five boilers on a 12-month rolling basis is calculated and maintained by the Medical and Environmental Management Division.

2.5 Reporting Requirements:

A. Visible Emissions Limitations

There were no known incidents of visible emissions from these units within the calendar year. Any incidents of visible emissions are reported in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

B. **Control of Sulfur Oxides**
Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2020 (reporting period July 2019 – December 2019).

C. **Control of Nitrogen Oxides**
Records of training program attendance and the results of combustion analyses are maintained onsite by the Facilities Management Division and are available to the Department and EPA upon request. The most recent training sessions occurred on November 28 and 29, 2017.

D. **Operational Limitations**
The Annual Emission Certification will be submitted to the Department by April 1, 2020 and will include the following:
(1) The calculated total rolling 12-month heat input to the five boilers.
(3) The average NO_x emission rate from all five boilers for each calendar month.
(4) The total annual SO_x emissions from all five boilers on a 12-month rolling basis.

Status (Check one): __ Intermittent Compliance __X__ Continuous Compliance

Emission Unit ID(s): EU24C-1, EU24C-2, EU24C-3, EU24C-4, EU24C-6, EU24C-8, EU31-1, EU31-2, EU31-3, EU31-4, EU31-5, EU7-2, EU10-3, EU29-1, EU7-3, EU28-1

Permit Term (Describe requirements and cross-reference)

3.1 **Applicable Standards/Limits:**

A. **Visible Emissions Limitations**
COMAR 26.11.09.05E(2), Stationary Internal Combustion Engine Powered Equipment. - 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."

COMAR 26.11.09.05E(3), Stationary Internal Combustion Engine Powered Equipment. - 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."

COMAR 26.11.09.05E(4) - Stationary Internal Combustion Engine Powered Equipment. - 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 26.11.09.07A – Sulfur Content Limitation 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: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

C. **Control of Nitrogen Oxides**
COMAR 26.11.09.08G(1), 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."

D. **Operational Limitation**
This condition does NOT apply* to *EU24C-6 and EU29-1 (ARMA Registration Nos. 033-0675-9-1366 and 9-1422)
In order to remain exempt from the requirements of 40 CFR Part 63, Subpart ZZZZ per 40 CFR §63.6585(f)(3), the engines may not operate or be contractually obligated to be available for more than 15 hours per calendar year for emergency demand response or periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. In addition the engines may not operate for non-emergency situations to supply power as part of a financial arrangement with another entity. The Permittee does not need to operate on No.2 fuel oil solely for the purpose of conducting this test.

3.2 Testing Requirements:

A. Visible Emissions Limitations
See Section 3.3, Monitoring Requirements.

B. Control of Sulfur Oxides
See Section 3.3, Monitoring Requirements.

C. Control of Nitrogen Oxides
The Permittee shall perform a combustion analysis and optimize combustion at least once annually when the fuel-burning equipment operates for more than 500 hours in a calendar year. **[Reference: COMAR 26.11.09.08G(1)(b)]**

D. Operation Limitation
See Section 3.4, Record Keeping Requirements.

3.3 Monitoring Requirements:

A. Visible Emissions Limitations
The Permittee shall perform preventive maintenance to optimize combustion performance. **[Reference: COMAR 26.11.03.06(C)]**

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 or obtain sulfur in fuel analyses of oil that is representative of the oil burned. **[Reference: COMAR 26.11.03.06C]**

C. Control of Nitrogen Oxides
The Permittee shall calculate the capacity factor of each unit for within 30 days after the end of each month. **[Reference: COMAR 26.11.03.06C]**

D. Operational Limitation
See Section 3.4, Record Keeping Requirements.

3.4 Record Keeping Requirements:
Note: All records must be maintained for a period of at least five (5) years and be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C(5)(g)]**

A. Visible Emissions Limitations
The Permittee shall:
(1) Maintain an operation manual and prevention maintenance plan; and
(2) Maintain a record of the maintenance performed that relates to combustion performance.
[Reference: COMAR 26.11.03.06C]

B. Control of Sulfur Oxides
The Permittee shall maintain records of fuel supplier's certification or sulfur in fuel analyses. **[Reference: COMAR 26.11.09.07C]**

C. Control of Nitrogen Oxides

The Permittee shall:
(1) Maintain the results of the combustion analysis performed when the hours of operation exceeds 500 hours. **[Reference: COMAR 26.11.09.08G(1)(c)]**
(2) Retain records of training program attendance for each operator. **[Reference: COMAR 26.11.09.08G(1)(e)]**
(3) Retain monthly records of the calculated capacity factors. **[Reference: COMAR 26.11.03.06C]**

D. Operational Limitation
The Permittee shall maintain for at least five (5) years, an operating log for each generator, listing the dates, hours of operation, and reason for generator operation (i.e. maintenance, operational testing, power outage, etc). **[Reference: COMAR 26.11.03.06]**

3.5 Reporting Requirements:

A. Visible Emissions Limitations
See Section 3.4, Record Keeping Requirements.

B. Control of Sulfur Oxides
The Permittee shall report fuel supplier certifications or a copy of the sulfur in fuel analyses to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

C. Control of Nitrogen Oxides
The Permittee shall submit a record of the training program attendance for each operator to the Department upon request. [**Reference: COMAR 26.11.09.08G(1)(e)]**

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the annual Emissions Certification Report. **[Reference: COMAR 26.11.09.08G(1)(a) and COMAR 26.11.03.06C]**

D. Operational Limitation
The Permittee shall submit a record of the total generator operating hours in writing as part of the Annual Emissions Certification Report. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

3 1 Applicable Standards/Limits:

A. Visible Emissions Limitations
Current records do not indicate any discharge from these units greater than 10 percent opacity while operating in idle mode, or greater than 40 percent opacity during operating mode.

B. Control of Sulfur Oxides
Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2020 (reporting period July 2019 – December 2019). The fuel supplier certifications certify that the fuel delivered in 2019 meets or exceeds the sulfur content limits and requirements identified in the Title V operating permit. The certifications certify the fuel oil is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel.

C. Control of Nitrogen Oxides
(a) The capacity factors of all the generators are calculated within 30 days after the end of each month. All calculated capacity factors are less than 15%. They are included in the Annual Emission Certification Report submitted to the Department by April 1, 2020.
(b) A combustion analysis has not been required because the generators have not operated more than 500 hours during the 2019 calendar year.
(c) Results of any combustion analysis are maintained onsite for at least 2 years and the results are available to the Department and EPA upon request.
(d) Each operator has attended an operator training program on combustion analysis, which is sponsored by the Department, EPA, or equipment vendors. The most recent training sessions occurred on November 28 and 29, 2017 for Code 220 and May 6, 2018 for Code 549.
(e) Records of the training programs attendance for each operator are maintained onsite and will be made available to the Department upon request.

D. Operational Limitation
Records indicate that the generators EU7-2, EU10-3, EU24C-1 to 4 and 8, EU31-1 to 5, and EU7-3 did not operate and were not contractually obligated to be available for more than 15 hours during the year for emergency demand response or periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. Records also indicate that the engines did not operate for non-emergency situations to supply power as part of a financial arrangement with another entity. Therefore, they remain exempt from the requirements of 40 CFR 63 Subpart ZZZZ. It should be noted that the conditions above have been rescinded and no generator at GSFC operates for emergency demand response purposes or periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. Furthermore, the total annual operating time for each generator is limited to 100 hours per calendar year.

3.2 Testing Requirements:

A. Visible Emissions Limitations
See Section 3.3, Monitoring Requirements.

B. Control of Sulfur Oxides
See Section 3.3, Monitoring Requirements.

C. Control of Nitrogen Oxides
These units were not operated for more than 500 hours this calendar year, therefore, no combustion analysis was required.

D. Operation Limitation
See Section 3.4, Record Keeping Requirements.

3.3 Monitoring Requirements:

A. Visible Emissions Limitations
Preventive maintenance to optimize combustion performance is performed on these units regularly.

B. Control of Sulfur Oxides
Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2020 (reporting period July 2019 – December 2019). The fuel supplier certifications certify that the fuel delivered in 2019 meets or exceeds the sulfur content limits and requirements identified in the Title V operating permit. The certifications certify the fuel oil is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel.

C. Control of Nitrogen Oxides
The monthly capacity factor of each unit is calculated within 30 days after the end of each month.

D. Operational Limitation
See Section 3.4, Record Keeping Requirements.

3.4 Record Keeping Requirements:
All records are maintained onsite for a period of at least 5 years and are available to the Department upon request.

A. **Visible Emissions Limitations**
All operations manuals are maintained onsite by the Facilities Management Division. Preventive maintenance plans and records of maintenance performed that relates to combustion performance are continuously maintained in the MAXIMO database.

B. **Control of Sulfur Oxides**
Records of fuel oil supplier certifications are collected after fuel deliveries and are maintained onsite by the Facilities Management Division.

C. **Control of Nitrogen Oxides**
(1) Hours of operation for the units are collected on a monthly basis. These records indicate that operation did not exceed 500 hours, therefore, no combustion analysis was required.
(2) Records of training program attendance for each operator are maintained onsite by the Facilities Management Division for a period of at least 5 years.
(3) Monthly records of the calculated capacity factors of each unit are maintained by the Medical and Environmental Management Division. These data are also reported in the Annual Emissions Certification Report submitted to the Department.

D. **Operational Limitation**
The operating log for each generator, listing the dates, hours of operation, and reason for generator operation is maintained onsite by the Facilities Management Division for a period of at least 5 years. These data are also reported in the Annual Emissions Certification Report and the Semi-Annual Fuel Use Report submitted to the Department.

3.5 **Reporting Requirements:**

A. **Visible Emissions Limitations**
See Section 3.4, Record Keeping Requirements.

B. **Control of Sulfur Oxides**
Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2020 (reporting period July 2019 – December 2019). The fuel supplier certifications certify that the fuel delivered in 2019 meets or exceeds the sulfur content limits and requirements identified in the Title V operating permit. The certifications certify the fuel oil is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel.

C. **Control of Nitrogen Oxides**
Records of training program attendance and the results of combustion analysis are maintained onsite by the Facilities Management Division and are available to the Department and EPA upon request. The most recent training sessions occurred on November 28 and 29, 2017 for Code 220 and May 6, 2018 for Code 549.

The Annual Emission Certification will be submitted to the Department by April 1, 2020 and will include monthly calculations of the capacity factor of each unit.

D. **Operational Limitation**
The Annual Emission Certification will be submitted to the Department by April 1, 2020 and will include the total generator operating hours.

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

Emission Unit ID(s): EU24C-6, EU29-1, EU28-1

Permit Term (Describe requirements and cross-reference)

3a.1 **Applicable Standards/Limits**:

A. **Visible Emissions Limitations**
The Permittee must not exceed the following opacity emission standards:
(a) 20 percent during the acceleration mode;
(b) 15 percent during the lugging mode; and
(c) 50 percent during the peaks in either the acceleration or lugging modes.
[Reference: 40 CFR §60.4205(b), §60.4202(a)(2), and §89.113(a)]

B. **Control of Sulfur Oxides**
The Permittee must meet the non-road diesel fuel sulfur requirements of 40 CFR §80.510(b) as follows:
(a) Maximum sulfur content 15 ppm and
(b) Minimum cetane index of 40; or
(c) Maximum aromatic content of 35 volume percent.
[Reference: 40 CFR §60.4207(b) and 40 CFR §80.510(b)]

C. **Control of Nitrogen Oxides**
The Permittee must not exceed the following emission requirement: NMHC + NOx: 6.4 grams per kilowatt hour. **[Reference: 40 CFR §60.4205(b), §60.4202(a)(2), §89.112(a), and 40 CFR §89.112(a) Table 1]**

D. **Control of Particulate Matter**
The Permittee must not exceed the following emission requirement: PM: 0.2 grams per kilowatt hour. **[Reference: 40 CFR §60.4205(b), §60.4202(a)(2), §89.112(a), and 40 CFR §89.112(a) Table 1]**

E. **Control of Carbon Monoxide**
The Permittee must not exceed the following emission requirement: CO: 3.5 grams per kilowatt hour. **[Reference: 40 CFR §60.4205(b), §60.4202(a)(2), §89.112(a), and 40 CFR §89.112(a) Table 1]**

F. **Operational Limitations**
The Permittee must install and operate a non-resettable hourly time meter on each engine. **[Reference: 40 CFR §60.4209(a)]**

The Permittee must operate and maintain the engines in a manner that achieves the emissions standards of the entire life of the engine. **[Reference: 40 CFR §60.4206]**

The Permittee must operate and maintain the engines and control devices according to the manufacturer's emission related written instruction. **[Reference: 40 CFR §60.4211(a)(1)]**

The Permittee may change only those emission related settings that are approved by the manufacturer. **[Reference: 40 CFR §60.4211(a)(2)]**

The Permittee must operate the emergency engines as described below.
(1) There is no time limit on the use of emergency stationary ICE in emergency situations.
(2) The Permittee may operate the emergency engine as described below for a maximum of 100 hours per calendar year:
  (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
  (ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60 17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
  (iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
  (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
    (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
    (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
    (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
    (D) The power is provided only to the facility itself or to support the local transmission and distribution system.
    (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.
  (ii) [Reserved]

[Reference: 40 CFR §60.4211(f)]

3a.2 **Testing Requirements:**

A. **Visible Emissions Limitations**
See Section 3a.3, Monitoring Requirements.

B. **Control of Sulfur Oxides**
See Section 3a.4, Record Keeping Requirements.

C. **Control of Nitrogen Oxides**
See Section 3a.3, Monitoring Requirements.

D. **Control of Particulate Matter**
See Section 3a.3, Monitoring Requirements.

E. **Control of Carbon Monoxide**
See Section 3a.3, Monitoring Requirements.

F. **Operational Limitations**
See Section 3a.4, Record Keeping Requirements.

3a.3 **Monitoring Requirements**:

A. **Visible Emissions Limitations**
The Permittee will demonstrate compliance with this condition by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b). **[Reference: 40 CFR §60.4211(c)]**

B. **Control of Sulfur Oxides**
See Section 3a.4, Record Keeping Requirements.

C. **Control of Nitrogen Oxides**
The Permittee will demonstrate compliance with this condition by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b). **[Reference: 40 CFR §60.4211(c)]**

D. **Control of Particulate Matter**
The Permittee will demonstrate compliance with this condition by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b). **[Reference: 40 CFR §60.4211(c)]**

E. **Control of Carbon Monoxide**
The Permittee will demonstrate compliance with this condition by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b). **[Reference: 40 CFR §60.4211(c)]**

F. **Operational Limitations**
See Section 3a.4, Record Keeping Requirements.

3a.4 **Record Keeping Requirements:**

A. **Visible Emissions Limitations**
See Section 3a.3, Monitoring Requirements.

B. **Control of Sulfur Oxides**
The Permittee shall maintain for at least five (5) years and make available to the Department upon request, records for each fuel delivery from the fuel supplier a fuel supplier certification consisting of the name of the oil supplier, the date of delivery, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel oil complies with the specifications of 40 CFR §80.510(b).

C. **Control of Nitrogen Oxides**
The Permittee shall maintain for at least five (5) years and make available to the Department upon request, records of the certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211.

D. **Control of Particulate Matter**
The Permittee shall maintain for at least five (5) years and make available to the Department upon request, records of the certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211.

E. **Control of Carbon Monoxide**
The Permittee shall maintain for at least five (5) years and make available to the Department upon request, records of the certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211.

F. **Operational Limitations**
The Permittee shall maintain for at least five (5) years and make available to the Department upon request, an operating log for each generator, listing the dates, hours of operation, and reason for generator operation (i.e. maintenance, operational testing, power outage, etc.). **[Reference: COMAR 26.11.03.06C]**

3a.5 **Reporting Requirements**:

A. **Visible Emissions Limitations**
See Section 3a.3, Monitoring Requirements.

B. **Control of Sulfur Oxides**
See Section 3a.4, Record Keeping Requirements.

C. **Control of Nitrogen Oxides**
See Section 3a.4, Record Keeping Requirements.

D. **Control of Particulate Matter**
See Section 3a.4, Record Keeping Requirements.

E. **Control of Carbon Monoxide**
See Section 3a.4, Record Keeping Requirements.

F. Operational Limitations

In years in which the generator is contractually obligated to be available for more than 15 hours per year for the purposes of emergency demand response or for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency, or for non-emergency situations to supply power as part of a financial arrangement with another entity, the Permittee must submit an annual report according to the following requirements:

(a) The report must contain the following information:
- (i) Company name and address where the engine is located.
- (ii) Date of the report and beginning and ending dates of the reporting period.
- (iii) Engine site rating and model year.
- (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
- (v) Hours operated for the purposes of emergency demand response and for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency, including the date, start time, and end time for engine operation for this use.
- (vi) Number of hours the engine is contractually obligated to be available for the purposes of emergency demand response and for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- (vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(b) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(c) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) *(www.epa.gov/cdx)*. However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR §60.4.

[Reference: 40 CFR §60.4214(d)]

Compliance Methods for the Above (Description and Citation):

3a.1 Applicable Standards/Limits:

A. Visible Emissions Limitations

To comply with this condition, an engine certified to the emission standards in 40CFR60.4205(b) must be purchased. The emissions standards at 40CFR60.4205(b) represent Tier 2 emissions standards for nonroad engines. According to their specifications, EU24C-6 and EU28-1 are certified to meet EPA regulations for Tier 2 emissions standards for nonroad engines and EU29-1 is certified to meet EPA regulations for Tier 4i emissions standards for nonroad engines, which are more stringent that the Tier 2 standards.

B. Control of Sulfur Oxides

Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2020 (reporting period July 2019 – December 2019). The fuel oil supplier certifications certify that the fuel oil delivered in 2019 meet the maximum sulfur content requirement of 15 ppm, the minimum cetane index requirement of 40, and/or the maximum aromatic content requirement of 35 percent by volume.

C. Control of Nitrogen Oxides

To comply with this condition, an engine certified to the emission standards in 40CFR60.4205(b) must be purchased. The emissions standards at 40CFR60.4205(b) represent Tier 2 emissions standards for nonroad engines. According to their specifications, EU24C-6 and EU28-1 are certified to meet EPA regulations for Tier 2 emissions standards for nonroad engines and EU29-1 is certified to meet EPA regulations for Tier 4i emissions standards for nonroad engines, which are more stringent that the Tier 2 standards.

D. Control of Particulate Matter

To comply with this condition, an engine certified to the emission standards in 40CFR60.4205(b) must be purchased. The emissions standards at 40CFR60.4205(b) represent Tier 2 emissions standards for nonroad engines. According to their specifications, EU24C-6 and EU28-1 are certified to meet EPA regulations for Tier 2 emissions standards for nonroad engines and EU29-1 is certified to meet EPA regulations for Tier 4i emissions standards for nonroad engines, which are more stringent that the Tier 2 standards.

E. Control of Carbon Monoxide

To comply with this condition, an engine certified to the emission standards in 40CFR60.4205(b) must be purchased. The emissions standards at 40CFR60.4205(b) represent Tier 2 emissions standards for nonroad engines. According to their specifications, EU24C-6 and EU28-1 are certified to meet EPA regulations for Tier 2 emissions standards for nonroad engines and EU29-1 is certified to meet EPA regulations for Tier 4i emissions standards for nonroad engines, which are more stringent that the Tier 2 standards.

F. Operational Limitations

A non-resettable hourly time meter is installed and operated on each engine.

EU24C-6, EU28-1 and EU29-1 are being operated and maintained according to the operation manuals and each engine specification documentation, which contain the emissions standards to achieve, emission related written instructions, and the required emission related settings.

GSFC operated the emergency engines as described below.

(1) Even though there is no time limit on the use of these emergency generators in emergency situations, EU29-1, EU28-1, and EU24C-6 did not operate in emergency situation in calendar year 2019.

(2) Records indicate that the emergency generators did not operate close to the maximum 100 hours in calendar year 2019:
- (i) Records indicate that the emergency generators operated only for maintenance checks and readiness.
- (ii) Rule vacated. However, records indicate that the emergency generators did not operate for emergency demand response.

(iii) Rule vacated. However, records indicate that the emergency generators did not operate for periods where there was a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Records indicate that the emergency generators did not operate in non-emergency situations in calendar year 2019.

3a.2 Testing Requirements:

A. Visible Emissions Limitations
See Section 3a.3, Monitoring Requirements.

B. Control of Sulfur Oxides
See Section 3a.4, Record Keeping Requirements.

C. Control of Nitrogen Oxides
See Section 3a.3, Monitoring Requirements.

D. Control of Particulate Matter
See Section 3a.3, Monitoring Requirements.

E. Control of Carbon Monoxide
See Section 3a.3, Monitoring Requirements.

F. Operational Limitations
See Section 3a.4, Record Keeping Requirements.

3a.3 Monitoring Requirements:

A. Visible Emissions Limitations
To comply with this condition, an engine certified to the emission standards in 40CFR60.4205(b) must be purchased. The emissions standards at 40CFR60.4205(b) represent Tier 2 emissions standards for nonroad engines. According to their specifications, EU24C-6 and EU28-1 are certified to meet EPA regulations for Tier 2 emissions standards for nonroad engines and EU29-1 is certified to meet EPA regulations for Tier 4i emissions standards for nonroad engines, which are more stringent that the Tier 2 standards.

B. Control of Sulfur Oxides
See Section 3a.4, Record Keeping Requirements.

C. Control of Nitrogen Oxides
To comply with this condition, an engine certified to the emission standards in 40CFR60.4205(b) must be purchased. The emissions standards at 40CFR60.4205(b) represent Tier 2 emissions standards for nonroad engines. According to their specifications, EU24C-6 and EU28-1 are certified to meet EPA regulations for Tier 2 emissions standards for nonroad engines and EU29-1 is certified to meet EPA regulations for Tier 4i emissions standards for nonroad engines, which are more stringent that the Tier 2 standards.

D. Control of Particulate Matter
To comply with this condition, an engine certified to the emission standards in 40CFR60.4205(b) must be purchased. The emissions standards at 40CFR60.4205(b) represent Tier 2 emissions standards for nonroad engines. According to their specifications, EU24C-6 and EU28-1 are certified to meet EPA regulations for Tier 2 emissions standards for nonroad engines and EU29-1 is certified to meet EPA regulations for Tier 4i emissions standards for nonroad engines, which are more stringent that the Tier 2 standards.

E. Control of Carbon Monoxide
To comply with this condition, an engine certified to the emission standards in 40CFR60.4205(b) must be purchased. The emissions standards at 40CFR60.4205(b) represent Tier 2 emissions standards for nonroad engines. According to their specifications, EU24C-6 and EU28-1 are certified to meet EPA regulations for Tier 2 emissions standards for nonroad engines and EU29-1 is certified to meet EPA regulations for Tier 4i emissions standards for nonroad engines, which are more stringent that the Tier 2 standards.

F. Operational Limitations
See Section 3a.4, Record Keeping Requirements.

3a.4 Record Keeping Requirements:
All records are maintained onsite for a period of at least 5 years and are available to the Department upon request.

A. Visible Emissions Limitations
See Section 3a.3, Monitoring Requirements.

B. Control of Sulfur Oxides
Records of fuel oil supplier certifications, which consist of the name of the oil supplier, the date of delivery, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel oil complies with the specifications of 40CFR80.510(b), are collected after fuel deliveries and are maintained onsite by the Facilities Management Division.

C. Control of Nitrogen Oxides
Records of the manufacturer's engine test data required by 40CFR60.4211 are contained in the generators' specification documentation, which are maintained onsite by the Facilities Management Division.

D. Control of Particulate Matter
Records of the manufacturer's engine test data required by 40CFR60.4211 are contained in the generators' specification documentation, which are maintained onsite by the Facilities Management Division.

E. **Control of Carbon Monoxide**
Records of the manufacturer's engine test data required by 40CFR60.4211 are contained in the generators' specification documentation, which are maintained onsite by the Facilities Management Division.

F. **Operational Limitations**
The operating log for each generator, listing the dates, hours of operation, and reason for generator operation is maintained onsite by the Facilities Management Division for a period of at least 5 years. These data are also reported in the Annual Emissions Certification Report and the Semi-Annual Fuel Report submitted to the Department.

3a.5 **Reporting Requirements**:

A. **Visible Emissions Limitations**
See Section 3a.3, Monitoring Requirements.

B. **Control of Sulfur Oxides**
See Section 3a.4, Record Keeping Requirements.

C. **Control of Nitrogen Oxides**
See Section 3a.4, Record Keeping Requirements.

D. **Control of Particulate Matter**
See Section 3a.4, Record Keeping Requirements.

E. **Control of Carbon Monoxide**
See Section 3a.4, Record Keeping Requirements.

F. **Operational Limitations**
In calendar year 2019, the generators EU24C-6, EU28-1 and E29-1 were not contractually obligated to be available for more than 15 hours for the purposes of emergency demand response or for periods where there was a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency, or for non-emergency situations to supply power as part of a financial arrangement with another entity. Therefore, GSFC does not have to submit an annual report to the Compliance and Emissions Data Reporting Interface.

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

Emission Unit ID(s): EU97-1, EU302-1, EU302-3, EU35-1, EU35-2

Permit Term (Describe requirements and cross-reference)

4.1 **Applicable Standards/Limits**:

A. **Visible Emissions Limitations**
COMAR 26.11.09.05A(2) – Fuel Burning Equipment. "In areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity."

COMAR 26.11.09.05A(3) Exceptions. "Section A(1) and (2) of this regulation do not apply to emissions during load changes, soot blowing, start-up or adjustments or occasional cleaning of control equipment if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

B. **Control of Nitrogen Oxides**
COMAR 26.11.09.08F, Requirements for Space Heaters.
(1) "A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall:
  (a) Submit to the Department a list of each affected installation on the premises and the types of fuel used in each installation;
  (b) Develop an operating and maintenance plan to minimize NO_x emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience;
  (c) Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department;
  (d) Require installation operators to attend in-State operator training programs once every 3 years on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
  (e) Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request."
(2) "A person who owns or operates an installation that no longer qualifies as a space heater shall inform the Department not later than 60 days after the date when the fuel-burning equipment did not qualify, and shall meet the applicable fuel-burning equipment RACT requirement in this regulation."

C. **Operational Limitations**
The Permittee shall burn only natural gas, unless approval is obtained from the Department. **[Reference: COMAR 26.11.02.09A(6)]**

4.2 **Testing Requirements:**

A. **Visible Emissions Limitations**
See Section 4.3, Monitoring Requirements.

B. **Control of Nitrogen Oxides**
See Section 4.3, Monitoring Requirements.

C. **Operational Limitations**
See Section 4.4, Record Keeping Requirements.

4.3 **Monitoring Requirements**:

A. **Visible Emissions Limitations**
The Permittee shall properly operate and maintain the boiler in a manner to prevent visible emissions. [**Reference: COMAR 26.11.03.06C]**

B. **Control of Nitrogen Oxides**
The Permittee shall maintain an operating and maintenance plan to minimize NO_x emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience. **[Reference: COMAR 26.11.09.08F(1)(b)]**

C. **Operational Limitations**
See Section 4.4, Record Keeping Requirements.

4.4 **Record Keeping Requirements**:
Note: All records must be maintained for a period of at least five (5) years and be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C(5)(g)]**

A. **Visible Emissions Limitations**
The Permittee shall maintain an operations manual and preventative maintenance plan and record of the maintenance performed based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience. **[Reference: COMAR 26.11.09.08F]**

B. **Control of Nitrogen Oxides**
The Permittee shall:
(1) Maintain the records of the maintenance performed based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience. **[Reference: COMAR 26.11.09.08F(1)(c)]**
(2) Retain records of training program attendance for each operator. **[Reference: COMAR 26.11.09.08G(1)(e)]**
(3) Maintain an operations manual and preventive maintenance plan.
(4) Maintain the records of fuel usage that demonstrates that each boiler meets the definition of a space heater. **[Reference: COMAR 26.11.09.08K(3) and COMAR 26.11.03.06C]**

C. **Operational Limitations**
The Permittee shall maintain a record of combined gas usage by the boilers based on meter readings and use this data to estimate fuel usage for each boiler. **[Reference: COMAR 26.11.03.06C]**

4.5 **Reporting Requirements**:

A. **Visible Emissions Limitations**
See Section 4.4, Record Keeping Requirements.

B. **Control of Nitrogen Oxides**
The Permittee shall submit a record of training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08F(1)(e)]**

C. **Operational Limitations**
See Section 4.4, Record Keeping Requirements.

Compliance Methods for the Above (Description and Citation):

4.1 **Applicable Standards/Limits**:

A. **Visible Emissions Limitations**
Records maintained onsite indicate that there were no discharges of visible emissions from these units during the 2019 calendar year.

B. **Control of Nitrogen Oxides**
(1) (a) A list of each affected emissions unit on the premises and the types of fuel used in each unit is submitted to the Department as part of the Semi-Annual Fuel Reports, which were submitted to the Department on July 25, 2019 (reporting period January 2019 to June 2019) and January 27, 2020 (reporting period July 2019 to December 2019).
(b) The operating and maintenance plans of these units to minimize NO_x emissions have been developed according to the recommendations of equipment vendors and other information including the sources' operating and maintenance experience.

(c) The operating and maintenance plans for these units have been implemented and are maintained onsite by the Facilities Management Division in the MAXIMO database. These records are available to the Department upon request.

(d) Once every 3 years, each operator is required to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors. Training was last completed on November 28 and 29, 2017.

(e) Records of training program attendance for each operator are maintained onsite and these records are available to the Department upon request.

(2) As soon as it becomes apparent that GSFC no longer owns or operates an installation that qualifies as a space heater; GSFC will inform the Department no later than 60 days after the discovery, and will meet the applicable fuel-burning equipment RACT requirements in this regulation.

C. Operational Limitations

Fuel usage records indicate that these units have only burned natural gas. However, the natural gas provider, Washington Gas, did not submit monthly invoices for the natural gas usage for the building 97 space heating boilers for the months of July, October and November. GSFC continues to request the monthly invoices as a corrective action.

4.2 Testing Requirements:

A. Visible Emissions Limitations

See Section 4.3, Monitoring Requirements.

B. Control of Nitrogen Oxides

See Section 4.3, Monitoring Requirements.

C. Operational Limitations

See Section 4.4, Record Keeping Requirements.

4.3 Monitoring Requirements:

A. Visible Emissions Limitations

These units are operated and maintained in a way that prevents the discharge of visible emissions.

B. Control of Nitrogen Oxides

The operating and maintenance plans for these units are maintained by the Facilities Management Division in the MAXIMO database.

C. Operational Limitations

See Section 4.4, Record Keeping Requirements.

4.4 Record Keeping Requirements:

All records are maintained onsite for a period of at least 5 years and are available to the Department upon request.

A. Visible Emissions Limitations

The operating and maintenance plans and records of maintenance for these units are maintained by the Facilities Management Division in the MAXIMO database.

B. Control of Nitrogen Oxides

(1) Records of maintenance performed on these units are maintained by the Facilities Management Division in the MAXIMO database.

(2) Records of training program attendance for each operator are maintained onsite. Training was last completed on November 28 and 29, 2017.

(3) The operating and maintenance plans for these units are maintained by the Facilities Management Division in the MAXIMO database.

(4) Records of fuel usage are maintained by the Medical and Environmental Management Division. However, Washington Gas, did not submit monthly invoices for the natural gas usage for the building 97 space heating boilers for the months of July, October and November. Therefore, these specific records were not maintained. GSFC continues to request the monthly invoices as a corrective action.

C. Operational Limitations

Records of the combined fuel usage by the boilers based on meter readings are maintained by the Medical and Environmental Management Division. However, Washington Gas, did not submit monthly invoices for the natural gas usage for the building 97 space heating boilers for the months of July, October and November. Therefore, these specific records were not included. GSFC continues to request the monthly invoices as a corrective action.

4.5 Reporting Requirements:

A. Visible Emissions Limitations

See Section 4.4, Record Keeping Requirements.

B. Control of Nitrogen Oxides

Records of training program attendance for each operator are maintained onsite and available to the department upon request.

C. Operational Limitations

See Section 4.4, Record Keeping Requirements.

Status (Check one): _X __ Intermittent Compliance _ _ Continuous Compliance

Emission Unit ID(s): EU4-2, EU4-3, EU4-6, EU5A-3

Permit Term (Describe requirements and cross-reference)

5.1 **Applicable Standards/Limits**:

A. **Visible Emissions Limitations**

COMAR 26.11.06.02C(2), Visible Emission Standards. "In areas III and IV a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers."

COMAR 26.11.06.02A(2), Exceptions. "The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modification or adjustments, or occasional cleaning of control equipment, if:

(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."

B. **Control of Particulate Matter**

COMAR 26.11.06.03B(2), Particulate Matter from Confined Sources**.** "Areas III and IV. (a) A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm)."

C. **Control of VOC**

COMAR 26.11.19.13-1A, Applicability and Exemptions.

(1) "This regulation applies to an aerospace coating operation at a premises where the total actual VOC emissions from all aerospace coating operations is 20 pounds or more per day."
(2) "The standards in §C(2) of this regulation do not apply to tooling and touch up and repair operations."
(3) "A person subject to the standards in §C(2) of this regulation may comply with those standards by using an air pollution control device (see Regulation .02B(2)(b) of this chapter)."

COMAR 26.11.19.13-1C, General Requirements for Aerospace Coating Operations.

(1) "Except as provided in §C(3) of this regulation, a person who owns or operates an aerospace coating operation subject to this regulation may not cause or permit the discharge of VOC into the atmosphere unless the standards in §C(2) of this regulation are met."
(2) Aerospace Coating Operation Standards.
(a) Coating Standards at Maximum Allowable VOC in Pounds Per Gallon (Grams Per Liter) of Coating Applied (Minus Water)

Coating Types	**Pounds/Gallon (Grams/Liter)**
Topcoats	3.5 (420)
Self-priming topcoat	3.5 (420)
Primers	2.9 (350)
Chemical Milling Maskants	1.3 (160)
Exterior primer for large commercial aircrafts	5.4 (650)
Primer for general aviation rework facilities	4.5 (540)
(b) Standards for Specialty Coatings.	
Coating	**Pounds/Gallon (Grams/Liter)**
Ablative Coating	5.0 (600)
Adhesion Promoter	7.42 (890)
Adhesive Bonding Primers: Cured at 250°F or below	7.09 (850)
Adhesive Bonding Primers: Cured above 250°F	8.59 (1030)
Antichafe Coating	5.50 (660)
Bearing Coating	5.17 (620)
Bonding Maskant	10.26 (1,230)
Caulking and Smoothing Compounds	7.09 (850)
Chemical Agent-Resistant Coating	4.58 (550)
Clear Coating	6.00 (720)
Commercial Exterior Aerodynamic Structure Primer	5.42 (650)
Commercial Interior Adhesive	6.34 (760)
Compatible Substrate Primer	6.50 (780)
Corrosion Prevention Compound	5.92 (710)
Critical Use and Line Sealer Maskant	8.51 (1 ,020)
Cryogenic Flexible Primer	5.38 (645)
Cryoprotective Coating	5.00 (600)
Cyanoacrylate Adhesive	8.51 (1,020)
Dry Lubricative Material	7.34 (880)
Electric or Radiation-Effect Coating	6.67 (800)
Electrostatic Discharge and Electromagnetic Interference (EMI) Coating	6.67 (800)
Elevated-Temperature Skydrol-Resistant Commercial Primer	6.17 (740)

Epoxy Polyamide Topcoat	5.50 (660)
Fire-Resistant (interior) Coating	6.67 (800)
Flexible Primer	5.34(640)
Flight-Test Coatings Missile or Single Use Aircraft	3.50 (420)
Flight-Test Coatings All Other	7.0 (840)
Fuel Tank Adhesive	5.17 (620)
Fuel-Tank Coating	6.00 (720)
High-Temperature Coating	7.09 (850)
Insulation Covering	6.17 (740)
Intermediate Release Coating	6.25 (750)
Lacquer	6.9 (830)
Metallized Epoxy Coating	6.17 (740)
Mold Release	6.50 (780)
Nonstructural Adhesive	3.00 (360)
Optical Antireflective Coating	6.25 (750)
Part Marking Coating	7.09 (850)
Pretreatment Coating	6.50
Rain Erosion-Resistant Coating	7.09 (850)
Rocket Motor Bonding Adhesive	7.42 (890)
Rocket Motor Nozzle Coating	5.50 (660)
Rubber-Based Adhesive	7.09 (850)
Scale Inhibitor	7.34 (880)
Screen Print Ink	7.00 (840)
Sealants: Extrudable/Roliable/Brushable Sealant	2.33 (280)
Sprayable Sealant	5.0 (600)
Seal Coat Maskant	10.26 (1,230)
Silicone Insulation Material	7.09 (850)
Solid Film Lubricant	7.34 (880)
Specialized Function Coating	7.42 (890)
Structural Autoclavable Adhesive	0.50 (60)
Structural Nonautoclavable Adhesive	7.09 (850)
Temporary Protective Coating	2.67 (320)
Thermal Control Coating	6.67 (800)
Wet fastener installation coating	5.63 (675)
Wing coating	7.09 (850)

(3) "A person subject to this regulation may exceed the specialty coating standards in §C(2)(b) of this regulation if the total VOC emissions from all specialty coatings that exceed the standard in §C(2)(b) of this regulation do not exceed 20 pounds on any day."

(4) "A person who owns or operates an aerospace coating operation subject to this regulation shall comply with the primer and topcoat applications operations, chemical milling maskant operations, and the test methods and coating averaging procedures specified in 40 CFR §§63.745(a)-(e), 63.747(a)-(e), and 63.750 as applicable, which are incorporated by reference."

(5) Cleanup Requirements. "A person who owns or operates an aerospace coating operation shall:
   (a) Store all waste materials containing VOC, including cloth or paper, in closed containers;
   (b) Maintain lids on surface preparation and cleanup materials when not in use; and
   (c) Use enclosed containers or VOC recycling equipment to clean spray gun equipment."

5.2 Testing Requirements:

A. Visible Emissions Limitations
See Section 5.3, Monitoring Requirements.

B. Control of Particulate Matter
See Section 5.3, Monitoring Requirements.

C. Control of VOC
See Section 5.4, Record Keeping Requirements.

5.3 Monitoring Requirements:

A. Visible Emissions Limitations
The Permittee shall conduct an annual one-minute visual observation of the spray booth exhaust. The visual observation must be conducted while the spray booth is in operation. If visible emissions are observed during any visual observation, the Permittee must increase the schedule of exhaust observation to a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly visual observations. If visible emissions are observed during any observation, the Permittee must inspect the spray booth for cause of visible emissions and perform necessary adjustments or repairs within 24-hours or prior to operating the spray booth. If visible emissions have not been eliminated, the Permittee shall perform daily 18-minute visual observation for opacity in accordance with EPA Reference Method 9 when operating the spray booth. **[Reference: COMAR 26.11.03.06(C)]**

B. **Control of Particulate Matter**
The Permittee shall maintain a preventative maintenance plan for the spray booth system that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan. **[Reference: COMAR 26.11.03.06(C)]**

C. **Control of VOC**
See Section 5.4, Record Keeping Requirements.

5.4 **Record Keeping Requirements**:
Note: All records must be maintained for a period of at least 5 years and be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C(5)(g)]**

A. **Visible Emissions Limitations**
The Permittee shall maintain a log of visible emission observations performed. **[Reference: COMAR 26.11.03.06C]**

B. **Control of Particulate Matter**
The Permittee shall maintain records of maintenance activities designed to minimize air emissions. **[Reference: COMAR 26.11.03.06(C)]**

C. **Control of VOC**
Aerospace Coating Operations - Record Keeping.
(1) "A person subject to this regulation shall maintain the following records:
(i) A description and the volume of each coating used; and
(ii) The total weight and VOC content of each coating used on a monthly basis."
(2) "Records shall be retained for 3 years and be made available to the Department on request."
[Reference: COMAR 26.11.19.13-1(C)(6)]

The Permittee shall maintain a copy of MSDS/VOC data sheet for each coating used and retain records of monthly inspections of work practices on site for at least five years and make these records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

The Permittee shall maintain records of material usage for the surface coating operation on site. **[Reference: MDE Permit to Construct No 16-7-0235M, Condition #6]**

The Permittee shall maintain records of the quantity of materials used in the paint spray booth and the hours of operation of the booth. **[Reference: MDE Permit to Construct No. 037-6-1323, Part D(1)(a)]**

5.5 **Reporting Requirements**:

A. **Visible Emissions Limitations**
The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations".

B. **Control of Particulate Matter**
See Section 5.4, Record Keeping Requirements

C. **Control of VOC**
The Permittee shall report material usage and VOC content of coatings in the annual Emission Certification Report. **[Reference: COMAR 26.11.02.19C & D and COMAR 26.11.19.13-1C(6)]**

Compliance Methods for the Above (Description and Citation):

5.1 **Applicable Standards/Limits:**

A. **Visible Emissions Limitations**
Annual one-minute visual observation of the spray booth exhausts were conducted for EU4-2 and EU4-3 on October 18, 2019 and EU5A-3 on December 12, 2019. No visual emissions were observed.

B. **Control of Particulate Matter**
Filter banks and exhaust fans collect overspray and particulate matter from the paint booth operations. Filters are replaced as necessary to ensure that no discharge of particulate matter in excess of 0.03gr/SCFD is released into the outdoor atmosphere.

C. **Control of VOC**
Records maintained onsite indicate that the total actual VOC emissions from all aerospace coating operations are less than 20 pounds per day.

Review of material usage records indicate that all general requirements for aerospace coating operations per COMAR 26.11.19.13-1(C) are being met. In addition, review of monthly and weekly inspection checklists indicates that work practices are in compliance with cleanup requirements.

5.2 **Testing Requirements**:

A. **Visible Emissions Limitations**
See Section 5.3, Monitoring Requirements.

B. **Control of Particulate Matter**
See Section 5.3, Monitoring Requirements.

C. **Control of VOC**
See Section 5.4, Record Keeping Requirements.

5.3 **Monitoring Requirements**:

A. **Visible Emissions Limitations**
Annual one-minute visual observation of the spray booth exhausts were conducted for EU4-2 and EU4-3 on October 28, 2019 and EU5A-3 on December 12, 2019. No visual emissions were observed.

B. **Control of Particulate Matter**
The preventive maintenance plan for these units, which describes the maintenance activity and time scheduled for completing each activity is maintained onsite. Records demonstrating that maintenance activities are performed within the timeframes established in the plan are maintained continuously onsite by Code 546 for EU4-2 and EU4-3 and Code 547 for EU5A-3.

C. **Control of VOC**
See Section 5.4, Record Keeping Requirements.

5.4 **Record Keeping Requirements**:
All records are maintained onsite for a period of at least 5 years and are available to the Department upon request.

A. **Visible Emissions Limitations**
Copies of visual emission observations performed forms are maintained by Code 546 for EU4-2 and EU4-3 and Code 547 for EU5A-3. They are also maintained by the Medical and Environmental Management Division.

B. **Control of Particulate Matter**
Records containing dates of maintenance activities, designed to minimize air emissions, that were performed on these units are stored continuously onsite by Code 546 for EU4-2 and EU4-3 and Code 547 for EU5A-3.

C. **Control of VOC**
Records of material usage are maintained onsite daily. They contain a description and volume of each coating used. The total weight and VOC content of each coating are calculated and maintained onsite.

Copies of MSDS/VOC data sheets for each coating used and records of monthly inspections of work practices are maintained onsite in the MAXIMO database.

For EU5A-3, the hours of operation of the booth are also maintained onsite.

5.5 **Reporting Requirements**:

A. **Visible Emissions Limitations**
There were no known incidents of visible emissions reported within the calendar year. Any incident will be reported in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations".

B. **Control of Particulate Matter**
See Section 5.4, Record Keeping Requirements

C. **Control of VOC**
The Annual Emission Certification will be submitted to the Department by April 1, 2020 and will include material usage and VOC content of coatings from surface coating operations.

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

Emission Unit ID(s): EU5-2, EU5-4, EU5-6

Permit Term (Describe requirements and cross-reference)

6.1 **Applicable Standards/Limits:**

A. **Visible Emissions Limitations**
COMAR 26.11.06.02C(2), Visible Emission Standards. "In areas III and IV a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers."

COMAR 26.11.06.02A(2), Exceptions. "The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modification or adjustments, or occasional cleaning of control equipment, if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."

B. Control of Particulate Matter
COMAR 26.11.06.03B(2), Particulate Matter from Confined Sources. Areas III and IV. (a) A person may not cause or permit to be discharged in the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm)."

C. Operational Limitation
Prior to engaging in chromium electroplating or chromium anodizing, the source shall submit for approval a demonstration of compliance with 40 CFR 63, Subpart N, National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks. **[Reference: MDE Permit to Construct No. 16-6-0855 N 1997]**

6.2 Testing Requirements:

A. Visible Emissions Limitations
See Section 6.3, Monitoring Requirements.

B. Control of Particulate Matter
See Section 6.3, Monitoring Requirements.

C. Operational Limitation
See Section 6.5, Reporting Requirements.

6.3 Monitoring Requirements:

A. Visible Emissions Limitations
The Permittee shall conduct an annual one-minute visual observation of the exhaust. The visual observation must be conducted while the plating line is in operation. If visible emissions are observed during any visual observation, the Permittee must perform monthly observations of the exhaust and maintain that schedule until no visible emissions are observed in six consecutive monthly visual observations. If visible emissions are observed during any observation, the Permittee must inspect the plating line for the cause of visible emissions and perform necessary adjustments or repairs within 24-hours or prior to again operating the plating line. **[Reference: COMAR 26.11.03.06(C)]**

B. Control of Particulate Matter
The Permittee shall maintain a preventative maintenance plan for the plating shop that describes the maintenance activity designed to minimize air emissions and time schedule for completing each activity. The Permittee shall perform the described maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed. **[Reference: COMAR 26.11.03.06(C)]**

C. Operational Limitation
See Section 6.5, Reporting Requirements.

6.4 Record Keeping Requirements:
Note: All records must be maintained for a period of at least 5 years and be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C(5)(g)]**

A. Visible Emissions Limitations
The Permittee shall maintain a log of visible emission observations performed. **[Reference: COMAR 26.11.03.06C]**

B. Control of Particulate Matter
The Permittee shall maintain records of maintenance activities designed to minimize air emissions. **[Reference: COMAR 26.11.03.06C]**

C. Operational Limitation
See Section 6.5, Reporting Requirements.

6.5 Reporting Requirements:

A. Visible Emissions Limitations
The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations".

B. Control of Particulate Matter
See Section 6.4, Record Keeping Requirements.

C. Operational Limitation
The Permittee shall submit for approval, a demonstration of compliance with 40 CFR Part 63, Subpart N, National Emissions Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks, prior to engaging in chromium electroplating or chromium anodizing activities. **[Reference: MOE Permit to Construct No. 16-6-0855 N issued in 1997]**

Compliance Methods for the Above (Description and Citation):

6.1 **Applicable Standards/Limits:**

A. **Visible Emissions Limitations**
Annual one-minute visual observations of EU5-2, EU5-4, and EU5-6 exhausts were conducted on July 15, 2019. No visual emissions were observed.

B. **Control of Particulate Matter**
No particulate matter in excess of 0.03 gr/SCFD is discharged from these units into the outdoor atmosphere. Emission controls implemented include using floating plastic balls, keeping tanks covered when not in use, and keeping specific tanks covered at all times.

C. **Operational Limitation**
GSFC only engages in approved operations.

6.2 **Testing Requirements**:

A. **Visible Emissions Limitations**
See Section 6.3, Monitoring Requirements.

B. **Control of Particulate Matter**
See Section 6.3, Monitoring Requirements.

C. **Operational Limitation**
See Section 6.5, Reporting Requirements.

6.3 **Monitoring Requirements**:

A. **Visible Emissions Limitations**
Annual one-minute visual observations of EU5-2, EU5-4, and EU5-6 exhausts were conducted on July 15, 2019. No visual emissions were observed.

B. **Control of Particulate Matter**
Preventive maintenance plans for the plating shop that describe the maintenance activity necessary to minimize air emissions, time schedules for completing each activity, and dates of completion, are maintained onsite by Code 547. All maintenance activities are performed within the timeframes established in the plan.

C. **Operational Limitation**
See Section 6.5, Reporting Requirements.

6.4 **Record Keeping Requirements**:
All records are maintained onsite for a period of at least 5 years and are available to the Department upon request.

A. **Visible Emissions Limitations**
Copies of visual emission observations performed forms are maintained by Code 547 and the Medical and Environmental Management Division.

B. **Control of Particulate Matter**
Records of maintenance activities designed to minimize air emissions that were performed on these units are maintained onsite by Code 547.

C. **Operational Limitation**
See Section 6.5, Reporting Requirements.

6.5 **Reporting Requirements**:

A. **Visible Emissions Limitations**
There were no known incidents of visible emissions reported within the 2019 calendar year. Any incidences will be reported in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

B. **Control of Particulate Matter**
See Section 6.4, Record Keeping Requirements.

C. **Operational Limitation**
GSFC only engages in approved operations.

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

Emission Unit ID(s): EU30-1, EU30-2, EU30-3, EU30-4, EU30-5, EU30-6, EU30-7, EU30-8

Permit Term (Describe requirements and cross-reference)

7.1 Applicable Standards/Limits:

A. Visible Emissions Limitations

COMAR 26.11.06.02C(2), Visible Emission Standards. "In Areas III and IV a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers."

COMAR 26.11.06.02A(2), Exceptions. "The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modification or adjustments, or occasional cleaning of control equipment, if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."

B. Control of Particulate Matter

COMAR 26.11.06.03B(2), Particulate Matter from Confined Sources. "Areas III and IV. (a)A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm)."

C. Control of VOC

COMAR 26.11.06.06B(1), Control of VOC from Installations. "The following requirements apply in Baltimore City and Anne Arundel, Baltimore, Carroll, Harford, Howard, Montgomery, and **Prince George's** counties: (b) Installations Constructed On or After May 12, 1972. Except as provided in §E of this regulation, a person may not cause or permit the discharge of VOC from any installation constructed on or after May 12, 1972, in excess of 20 pounds (9.07 kilograms) per day unless the discharge is reduced by 85 percent or more overall."

D. Operational Limitation

The emissions from the Clean Room operation shall be controlled by a wet scrubber. The wet scrubber shall be operated in accordance with the specifications contained in this application and operating procedures that were specified in the application by the equipment vendors. **[Reference: MDE PTC 16-6-0903 N, Issued August 26, 1997]**

7.2 Testing Requirements:

A. Visible Emissions Limitations

See Section 7.3, Monitoring Requirements.

B. Control of Particulate Matter

See Section 7.3, Monitoring Requirements.

C. Control of VOC

See Section 7.3, Monitoring Requirements.

D. Operational Limitation

See Section 7.4, Record Keeping Requirements.

7.3 Monitoring Requirements:

A. Visible Emissions Limitations

The Permittee shall conduct annual one-minute visual observations of the scrubber exhaust. The visual observation must be conducted while the clean room processes and scrubber are in operation. If visible emissions are observed during any visual observation, the Permittee must increase the frequency of the observation of the scrubber exhaust to a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly visual observations. If visible emissions are observed during any observation, the Permittee must inspect the scrubber and clean room operations for the cause of visible emissions and perform necessary adjustments or repairs within 24-hours or prior to again operating the clean room processes. If visible emissions have not been eliminated, the Permittee shall perform daily 18-minute visual observation for opacity in accordance with EPA Reference Method 9 when operating the clean room operations. **[Reference: COMAR 26.11.03.06C]**

B. Control of Particulate Matter

The Permittee shall maintain a preventative maintenance plan for the scrubber that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed. **[Reference: COMAR 26.11.03.06C]**

C. Control of VOC

The operator shall check MSDS and material usage to ensure that the total VOC emissions do not exceed 20 lbs per day. The MSDS shall contain VOC data that is based on EPA Method 24 testing or equivalent. **[Reference: COMAR 26.11.03.06C]**

D. Operational Limitation

See Section 7.4, Record Keeping Requirements.

7.4 Record Keeping Requirements:

Note: All records must be maintained for a period of at least 5 years and be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C(5)(g)]**

A. **Visible Emissions Limitations**
The Permittee must maintain records of visible emissions observations. **[Reference: COMAR 26.11.03.06C]**

B. **Control of Particulate Matter**
See Section 7.3, Monitoring Requirements.

C. **Control of VOC**
The Permittee shall maintain the following records:
(1) Material usage;
(2) The weight and HAP and VOC content of each material used totaled on a monthly basis;
(3) A copy of MSDS/VOC data sheet for each material used; and
(4) Preventative Maintenance log including records of monthly inspections of work practices.
[Reference: COMAR 26.11.03.06C and MDE PTC 16-6-0903 N Issued August 26, 1997]

D. **Operational Limitation**
The Permittee shall maintain records of material usage. **[Reference: COMAR 26.11.03.06C]**

7.5 **Reporting Requirements**:

A. **Visible Emissions Limitations**
The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations". **[Reference: COMAR 26.11.03.06C]**

B. **Control of Particulate Matter**
See Section 7.3, Monitoring Requirements.

C. **Control of VOC**
Records of material usage and calculated HAP, TAP and VOC emissions shall be submitted to the department as part of the annual Emissions Certification Report. **[Reference: COMAR 26.11.03.06C]**

D. **Operational Limitation**
The Permittee shall report material usage to the Department as part of the annual Emissions Certification Report. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

7.1 **Applicable Standards/Limits:**

A. **Visible Emissions Limitations**
Annual one-minute visual observations of EU30-1 through EU30-8 exhausts were conducted on December 4, 2019. No visual emissions were observed.

B. **Control of Particulate Matter**
The wet scrubber installed controls emissions for the Clean Room operations. The scrubber is operated in accordance with the specification contained in the operating procedures that were specified by equipment vendors. The scrubber ensures that no particulate matter in excess of 0.03 gr/SCFD is discharged into the outdoor atmosphere**.**

C. **Control of VOC**
The calculated VOC discharge demonstrates that less than 20 pounds per day of VOCs are discharged from these units.

D. **Operational Limitation**
The Clean Room operation is controlled by a wet scrubber operated in accordance with permit specifications and operating procedures that were specified by the equipment vendors.

7.2 **Testing Requirements**:

A. **Visible Emissions Limitations**
See Section 7.3, Monitoring Requirements.

B. **Control of Particulate Matter**
See Section 7.3, Monitoring Requirements.

C. **Control of VOC**
See Section 7.3, Monitoring Requirements.

D. **Operational Limitation**
See Section 7.4, Record Keeping Requirements.

7.3 **Monitoring Requirements**:

A. **Visible Emissions Limitations**
Annual one-minute visual observations of EU30-1 through EU30-8 exhausts were conducted on December 4, 2019. No visual emissions

were observed.

B. **Control of Particulate Matter**
The preventive maintenance plan for the scrubber and records containing dates of maintenance activities that were performed on the scrubber are stored in the MAXIMO database.

C. **Control of VOC**
Material usage records are collected by the Medical and Environmental Management Division on a quarterly basis. The VOC discharge is then calculated. The calculated VOC discharge demonstrates that less than 20 pounds per day of VOCs are discharged from these units.

D. **Operational Limitation**
See Section 7.4, Record Keeping Requirements.

7.4 **Record Keeping Requirements**:
All records are maintained onsite for a period of at least 5 years and are available to the Department upon request.

A. **Visible Emissions Limitations**
Copies of records of visual emission observations performed are maintained by Code 553 and the Medical and Environmental Management Division.

B. **Control of Particulate Matter**
See Section 7.3, Monitoring Requirements.

C. **Control of VOC**
The following records are maintained onsite:
(1) Material usage;
(2) The weight and HAP and VOC content of each material used totaled on a monthly basis are calculated;
(3) A copy of MSDS/VOC data sheet for each material used; and
(4) Preventive Maintenance records are maintained in the MAXIMO database.

D. **Operational Limitation**
Records of material usage are maintained onsite.

7.5 **Reporting Requirements**:

A. **Visible Emissions Limitations**
There were no known incidents of visible emissions reported within the calendar year. Any incidences will be reported in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations."

B. **Control of Particulate Matter**
See Section 7.3, Monitoring Requirements.

C. **Control of VOC**
The Annual Emission Certification will be submitted to the Department by April 1, 2020 and will include records of material usage and calculated HAPs, TAPs, and VOCs.

D. **Operational Limitation**
The Annual Emission Certification will be submitted to the Department by April 1, 2020 and will include material usage for these units.

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

Emission Unit ID(s): EU27-2, EU27-3

Permit Term (Describe requirements and cross-reference)

9.1 **Applicable Standards/Limits:**

Control of VOC
COMAR 26.11.13.04C(2), Small Storage Tanks – Stage I Vapor Recovery. "An owner or operator of a gasoline tank truck or an owner or operator of a stationary storage tank subject to this regulation may not cause or permit gasoline to be loaded into a stationary tank unless the loading system is equipped with a vapor balance line that is properly installed, maintained, and used."

COMAR 26.11.13.04D, Small Storage Tanks – General Standards. "A person may not cause or permit gasoline or VOC having a TVP greater than 1.5 psia (10.3 kilonewtons/square meter) or greater be loaded into any tank truck, railroad tank car, or other contrivance unless:
(1) Loading connections on the vapor lines are equipped with fittings that have no leaks and that automatically and immediately close upon disconnection to prevent release of gasoline or VOC from these fittings; and
(2) Equipment is maintained and operated in a manner to prevent avoidable liquid leaks during loading or unloading operations."

9.2 **Testing Requirements**:

Control of VOC
See Section 9.3, Monitoring Requirements

9.3 **Monitoring Requirements**:

Control of VOC
The Permittee shall monitor a fuel drop to verify that the Stage 1 vapor balance system is used at least once for every 10 fuel deliveries that are received. In addition, at least once for every 10 fuel deliveries during a delivery, the Permittee shall monitor a fuel drop for liquid spills and check the hose fittings and connections for leaks and proper operation. If leaks are detected, corrective action shall be as follows:
(1) Take immediate action to repair all observed VOC leaks that can be repaired with 48 hours; and
(2) Repair all other leaking components not later than 15 days after the leak is discovered. If a replacement part is needed, the part shall be ordered within 3 days after discovery of the leak, and the leak shall be repaired within 48 hours after receiving the part.
[Reference: COMAR 26.11.03.06C]

9.4 **Record Keeping Requirements**:
Note: All records must be maintained for a period of at least 5 years and be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Control of VOC
COMAR 26.11.24.07D, – Record Keeping and Reporting Requirements.
"An owner or operator of a gasoline dispensing facility exempted according to Regulation .02C of this chapter shall create and maintain records on gasoline throughput and tank sizes and make the records available to the Department upon request." **[Reference: COMAR 26.11.24.02B]**

COMAR 26.11.24.02F, - Applicability, Exemptions, and Effective Date.
"An owner or operator of a gasoline dispensing facility shall install and operate an approved system within 1 year after any calendar year in which the average monthly gasoline throughput at the facility during the calendar year exceeds 50,000 gallons per month for existing independent small business gasoline marketers, or 10,000 gallons per month for other existing gasoline dispensing facilities. The owner and operator of these facilities are subject to all applicable requirements of this chapter."

9.5 **Reporting Requirements**:

Control of VOC
See Section 9.4, Record Keeping Requirements.

Compliance Methods for the Above (Description and Citation):

9.1 **Applicable Standards/Limits:**

Control of VOC
EU 27-2 and EU27-3 are equipped with Stage I vapor recovery systems. GSFC does not permit gasoline to be loaded into a stationary tank unless the loading system is equipped with a vapor balance line that is properly installed, maintained, and used.

GSFC's Integrated Contingency Plan contains detailed procedures for fuel transfers. These procedures require that all hose connections to the tank and truck be checked by the driver during loading operations and that the driver properly drains all hoses prior to securing them to his/her vehicle. These procedures also require that equipment is operated in a manner to prevent avoidable liquid leaks during loading or unloading operations.

9.2 **Testing Requirements**:

Control of VOC
See Section 9.3, Monitoring Requirements.

9.3 **Monitoring Requirements**:

Control of VOC
At least once for every 10 fuel deliveries it is verified that the Stage I vapor balance system is used. GSFC's Integrated Contingency Plan contains detailed procedures for fuel transfers. These procedures require that all hose connections to the tank and truck be checked by the driver during loading operations and that the driver properly drains all hoses prior to securing them to his/her vehicle. In addition, each fuel delivery is monitored for fuel leaks. Any leaking component will be repaired no later than 15 days after the leak is discovered. If a replacement part is needed, the part will be ordered within 3 days after the leak is discovered, and the leak will be repaired within 48 hours after receiving the part.

9.4 **Record Keeping Requirements**:
All records are maintained onsite for a period of at least 5 years and are available to the Department upon request.

Control of VOC
(a) Records of gasoline throughput and tank sizes are maintained onsite and are available to the Department upon request.
(b) The average monthly gasoline throughput at the facility is less than 10,000 gallons per month.

9.5 **Reporting Requirements**:

Control of VOC
See Section 9.4, Record Keeping Requirements.

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 possible 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:

Section 4.4.B.(4): Maintain the records of fuel usage that demonstrates that each boiler meets the definition of a space heater. [Reference: COMAR 26.11.09.08K(3) and COMAR 26.11.03.06C]

Section 4.4.C.: The Permittee shall maintain a record of combined gas usage by the boilers based on meter readings and use this data to estimate fuel usage for each boiler. [Reference: COMAR 26.11.03.06C]

Emission Units (unit IDs): EU97-1

Deviation Start 07 / 01 / 2019 00 : 00 End: 07 / 31 / 2019 23 : 59
Deviation Start 10 / 01 / 2019 00 : 00 End: 11 / 30 / 2019 23 : 59

Date Written Report Submitted 01 / 27 / 2020

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
NASA GSFC complies with this requirement under the Part 70 Operating Permit. Procedures for controlling particulate matter emissions are specified in GSFC Construction Specifications for contractors. Section 01500 specifies requirements for dust control from worksites and access roads, and Section 01730 specifies that a detailed Demolition Plan must describe procedures for demolition. [COMAR 26.11.06.03D]

2. Open Burning
NASA GSFC complies with this requirement under the Part 70 Operating Permit. No unregulated open burning occurred during calendar year 2019. The regulation permits open burning for the instruction of industrial employees under the supervision of an appropriate fire control official. [COMAR 26.11.07.04(B)(2)]

3. Air Pollution Episode (N/A)
NASA GSFC complies with this requirement under the Part 70 Operating Permit. If requested by the Department, the Permittee will prepare, in writing, standby emissions reduction plans consistent with good industrial practice and safe operating procedures. No emission reduction plans were requested by the Department. [COMAR 26 11.05.04]

4. Report of Excess Emissions and Deviations
NASA GSFC complies with this requirement under the Part 70 Operating Permit. The Department is notified of conditions for occurrences of excess emissions and deviation. Deviations related to the record keeping of the natural gas usage of EU97-1 were included in the 6-Month Monitoring Reports submitted to the Department on January 27, 2020. [COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

5. Accidental Release Provisions (if applicable)
NASA GSFC complies with this requirement under the Part 70 Operating Permit. GSFC did not become subject to 40 CFR Part 68 during the 2019 calendar year. [COMAR 26 11.03.03B(23)] and [40 CFR 68]

6. General Testing Requirements
NASA GSFC complies with the general testing requirements under the Part 70 Operating Permit. Testing is done at a reasonable time, and all information gathered during testing is provided to the Department. [COMAR 26.11.01.04]

7. Emissions Test Methods
NASA GSFC complies with Emissions Test Methods under reference documents approved by the Department including 40 CFR 60, Appendix A, 40 CFR 51, Appendix M and the Department's Technical Memorandum 91-01. [COMAR 26.11.01.04]

8. Emission Certification Report
NASA GSFC complies with this requirement under the Part 70 Operating Permit. The Emission Certification Report will be submitted to the Department by April 1, 2020. [COMAR 26 11.01.05-1], [COMAR 26.11.02.19C], and [COMAR 26.11.02.19D]

9. Compliance Certification Report
NASA GSFC complies with this requirement under the Part 70 Operating Permit. The Annual Compliance Certification report will be submitted to the Department and EPA by April 1, 2020. [COMAR 26.11.03.06G (6) and (7)]

10. Certification by Responsible Official
NASA GSFC complies with this requirement under the Part 70 Operating Permit. All applications forms, reports, and compliance certifications submitted are certified as to truth, accuracy, and completeness by the Chief, Medical and Environmental Management Division. [COMAR 26.11.02.02F]

11. Sampling and Emissions Testing Record Keeping
NASA GSFC complies with sampling and emissions testing under the Part 70 Operating Permit. Records of NO_x meter measurements, visible emissions observations, and stack tests include the pertinent testing information. [COMAR 26.11.03.06C(5)]

12. General Record Keeping
NASA GSFC complies with this requirement under the Part 70 Operating Permit. All records are maintained for a period of at least 5 years and will be made available to the Department upon request. [COMAR 26.11.03.06C(6)]

13. General Conformity (N/A except for federal facilities)
NASA GSFC complies with the General Conformity rule under the Part 70 Operating Permit. [COMAR 26.11.26.09]

14. Asbestos Provisions (if applicable)
Procedures for complying with asbestos requirements when conducting any renovation or demolition activities are specified in GSFC Construction Specifications for contractors. Section 13285 Asbestos Abatement specifies requirements to comply with 40 CFR 61, Subpart M, as applicable.

15. Ozone Depleting Regulations (if applicable)
NASA GSFC manages Ozone Depleting and Global Warming Substances (ODGWS) regulations in accordance with 40 CFR Part 82, Subpart F, as applicable. [40 CFR 82, Subpart F]

16. Acid Rain Permit (if applicable)
N/A