



**AIR AND RADIATION ADMINISTRATION
DRAFT PART 70 OPERATING PERMIT**

DOCKET # 24-033-0675

COMPANY: NASA Goddard Space Flight Center

LOCATION: 8800 Greenbelt Rd
Greenbelt, Maryland 220771

CONTENTS:

1. Overview of the Part 70 Program
2. Notice of Opportunity for a Public Hearing
3. Fact Sheet
4. Draft Permit
5. Part 70 Permit Application

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
AIR QUALITY PERMITS PROGRAM
TITLE V – PART 70 OPERATING PERMIT PROGRAM OVERVIEW**

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

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

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

Public Participation Process

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

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

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

Citizen Petition to EPA to Object to Permit Issuance

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

Applicant Objection to Permit Issuance and Recourse

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

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION**

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

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of the application for a renewal Part 70 Operating Permit submitted by NASA Goddard Space Flight Center. The installation includes 5 dual-fueled boilers rated at 49.5 MMBtu/hr, space heating boilers, 17 emergency generators, a surface coating operation, a plating operation, fuel storage, and Clean Room fabrication operation.

The applicant is represented by:

Ms. Kimberly Finch, Chief
Medical and Environmental Management Division
NASA Goddard Space Flight Center
8800 Greenbelt Road
Greenbelt, Maryland 20771

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

<https://tinyurl.com/DraftTitleV>

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

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

A Request for public hearing shall include the following:

- 1) The name, mailing address, and telephone number of the person making the request;
- 2) The names and addresses of any other persons for whom the person making the request is representing; and
- 3) The reason why a hearing is requested, including the air quality concern that forms the basis for the request and how this concern relates to the person making the request.

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

BACKGROUND

The National Aeronautics and Space Administration – Goddard Space Flight Center (NASA-GSFC) facility is located in Greenbelt, Prince George’s County, Maryland.

NASA-GSFC’s vision is to revolutionize knowledge of the Earth and the universe through scientific discovery from space to enhance life on Earth. The GSFC is one of NASA’s most comprehensive laboratory facilities. Work activities at this facility include research, fabrication of equipment and satellite tracking by the ground control station. Research activities are conducted in space and earth science disciplines and include the development and testing of instruments, propulsion systems, spacecrafts, satellite antennas, and laboratory measurements. Fabrication activities include clean rooms, machine shops, electronic shops, a plating shop, and an acid etch facility. The satellite tracking system includes radar, telemetry, and optical devices. The primary Standard Industrial Classification (SIC) code for this facility is 9661. The Primary North American Industry Classification System (NAICS) code for this facility is 927110.

The following table summarizes the actual emissions from NASA-GSFC based on its Annual Emission Certification Reports:

Table 1: Actual Emissions

Year	NO_x (TPY)	SO_x (TPY)	PM₁₀ (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2019	14.87	0.41	0.54	21.10	1.81	0.31
2020	18.29	0.53	0.48	22.97	1.62	0.99
2021	17.39	0.46	0.64	21.45	2.58	0.022
2022	18.94	0.99	1.00	22.06	2.45	0.02
2023	19.03	0.99	1.02	20.95	2.45	0.16

The major source threshold for triggering Title V permitting requirements in Prince George’s county is 25 tons per year for VOC, 25 tons per year for NO_x, and 100 tons per year for any other criteria pollutants and 10 tons per year for a single HAP or 25 tons per year for total HAPs. Since the facility-wide potential, NO_x emissions from the facility are greater than the major source threshold, NASA-GSFC is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 PERMIT NO. 24-033-0675
 PART 70 OPERATING PERMIT FACT SHEET**

A Part 70 permit renewal application was received by the Department on November 30, 2023. An administrative completeness review was conducted, and the application was deemed to be administratively complete. A completeness determination letter was sent to NASA-GSFC on January 5, 2024 granting NASA-GSFC an application shield.

CHANGES AND MODIFICATIONS TO THE PART 70 OPERATING PERMIT

The following equipment was removed from the NASA-GSFC facility since the last Title V Operating Permit was issued.

MDE Registration Number	Emissions Unit Number	Emissions Unit Name and Description	Date of Installation
033-0675-6-1459	EU7-4	One (1) ultrasonic vapor degreaser, equipped with two (2) cooling coils and a power sliding cover and with a solvent capacity of 9.2 gallons.	2013

The following equipment has been added to the NASA-GSFC facility since the last Title V Operating Permit was issued.

MDE Registration Number	Emissions Unit Number	Emissions Unit Name and Description	Date of Installation
033-0675-9-1652	EU30-9	One (1) diesel fired emergency generator rated at 1000 kW (1341 HP).	2024

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

Several emission units at the NASA-GSFC are subject to the following NSPS:

Subpart Dc for Small Industrial-Commercial-Institutional Steam Generating Units applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

NASA-GSFC owns five boilers with a heat input rating between 10 million and 100 MMBtu/hr. installed in 1995. These boilers are subject to 40 CFR, Part 60, Subpart Dc.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

Subpart IIII for Stationary Compression Ignition Internal Combustion Engines applies to stationary compression ignition (CI) internal combustion engines (ICE) constructed after July 11, 2005 and either manufactured after April 1, 2006 or modified or reconstructed after July 11, 2005.

NASA-GSFC has four (4) emergency generators (MDE Registration Nos. 033-0675-9-1366, 9-1422, 9-1535 and 9-1652) that were installed and manufactured after June 12, 2006. These engines are subject to 40 CFR Part 60, Subpart IIII. All applicable requirements from 40 CFR Part 60, Subpart IIII were included in the Title V Operating Permit. The other thirteen (13) emergency generators owned by NASA-GSFC were installed before 2006 and are not subject to 40 CFR, Part 60, Subpart IIII per 40 CFR §60.4200(a)(2)(i).

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

The NASA-GSFC is not a major HAP Emissions Source. Instead, it is an area HAP emission source and is subject to the following MACTs:

Subpart N—National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks

As a condition of this permit, NASA-GSFC shall submit for approval a demonstration of compliance with 40 CFR Part 63, Subpart N prior to engaging in chromium electroplating or chromium anodizing

Subpart T—National Emission Standards for Halogenated Solvent Cleaning
Per 40 CFR §63.460(a), this regulation is applicable only to solvents containing any one or combination of the following in quantities greater than 5% by weight: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform (40 CFR §63.460(a)). NASA-GSFC does not utilize any of these solvents, therefore, this regulation does not apply.

Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities

NASA-GSFC is not a major source for HAP emissions and is not subject to 40 CFR Part 63, Subpart GG per 40 CFR §63.741(a).

Subpart ZZZZ — Stationary Reciprocating Internal Combustion Engines.
Requirements for Existing Stationary RICE Located at Area Sources of HAP
All of the seventeen (17) emergency generators owned by NASA-GSFC are subject to 40 CFR, Part 63, Subpart ZZZZ. Four (4) of the generators (MDE

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

Registration Nos. 033-0675-9-1366, 9-1422, 9-1535 and 9-1652) will meet the requirements of 40 CFR Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart IIII per 63.6590(a)(2)(iii) and 63.6590(c)(1).

The remaining thirteen (13) emergency generators are exempt from the requirements of 40 CFR Part 63, Subpart ZZZZ as long as they meet the requirement in 40 CFR §63.6585(f)(3). This exemption is included as an operating limitation in Section IV, Table IV-3 of the Title V Operating Permit.

§63.6585 - *Am I subject to this subpart?*

“You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RI CE test cell/stand.

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).”

Subpart JJJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

The five (5) boilers are exempt from the requirements of 40 CFR Part 63, Subpart JJJJJJ per 40 CFR §63.11195(e) as long as they meet the definition of “gas-fired boiler” in 40 CFR §63.11237.

40 CFR §63.11237: *Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.*

COMPLIANCE ASSURANCE MONITORING (CAM)

NASA-GSFC conducted a Compliance Assurance Monitoring (CAM) analysis and determined that the facility is not subject to the (CAM) Rule 40 CFR Subpart 64. Where control device is employed to control emission, the pre-control emissions of all pollutants are less than the major source threshold.

CAM is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act for large emission units that rely on air pollution control (APC) equipment to achieve compliance. The CAM

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 PERMIT NO. 24-033-0675
 PART 70 OPERATING PERMIT FACT SHEET**

approach establishes monitoring for the purpose of: (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that the cause or causes of the excursions are corrected. In order for a unit to be subject to CAM, the unit must be located at a major source, be subject to an emission limitation or standard; use a control device to achieve compliance; have post-control emissions of at least 100% of the major source amount (for initial CAM submittals); and must not otherwise be exempt from CAM. Applicability determinations are made on a pollutant-by-pollutant basis for each emission unit.

GREENHOUSE GAS (GHG) EMISSIONS

NASA-GSFC emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (NO₂). These GHGs originate from various processes (i.e., internal combustion engines, and boilers) contained within the facility premises applicable NASA-GSFC. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. While there may be no applicable requirements as a result of PSD, emission certifications reports for the years 2021, 2022, and 2023, showed that NASA-GSFC is not a major source (threshold: 100,000 tpy CO₂e) for GHG's (see Table 2 shown below). The Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit.

The following table summarizes the actual emissions from NASA-GSFC based on its Annual Emission Certification Reports:

Table 2: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2023 tpy CO₂e	2022 tpy CO₂e	2021 tpy CO₂e
Carbon dioxide CO ₂	1	28,673.64	31,126.64	27,787.22
Methane CH ₄	25	25	25	11
Nitrous Oxide N ₂ O	298	0	0	0.0

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 PERMIT NO. 24-033-0675
 PART 70 OPERATING PERMIT FACT SHEET**

Total GHG CO _{2eq}		28,698.64	31,151.64	27,798.22
--------------------------------	--	------------------	------------------	------------------

EMISSION UNIT IDENTIFICATION

NASA-GSFC has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Table 3: Emission Unit Identification

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
Building 24 Boilers			
EU24-1	5-0808	Three (3) Nebraska natural gas/landfill gas/No. 2 fuel oil-fired boilers each rated at 49.5 MMBtu/hr. and each equipped with low NO _x burners.	1995
EU24-2	5-0809		
EU24-4	5-0811		
EU24-3	5-0810	Two (2) Nebraska natural gas/No. 2 fuel oil fired boilers each rated at 49.5 MMBtu/hr. and each equipped with low NO _x burners.	1995
EU24-5	5-0812		
Small Space Heating Boilers			
EU35-1	5-1531	Two (2) 1.5 MMBtu/hr. natural gas Lochinvar space heating boilers.	2013
EU35-2	5-1532		
EU97-1	5-0846	One (1) Lochinvar natural gas fired boiler rated at 1.118 MMBtu/hr.	1990
EU302-1	5-0831	One (1) natural gas fired boiler rated at 1.7 MMBtu/hr.	1990
EU302-3	5-1533	One (1) natural gas fired boiler rated at 1.44 MMBtu/hr.	2013
Emergency Generators			
EU7-2	9-1045	One (1) 500-kW emergency generator firing No. 2 fuel oil.	1999
EU10-3	9-1047	One (1) 500-kW emergency generator firing No. 2 fuel oil.	1999
EU24C-1	9-1054		1996
EU24C-2	9-1055		

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 PERMIT NO. 24-033-0675
 PART 70 OPERATING PERMIT FACT SHEET**

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
EU24C-3	9-1056	Five (5) Caterpillar emergency generators each rated at 1,000-kW and firing No. 2 fuel oil.	
EU24C-4	9-1057		
EU24C-8	9-1058		
EU24C-6	9-1366	One (1) MTU Detroit Diesel emergency generator rated at 1,000-kW firing No. 2 fuel oil.	2012
EU31-1	9-1049	Five (5) Caterpillar emergency generators, each rated at 1,450 kW and firing No. 2 fuel oil.	1996
EU31-2	9-1050		
EU31-3	9-1051		
EU31-4	9-1052		
EU31-5	9-1053		
EU29-1	9-1422	One (1) emergency generator rated at 1,000-kW firing No. 2 fuel oil.	2013
EU7-3	9-1433	One (1) 500-kW emergency generator firing No. 2 fuel oil.	2003
EU28-1	9-1535	One (1) diesel fired Kohler emergency generator rated at 755 horsepower (563 kW).	2018
EU30-9	9-1652	One (1) diesel fired emergency generator rated at 1000 kW.	2024
Surface Coating Operation			
EU4-2	6-1101	Surface Coating Operation - coats instruments and structural members for spacecraft. There are two (2) paint booths and an electric curing oven.	1984
EU4-3			1960
EU4-6			1991
EU5A-3	6-1323	One (1) paint spray booth equipped with a filter. Used for painting of spaceflight hardware.	2006
Electro-chemical Plating Shop			
EU5-2	6-0852	Electro-chemical plating acid process line A equipped with scrubber. Tanks A-1, A-2, A-4, A-6, A-8, A-9, and A-11.	1994
EU5-4	6-0854	Electro-chemical plating acid process line N equipped with scrubber. Tanks N-1, N-3A, N-3B, N-5A, N-5B, N-5C, N-7, and N-8.	1994

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
EU5-6	6-0862	Electro-chemical plating acid process line B and E equipped with scrubber. Tanks B-1A, B-1B, B-3, B-4A, B-4B, B-6, B-7, B-8, B-10, E-1, E-2, E-3, E-5, E-7, and E-8.	1994
Fuel Storage and Dispensing Facility			
EU27-2	9-1168	One (1) 5,000 gallon AST storing E85 which is a gasoline/ethanol mixture. The tank is equipped with a Stage I vapor recovery system.	2004
EU27-3	9-1331	Two (2) 5,000 gallon ASTs storing gasoline and equipped with a Stage I vapor recovery system.	2009
Clean Room Semiconductor Development and Fabrication			
EU30-1	6-0903	Chemical vapor deposition followed by three (3) gas reactor columns and scrubber.	1997
EU30-3		Dry chemistry process equipped with scrubber.	
EU30-4		Oxidation process equipped with scrubber.	
EU30-5		Blasting process equipped with scrubber.	
EU30-6		Two (2) Thin films units equipped with scrubber.	
EU30-7		Four (4) Wet chemistry processes equipped with scrubber.	
EU30-8		Four (4) Photolithography processes equipped with scrubber.	
Char-broilers			
EU92-1	8-0186	Four (4) Char-broilers.	1991
EU92-2	8-0187		
EU92-3	8-0188		

AN OVERVIEW OF THE PART 70 PERMIT

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

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

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

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

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

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

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

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 PERMIT NO. 24-033-0675
 PART 70 OPERATING PERMIT FACT SHEET**

**REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE
 METHODOLOGY**

Emission Units: EU24-1 thru EU24-5 - Boilers

EU24-1, EU24-2 & EU24-4: Three (3) Nebraska natural gas/landfill gas/No. 2 fuel oil fired boilers each rated at 49.5 MMBtu/hr. and each equipped with low NO_x burners. Landfill gas and natural gas are the primary fuel sources; No. 2 fuel oil is only burned during periods of curtailment. [5-0808, 5-0809 & 5-0811]

EU24-3 & EU24-5: Two (2) Nebraska natural gas/No. 2 fuel oil fired boilers each rated at 49.5 MMBtu/hr. and each equipped with low NO_x burners. Natural gas is the primary fuel source; No. 2 fuel oil is only burned during periods of curtailment. [5-0810 & 5-0812]

These five (5) boilers have heat input rating between 10 million and 100 MMBtu/hr. installed in 1995 and are subject to **40 CFR Part 60, Subpart Dc. 40 CFR Part 60, Subpart Dc-Small Industrial-Commercial-Institutional Steam Generating Units** applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

These boilers are exempt from the requirements of **40 CFR Part 63, Subpart JJJJJJ** per 40 CFR §63.11195(e) as long as they meet the definition of “gas-fired boiler” in 40 CFR §63.11237.

Compliance Status

On January 10-12, 2023, the Permittee performed stack testing on one (1) [5-0809] of the five (5) boilers (49.5 MMBtu/hr. Nebraska boilers). During testing, the boilers burned either natural gas/landfill gas, natural gas or No.2 fuel oil. The tests were performed in accordance with US EPA Reference Methods (1-4, 5, 6C, 7E, 25A and 202). Steam loading on the boilers during the tests was approximately 30-35 Klbs/hr. The results are as follows:

Pollutants	Boiler #2 (5-0809)		
	Natural gas/Landfill gas	Natural gas	No. 2 fuel oil
NO _x (lb./MMBtu)	0.046*	0.068*	0.057*

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 PERMIT NO. 24-033-0675
 PART 70 OPERATING PERMIT FACT SHEET**

Pollutants	Boiler #2 (5-0809)		
	Natural gas/Landfill gas	Natural gas	No. 2 fuel oil
SO _x (lb./MMBtu)	0.0002	0.0008	0.00
PM (gr/dscf)	0.00	0.0007	0.0042
PM cond (gr/dscf)	0.002	0.0028	0.0012
VOC (lb./MMBtu)	0.00001	0.00	0.00

* The NO_x limits in the April 2005 PTC are 0.1 lbs./MMBtu per unit for a 24-hr averaging period and 0.1 lbs./MMBtu for a combined unit monthly averaging period. When the NO_x test results are rounded to one significant figure (consistent with the PTC condition limit) the facility will comply with all PTC NO_x averaging periods.

Per the January 10, 2023 Full Compliance Inspection report, NASA-GSFC’s fuel supplier certifies that all fuel oil delivered in 2020 and 2021 is a 15 ppm sulfur (maximum) dyed ultra-low sulfur diesel fuel. Copies of the fuel supplier certification are submitted to MDE in NASA-GSFC’s semi-annual Fuel (NSPS) Report.

Applicable Standards and Limits

A. Control of Visible Emissions

COMAR 26.11.09.05 - Visible Emissions.

“A. Fuel Burning Equipment.

(2) Areas III and IV. 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.

(3) Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, 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 Part 60 Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 MMBtu/hr but greater than 10 MMBtu/hr. for construction began after June 9, 1989.

§60.43c - Standard for particulate matter (PM).

“(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall 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. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb./MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.”

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.

Compliance Demonstration

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.

The Permittee shall perform the following, if visible emissions are observed:
Inspect combustion control system and boiler operations;
Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated;

Document in writing the results of the inspections, adjustments, and/or repairs to the boiler; and

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.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

The Permittee shall maintain the following:

- (1) An operations manual and preventative maintenance plan and records of maintenance performed that relates to combustion performance.
- (2) Records of the maintenance performed on the boiler that relate to preventing visible emissions
- (3) A log of visible emission observations performed.

[Reference: COMAR 26.11.03.06C]

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

COMAR 26.11.09.07 - Control of Sulfur Oxides From Fuel Burning Equipment.

A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: **(2)** In Areas III and IV: **(b)** Distillate fuel oils, 0.3 percent."

40 CFR Part 60 Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 MMBtu/hr. but greater than 10 MMBtu/hr. for construction began after June 9, 1989.

§60.42c - Standard for sulfur dioxide (SO₂).

"(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ 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.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr.).

(i) The SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction."

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

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.

Compliance Demonstration

§60.44c - Compliance and performance test methods and procedures for sulfur dioxide.

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

§60.46c - Emission monitoring for sulfur dioxide.

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

§60.48c - Reporting and recordkeeping requirements.

“(e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

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

(iii) The sulfur content or maximum sulfur content of the oil.”

§60.48c - Reporting and recordkeeping requirements.

(e)(11) The report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

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.”

Compliance Demonstration

The Permittee shall perform a combustion analysis for each installation at least once each year and optimize combustion based on the combustion analysis.

[Reference: COMAR 26.11.09.08E(2)]

The Permittee shall maintain on site records of the following: (1) Results of the annual combustion analysis; and (2) Training program attendance for each operator. **[Reference: COMAR 26.11.09.08E(5)]**

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 the training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08E(5)]**
-

D. Operational Limits

[Reference: MDE PTC No. 033-5-0808 thru 5-0812 issued April 27, 2005]

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

- (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.
- (2) The total 12-month rolling heat input consumed by the five (5) boilers shall not exceed 750,000 MMBtu.
- (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.
- (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.

Compliance Demonstration

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 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]**

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 (5) 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.

The Permittee shall maintain records of the following:

- (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.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

- (2) Calculated total rolling 12-month heat input to the five boilers.
- (3) Average NO_x emission rate from all five (5) boilers on calendar monthly basis.
- (4) Total annual SO_x emissions from all five (5) boilers on a 12-month rolling basis.

The Permittee shall report as part of the Annual Emissions 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 total annual 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. **[Reference: COMAR 26.11.03.06C]**

**Emission Units: EU35-1, EU35-2, EU97-1, EU302-1 & EU302-3 – Boilers:
Space Heaters**

EU35-1: One (1) Lochinvar, natural gas fired space heating boiler rated at 1.5 MMBtu/hr. **[5-1531]**

EU35-2: One (1) Lochinvar, natural gas fired space heating boiler rated at 1.5 MMBtu/hr. **[5-1532]**

EU97-1: One (1) Lochinvar, natural gas fired boiler rated at 1.118 MMBtu/hr. **[5-0846]**

EU302-1: One (1) natural gas fired boiler rated at 1.7 MMBtu/hr. **[5-0831]**

EU302-3: One (1) natural gas fired boiler rated at 1.44 MMBtu/hr. **[5-1533]**

40 CFR Part 60, Subpart Dc does not apply to these five (5) boilers since they are all less than 10 MMBtu/hr. each (per 40 CFR §60.40c(a)).

These five (5) boilers are exempt from the requirements of **40 CFR Part 63, Subpart JJJJJJ** per 40 CFR §63.11195(e) since they meet the definition of “gas-fired boiler” in 40 CFR §63.11237.

Compliance Status

Per the January 10, 2023 full compliance inspection report:

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

- The Permittee performs regular preventive maintenance on the units to optimize combustion, which will limit visible emissions.
- Fuel records from Washington Gas show that the units only burn natural gas and annual fuel usage records are submitted to MDE in the annual emission certification report.

Applicable Standards and Limits

A. Control of Visible Emissions

COMAR 26.11.09.05 - Visible Emissions.

A. Fuel Burning Equipment.

(2) Areas III and IV. 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.

(3) Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, 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.”

Compliance Demonstration

The Permittee shall properly operate and maintain the boiler in a manner to prevent visible emissions and keep records of the maintenance performed on the boilers. **[Reference: COMAR 26.11.03.06C]**

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 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;

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

(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.”

Compliance Demonstration

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)]

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 operations and preventive maintenance plan.

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

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 Limits

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

Compliance Demonstration

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 and make available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

Emission Units: EU7-2, EU7-3, EU10-3, EU24C-1 thru EU24C-4, EU24C-6, EU24C-8, EU31-1 thru EU31-5, EU28-1, EU29-1, and EU30-9 – Emergency Engines

EU7-2: One (1) emergency generator rated at 500 kW and firing No. 2 fuel oil. [9-1045].

EU7-3: One (1) emergency generator rated at 500 kW and firing No. 2 fuel oil. [9-1433]

EU10-3: One (1) emergency generator rated at 500 kW and firing No. 2 fuel oil. [9-1047].

EU24C-1 through EU24C-4 and EU24C-8: Five (5) Caterpillar emergency generators each rated at 1,000 kW and firing No. 2 fuel oil. [9-1054 thru 9-1058]

EU24C-6: One (1) MTU Detroit Diesel emergency generator rated at 1,000 kW and firing No. 2 fuel oil. [9-1366]

See Table IV-3a for additional requirements.

EU28-1: One (1) diesel fired Kohler emergency generator rated at 755 horsepower (563 kW). [9-1535]

See Table IV-3a for additional requirements.

EU29-1: One (1) emergency generator rated at 1,000 kW (1,341 HP) and firing No. 2 fuel oil. [9-1422]

See Table IV-3a for additional requirements.

EU30-9: One (1) emergency generator rated at 1,000 kW (1,341 HP) and firing No. 2 fuel oil. [9-1652]

See Table IV-3a for additional requirements.

EU31-1 thru EU31-5: Five (5) Caterpillar emergency generators each rated at 1,450 kW and firing No. 2 fuel oil. [9-1049 thru 9-1053]

40 CFR Part 60, Subpart IIII – NSPS for Stationary Compression Ignition Internal Combustion Engines.

Per 40 CFR §60.4200(a)(2)(i), this regulation applies only to Emission Units EU24C-6, EU28-1, EU29-1, and EU30-9. All requirements of this regulation are included in the Title V Operating Permit.

40 CFR Part 63, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines.

Per 40 CFR §63.6590(a)(1)(iii), this regulation applies to the following Emission Units: EU7-2, EU10-3, EU24C-1, EU24C-2, EU24C-3, EU24C-4, EU24C-8, EU31-1, EU31-2, EU31-3, EU31-4, EU31-5, and EU7-3. NASA centers are classified as "institutional" and therefore these existing units are considered exempt from 40 CFR Part 63, Subpart ZZZZ per 40 CFR 63.6585(f)(3).

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

§63.6585(f) *"The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f)."*

"(3) *Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)."*

EU24C-6, EU28-1, EU29-1, and EU30-9 are subject to **40 CFR Part 63, Subpart ZZZZ**. These engines will meet the requirements of 40 CFR Part 63, Subpart ZZZZ, by meeting the requirements of 40 CFR Part 60, Subpart IIII. There are no further requirements for these engines under 40 CFR Part 63, Subpart ZZZZ.

Compliance Status

Per the January 10, 2023, full compliance inspection report:

- NASA-GSFC's fuel supplier certifies that all fuel oil delivered in 2020 and 2021 is a 15-ppm sulfur (maximum) ultra-low sulfur diesel fuel.
- Data shows that all the engines did not operate more than 500 hours or had a capacity factor greater than 15% during 2020 and 2021. NASA-GSFC maintains these records for each engine on a monthly basis and also submits it annually in the Emissions Certification Report. Operators of boilers and generators receive required NO_x training.

Applicable Standards and Limits

A. Control of Visible Emissions

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

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

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

(4) Exceptions.

(a) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(b) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(i) Engines that are idled continuously when not in service: 30 minutes;

(ii) All other engines: 15 minutes.

(c) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics."

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

Compliance Demonstration

The Permittee shall perform preventive maintenance to optimize combustion performance. **[Reference: COMAR 26.11.03.06C]**

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]

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

COMAR 26.11.09.07 - Control of Sulfur Oxides From Fuel Burning Equipment.

"**A. Sulfur Content Limitations for Fuel.** A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

Compliance Demonstration

The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil or obtain sulfur in fuel analyses of oil that is representative of the oil burned.

[Reference: COMAR 26.11.03.06C]

The Permittee shall maintain records of fuel supplier's certification or sulfur in fuel analyses and 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

COMAR 26.11.09.08G. - Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent.

"(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- (a) Provide certification of the capacity factor of the equipment to the Department in writing;
- (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

- (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.”

Compliance Demonstration

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

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

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]**

The Permittee shall submit a record of the training program attendance for each operation 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]**

Emission Units: EU24C-6, EU28-1, EU29-1, and EU30-9 – Emergency Engines (Cont'd)

EU24C-6: One (1) MTU Detroit Diesel emergency generator rated at 1,000 kW and firing No. 2 fuel oil. **[9-1366]**

EU28-1: One (1) diesel fired Kohler emergency generator rated at 755 horsepower (563 kW). **[9-1535]**

EU29-1: One (1) emergency generator rated at 1,000 kW (1,341 HP) and firing No. 2 fuel oil. **[9-1422]**

EU30-9: One (1) emergency generator rated at 1,000 kW (1,341 HP) and firing No. 2 fuel oil. **[9-1652]**

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

Compliance Status

Per the January 10, 2023, full compliance inspection report:

- Tier certifications for engines are submitted with permit to construct applications
- NASA-GSFC's fuel supplier certifies that all fuel oil delivered in 2020 and 2021 is a 15-ppm sulfur (maximum) ultra-low sulfur diesel fuel.
- Non-resettable hour meters have been installed on engines and verified during the inspection

Applicable Standards and Limits

A. Control of Visible Emissions

The exhaust opacity from the emergency generators shall not exceed:

- (1) 20 percent during the acceleration mode;
- (2) 15 percent during the lugging mode; and
- (3) 50 percent during the peaks in either the acceleration or lugging modes.

[Ref: 40 CFR §60.4205(b), §60.4202(b)(2), and §1039]

Compliance Demonstration

The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. **[Reference: 40 CFR §60.4211(c)]**

B. Control of Sulfur Oxides

The Permittee must meet the non-road diesel fuel sulfur requirements of 40 CFR §1090.305 as follows:

- (a) Maximum sulfur content 15 ppm and
- (b) Minimum cetane index of 40; or
- (c) Maximum aromatic content of 35 volume percent.

[Ref: 40 CFR §1090.305]

Compliance Demonstration

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 §1090.305.

[Reference: COMAR 26.11.03.06C]

C. Control of Nitrogen Oxides

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

The Permittee must not exceed the following emission requirement: NMHC + NO_x: 6.4 grams per kilowatt hour. **[Reference: 40 CFR §60.4205(b), §60.4202(a)(2), and §1039]**

Compliance Demonstration

The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. **[Reference: 40 CFR §60.4211(c)]**

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. **[Reference: COMAR 26.11.03.06C]**

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), §1039, and 40 CFR §89.112(a) Table 1]**

Compliance Demonstration

The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. **[Reference: 40 CFR §60.4211(c)]**

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. **[Reference: COMAR 26.11.03.06C]**

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), and §1039]**

Compliance Demonstration

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. **[Reference: 40 CFR §60.4211(c)]**

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. **[Reference: COMAR 26.11.03.06C]**

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 manufacturers 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) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

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. **[Reference: 40 CFR §60.4211(f)]**

(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.

[Reference: 40 CFR §60.4211(f)]

Compliance Demonstration

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] §60.4214 (d)** – “If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) 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 specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(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.

(2) 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.

(3) 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) (<https://cdx.epa.gov/>). 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 § 60.4. Beginning on February 26, 2025, submit annual report electronically according to paragraph (g) of this section.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

Emission Units: EU4-2, EU4-3, EU4-6 and EU5A-3 – Surface Coating

EU4-2, EU4-3 & EU4-6: Surface Coating Operation - coats instruments and structural members for spacecraft. There are two (2) paint booths and an electric curing oven. [6-1101]

EU5A-3 - One (1) paint spray booth equipped with a filter. Used for painting of spaceflight hardware. [6-1323]

Compliance Status

Per the January 10, 2023 full compliance inspection report:

- The most recent VE observations were performed on: EU4-2 (3/30/2022), EU4-3 (3/30/2022) and EU5A-3 (7/16/2022). No visible emissions were observed during the observation.
- The Permittee performs regular preventive maintenance on the units and operating and maintenance activities for the units are maintained on-site in the facility's MAXIMO database.
- SDS with VOC content for all the coatings used in the spray booths are maintained on-site with the Facility's Hazardous Material Maintenance System (HMMS). Material usage and VOC content of the coatings are submitted to MDE in the annual emission certification report.

Applicable Standards and Limits

A. Control of Visible Emissions

COMAR 26.11.06.02C. - Visible Emission Standards.

“(2) 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 - General Exceptions

“(2) The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications 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.”

Compliance Demonstration

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

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

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

COMAR 26.11.06.03B – Particulate Matter from Confined Sources

"(2) 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)."

Compliance Demonstration

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 and shall maintain a log with records of the dates that maintenance was performed. The Permittee shall maintain records of maintenance activities designed to minimize air emissions and make available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

C. Control of VOC Emissions

COMAR 26.11.19.13-1 – Aerospace Coating Operations

A. 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)."

C. 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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 PERMIT NO. 24-033-0675
 PART 70 OPERATING PERMIT FACT SHEET**

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)

<i>Coating Types</i>	<i>Pounds/Gallon (Grams/Liter)</i>
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.	
<i>Coating</i>	<i>Pounds/Gallon (Grams/Liter)</i>
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)

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

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/Rollable/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,

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

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.

Compliance Demonstration

COMAR 26.11.19.13-1C(6) - Record Keeping.

“(a) 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.
- (b) Records shall be retained for not less than 3 years and be made available to the Department upon request.”

The Permittee shall maintain a copy of SDS/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 the following information:

- (1) Quantity of materials used in the paint spray booth and the hours of operation of the booth.
- (2) Material usage for the surface coating operation on site.

[Reference: MDE Permit to Construct No. 033-6-1323 issued August 2, 2006]

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

Emission Units: EU5-2, EU5-4 & EU5-6 – Electro Chemical Plating Shop

EU5-2: Electro-chemical plating acid process line A equipped with scrubber. Tanks A-1, A-2, A-4, A-6, A-8, A-9, and A-11. **[6-0852]**

EU5-4: Electro-chemical plating acid process line N equipped with scrubber. Tanks N-1, N-3A, N-3B, N-5A, N-5B, N-5C, N-7, and N-8. **[6-0854]**

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

EU5-6 - Electro-chemical plating acid process line B and E equipped with scrubber. Tanks B-1A, B-1B, B-3, B-4A, B-4B, B-6, B-7, B-8, B-10, E-1, E-2, E-3, E-5, E-7, and E-8. **[6-0862]**

Compliance Status

Per the January 10, 2023 full compliance inspection report:

- The most recent VE observations were performed on: EU5-2, EU5-4, and EU5-6 on April 15, 2022. No visible emissions were observed during the observation.
- The Permittee employs the use of floating plastic balls in the tanks, keeping the tank covers closed when not in use, and keeping specific tanks performs regular preventive maintenance on the units and operating and maintenance activities for the units are maintained on-site in the facility's database.
- SDS with VOC content for all the coatings used in the spray booths are maintained on-site with the Facility's Hazardous Material Maintenance System (HMMS).

Applicable Standards and Limits

A. Control of Visible Emissions

COMAR 26.11.06.02C. - Visible Emission Standards.

“(2) 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 - General Exceptions

“(2) The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications 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.”

Compliance Demonstration

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)]**

The Permittee shall maintain a log of visible emission observations performed.

[Reference: COMAR 26.11.03.06C]

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

B. Control of Particulate Matter

COMAR 26.11.06.03B – Particulate Matter from Confined Sources

“(2) 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).”

Compliance Demonstration

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. The Permittee shall maintain records of maintenance activities designed to minimize air emissions and make them available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

C. Operational Limit

Prior to engaging in chromium electroplating or chromium anodizing, the source 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.

[Reference: MDE Permit to Construct No. 16-6-0855 N issued in 1997]

Compliance Demonstration

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: MDE Permit to Construct No. 16-6-0855 N issued in 1997]**

Emission Units: EU27-2 & EU27-3 – Fuel Storage and Dispensing Facility

EU27-2: One (1) 5,000 gallon AST storing E85 which is a gasoline/ethanol mixture. The tank is equipped with a Stage I vapor recovery system. **[9-1168]**

EU27-3: Two (2) 5,000 gallon ASTs storing gasoline and equipped with a Stage I vapor recovery system. **[9-1331]**

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

Compliance Status

Per the January 10, 2023 full compliance inspection report:

- NASA-GSFC has an Integrated Contingency Plan that contains procedures for fuel transfers and equipment inspections. Activities related to this plan are maintained in the facility's database.
- Records of gasoline throughput are maintained by NASA-GSFC at the Motor Pool and show that monthly throughput is less than 10,000 gallons per month. In 2022, 25,674 gallons of unleaded gasoline and 10,379 gallons of E85 were dispensed.

Applicable Standards and Limits

Control of VOC Emissions

COMAR 26.11.13.04C. - Small Storage Tanks.

(1) Applicability. "This section applies to a person who owns or operates:

(a) A gasoline storage tank that has a tank capacity greater than 2,000 gallons but less than 40,000 gallons; or

(b) A gasoline tank truck used to transfer gasoline into a storage tank that is listed in §C(1)(a) of this regulation."

(2) 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. General Standards. "A person may not cause or permit gasoline or VOC having a TVP of 1.5 psia (10.3 kilonewtons/square meter) or greater to be loaded into any tank truck, railroad tank car, or other contrivance unless the:

(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."

Compliance Demonstration

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

(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]

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 on request.”

Emission Units: EU30-1 thru EU30-8: Clean Room Semiconductor Development and Fabrication

EU30-1: Chemical Vapor Deposition process followed by three (3) gas reactor columns and scrubber.

EU30-3: Dry chemistry process equipped with a scrubber.

EU30-4: Oxidation process equipped with a scrubber.

EU30-5: Blasting process equipped with a scrubber.

EU30-6: Two (2) thin film units equipped with a scrubber.

EU30-7: Four (4) wet chemistry processes equipped with a scrubber.

EU30-8: Four (4) photolithography processes equipped with a scrubber.

[6-0903]

Compliance Status

Per the January 10, 2023 compliance inspection report:

- VE observations were performed on: EU30-1 through EU30-8 on July 19, 2022. No visible emissions were observed during the observation.
- The preventive maintenance plans for the scrubber and records containing the dates of maintenance activities performed on the scrubber are maintained in the facility's database.
- NASA-GSFC maintain records of material usage, copies of the SDS/VOC data for each material used as well as the weight, HAP, and VOC content of each material used on a monthly basis.

Applicable Standards and Limits

A. Control of Visible Emissions

COMAR 26.11.06.02C. - Visible Emission Standards.

“(2) 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 - General Exceptions

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

“(2) The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications 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.”

Compliance Demonstration

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 annual 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 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]**

The Permittee must maintain records of visible emissions observations.

[Reference: COMAR 26.11.03.06C]

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

COMAR 26.11.06.03B – Particulate Matter from Confined Sources

“(2) 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).”

Compliance Demonstration

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 26.11.03.06(C)]**

C. Control of VOC Emissions

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

COMAR 26.11.06.06B. - Control of VOC from Installations.

“(1) 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.”

Compliance Demonstration

The operator shall check SDS and material usage to ensure that the total VOC emissions do not exceed 20 lbs per day. The SDS shall contain VOC data that is based on EPA Method 24 testing or equivalent.

[Reference: COMAR 26.11.03.06C]

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 SDS/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]

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 Limit

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 the 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]**

Compliance Demonstration

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

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

**Emission Units: Facility-Wide
Facility-wide subject to COMAR 26.11.19**

Compliance Status

Per the January 10, 2023 full compliance inspection report:

- In general, NASA-GSFC maintains records of written description of good operating practices, VOC leak detection activities, and equipment repair logs.

Applicable Standards and Limits

Control of VOC Emissions

COMAR 26.11.19.02I. - Good Operating Practices, Equipment Cleanup, and VOC Storage.

(1) Applicability. The requirements in this section apply to a person who owns or operates an installation that is subject to any requirement in this chapter.

(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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

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

(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.

(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 26.11.19.16 - Control of VOC Equipment Leaks

C. 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.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

(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.”

D. 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.”

Compliance Demonstration

The Permittee shall maintain the following:

- (1) All written descriptions of “good operating practices” designed to minimize emissions of VOCs; and
- (2) 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.

[Reference: COMAR 26.11.03.06C]

COMPLIANCE SCHEDULE

NASA-GSFC is currently in compliance with all applicable air quality regulations.

TITLE IV – ACID RAIN

Not Applicable.

TITLE VI – OZONE DEPLETING SUBSTANCES

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

NASA-GSFC is not subject to Title VI requirements.

SECTION 112(r) – ACCIDENTAL RELEASE

NASA-GSFC is not subject to the requirements of Section 112(r).

PERMIT SHIELD

The NASA-GSFC facility requested that a permit shield be expressly included in the Permittee's Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table in Section IV - Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

INSIGNIFICANT ACTIVITIES

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

- (1) No. 4 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

[For Areas III and IV]

The *affected fuel burning units* are subject to the following requirements:

COMAR 26.11.09.05A(2), which establishes that the Permittee 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.

Exceptions: COMAR 26.11.09.05A(2) does not apply to emissions during load changing, 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

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET

- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

[For Distillate Fuel Oil]

COMAR 26.11.09.07A(2)(b), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

- (2) No. 7 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The affected units are subject to the following requirements:

- (A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.
- (B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.
- (C) Exceptions:
- (i) COMAR 26.11.09.05E(2) 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.
- (ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
- (a) Engines that are idled continuously when not in service: 30 minutes
- (b) all other engines: 15 minutes.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

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

(4) No. 5 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The *affected units* are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;
- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;
- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET

- (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
- (5) ✓ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
- (6) ✓ Confection cookers where the products are edible and intended for human consumption;
- (7) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
- (8) ✓ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (9) ✓ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;
- (10) Containers, reservoirs, or tanks used exclusively for:
- (a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;
- (b) No. 6 Storage of lubricating oils;
- (c) No. 21 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (11) ✓ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

- (12) Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (13) First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (14) Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (15) Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (16) Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;
- (17) Laboratory fume hoods and vents;

For the following, attach additional pages as necessary:

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

No. 7 Abrasive Blasters_____

No. 3 Milling and Grinding Machines_____

No. 2 Paint Booth_____

No. 8 3D printers_____

No. 1 XeF2 Abatement System_____

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

No. 3 Vacuum Chambers_____

No. 1 Dust Collector_____

No. 1 Sputterer_____

No. 1 E-Beam Deposit Tool_____

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

STATE ONLY ENFORCEABLE REQUIREMENTS

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

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

1. Applicable Regulations:

COMAR 26.11.06.08 - Nuisance.

"An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution."

COMAR 26.11.06.09 - Odors.

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

COMAR 26.11.15.05 - Control Technology Requirements.

"A. New or Reconstructed Installations. A person may not construct, reconstruct, operate, or cause to be constructed, reconstructed, or operated, any new installation or source that will discharge a toxic air pollutant to the atmosphere without installing and operating T-BACT."

COMAR 26.11.15.06 - Ambient Impact Requirement.

"A. Requirements for New Installations, Sources, or Premises.

(1) Except as provided in §A(2) of this regulation, a person may not construct, modify, or operate, or cause to be constructed, modified, or operated, any new installation or source without first demonstrating to the satisfaction of the Department using procedures established in this chapter that total allowable emissions from the premises of each toxic air pollutant discharged by the new installation or source will not unreasonably endanger human health.

(2) If a new installation or source will discharge a TAP that is not listed in COMAR 26.11.16.07 and will be part of an existing premises, then emissions of that TAP from existing sources or existing installations on the premises may be omitted from a screening analysis unless the TAP is added to COMAR 26.11.16.07."

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
PERMIT NO. 24-033-0675
PART 70 OPERATING PERMIT FACT SHEET**

Condition (D) applies to the char-broiler only. (ARA Registration Nos. 033-0675-8-0186)

COMAR 26.11.18.06B(2), which states that “A person who constructs, owns, or operates a char-broiler or pit barbecue not subject to §B(1), of this regulation, may not cause or permit the discharge of emissions greater than 30 percent opacity.”

Note: This requirement was revised per information provided with the Title V Renewal Application which stated that COMAR 26.11.18.06B(1) should not apply since the char-broilers are greater than 300 feet from the property line. As such, COMAR 26.11.18.06B(1) was revised to COMAR 26.11.18.06B(2) and COMAR 26.11.18.06C(1) was also removed as a condition in this permit.

2. Operating Conditions:

This condition applies to the Electroplating Process only (ARA Registration Nos. 033-0675-6-0852, 6-0854, and 6-0862)

To comply with T-BACT, the Permittee shall:

- (a) Use floating plastic balls to cover the liquid surface on Tanks A-1, A-2, A-4, and A-11 as a fume suppressant.
- (b) Keep tanks B-1A, B-1B, B-3, B-4A, B-4B, E-1, E-2, E-3, N-3B, N-5A, N-5B, N-5C, and N-8 covered when not in operation.
- (c) Keep tanks E-7 and E-8 covered at all times.

3. Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee’s facility during the previous calendar year. The analysis shall include either:

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

SECTION I	SOURCE IDENTIFICATION	4
1.	DESCRIPTION OF FACILITY	4
2.	FACILITY INVENTORY LIST	4
SECTION II	GENERAL CONDITIONS	7
1.	DEFINITIONS	7
2.	ACRONYMS	7
3.	EFFECTIVE DATE	8
4.	PERMIT EXPIRATION	8
5.	PERMIT RENEWAL	8
6.	CONFIDENTIAL INFORMATION	9
7.	PERMIT ACTIONS	9
8.	PERMIT AVAILABILITY	10
9.	REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA	10
10.	TRANSFER OF PERMIT	10
11.	REVISION OF PART 70 PERMITS – GENERAL CONDITIONS	10
12.	SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS	11
13.	MINOR PERMIT MODIFICATIONS	12
14.	ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS	15
15.	OFF-PERMIT CHANGES TO THIS SOURCE	17
16.	ON-PERMIT CHANGES TO SOURCES	18
17.	FEE PAYMENT	20
18.	REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS	20
19.	CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION	21
20.	PROPERTY RIGHTS	22
21.	SEVERABILITY	22
22.	INSPECTION AND ENTRY	22
23.	DUTY TO PROVIDE INFORMATION	23
24.	COMPLIANCE REQUIREMENTS	23
25.	CREDIBLE EVIDENCE	24
26.	NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE	24
27.	CIRCUMVENTION	24
28.	PERMIT SHIELD	24
29.	ALTERNATE OPERATING SCENARIOS	25
SECTION III	PLANT WIDE CONDITIONS	26
1.	PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION	26
2.	OPEN BURNING	26
3.	AIR POLLUTION EPISODE	26
4.	REPORT OF EXCESS EMISSIONS AND DEVIATIONS	26
5.	ACCIDENTAL RELEASE PROVISIONS	27
6.	GENERAL TESTING REQUIREMENTS	28
7.	EMISSIONS TEST METHODS	28
8.	EMISSIONS CERTIFICATION REPORT	29
9.	COMPLIANCE CERTIFICATION REPORT	30
10.	CERTIFICATION BY RESPONSIBLE OFFICIAL	31

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

11.	SAMPLING AND EMISSIONS TESTING RECORD KEEPING	31
12.	GENERAL RECORDKEEPING	32
13.	GENERAL CONFORMITY	32
14.	ASBESTOS PROVISIONS.....	32
15.	OZONE DEPLETING REGULATIONS.....	33
16.	ACID RAIN PERMIT.....	33
SECTION IV	PLANT SPECIFIC CONDITIONS.....	34
SECTION V	INSIGNIFICANT ACTIVITIES	74
SECTION VI	STATE-ONLY ENFORCEABLE CONDITIONS	79

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

The National Aeronautics and Space Administration – Goddard Space Flight Center (NASA-GSFC) facility is located in Greenbelt, Prince George’s County, Maryland. NASA-GSFC’s vision is to revolutionize knowledge of the Earth and the universe through scientific discovery from space to enhance life on Earth.

GSFC is one of NASA’s most comprehensive laboratory facilities. Work activities at this facility include research, fabrication of equipment and satellite tracking by the ground control station. Research activities are conducted in space and earth science disciplines and include the development and testing of instruments, propulsion systems, spacecrafts, satellite antennas, and laboratory measurements. Fabrication activities include clean rooms, machine shops, electronic shops; a plating shop and an acid etch facility. The satellite tracking system includes radar, telemetry and optical devices. The primary Standard Industrial Classification (SIC) code for this facility is 9661. The Primary North American Industry Classification System (NAICS) code for this facility is 927110.

2. FACILITY INVENTORY LIST

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
Building 24 Boilers			
EU24-1	5-0808	Three (3) Nebraska natural gas/landfill gas/No. 2 fuel oil-fired boilers each rated at 49.5 MMBtu/hr. and each equipped with low NO _x burners.	1995
EU24-2	5-0809		
EU24-4	5-0811		
EU24-3	5-0810	Two (2) Nebraska natural gas/No. 2 fuel oil fired boilers each rated at 49.5 MMBtu/hr. and each equipped with low NO _x burners.	1995
EU24-5	5-0812		
Small Space Heating Boilers			
EU35-1	5-1531	Two (2) 1.5 MMBtu/hr. natural gas Lochinvar space heating boilers.	2013
EU35-2	5-1532		
EU97-1	5-0846	One (1) Lochinvar natural gas fired boiler rated at 1.118 MMBtu/hr.	1990
EU302-1	5-0831	One (1) natural gas fired boiler rated at 1.7 MMBtu/hr.	1990
EU302-3	5-1533	One (1) natural gas fired boiler rated at 1.44 MMBtu/hr.	2013

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
Emergency Generators			
EU7-2	9-1045	One (1) 500 kW emergency generator firing No. 2 fuel oil.	1999
EU10-3	9-1047	One (1) 500 kW emergency generator firing No. 2 fuel oil.	1999
EU24C-1	9-1054	Five (5) Caterpillar emergency generators, each rated at 1,000 kW and firing No. 2 fuel oil.	1996
EU24C-2	9-1055		
EU24C-3	9-1056		
EU24C-4	9-1057		
EU24C-8	9-1058		
EU24C-6	9-1366	One (1) MTU Detroit Diesel emergency generator rated at 1,000-kW firing No. 2 fuel oil.	2012
EU31-1	9-1049	Five (5) Caterpillar emergency generators, each rated at 1,450-kW and firing No. 2 fuel oil.	1996
EU31-2	9-1050		
EU31-3	9-1051		
EU31-4	9-1052		
EU31-5	9-1053		
EU29-1	9-1422	One (1) emergency generator rated at 1,000-kW firing No. 2 fuel oil.	2013
EU7-3	9-1433	One (1) 500-kW emergency generator firing No. 2 fuel oil.	2003
EU28-1	9-1535	One (1) diesel fired Kohler emergency generator rated at 755 horsepower (563 kW).	2018
EU30-9	9-1652	One (1) diesel fired emergency generator rated at 1000 kW.	2024
Surface Coating Operation			
EU4-2	6-1101	Surface Coating Operation - coats instruments and structural members for spacecraft. There are two (2) paint booths and an electric curing oven.	1984
EU4-3			1960
EU4-6			1991
EU5A-3	6-1323	One (1) paint spray booth equipped with a filter. Used for painting of spaceflight hardware.	2006
Electro-chemical Plating Shop			
EU5-2	6-0852	Electro-chemical plating acid process line A equipped with scrubber. Tanks A-1, A-2, A-4, A-6, A-8, A-9, and A-11.	1994

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
EU5-4	6-0854	Electro-chemical plating acid process line N equipped with scrubber. Tanks N-1, N-3A, N-3B, N-5A, N-5B, N-5C, N-7, and N-8.	1994
EU5-6	6-0862	Electro-chemical plating acid process line B and E equipped with scrubber. Tanks B-1A, B-1B, B-3, B-4A, B-4B, B-6, B-7, B-8, B-10, E-1, E-2, E-3, E-5, E-7, and E-8.	1994
Fuel Storage and Dispensing Facility			
EU27-2	9-1168	One (1) 5,000 gallon AST storing E85 which is a gasoline/ethanol mixture. The tank is equipped with a Stage I vapor recovery system.	2004
EU27-3	9-1331	Two (2) 5,000 gallon ASTs storing gasoline and equipped with a Stage I vapor recovery system.	2009
Clean Room Semiconductor Development and Fabrication			
EU30-1	6-0903	Chemical vapor deposition followed by three (3) gas reactor columns and scrubber.	1997
EU30-3		Dry chemistry process equipped with scrubber.	
EU30-4		Oxidation process equipped with scrubber.	
EU30-5		Blasting process equipped with scrubber.	
EU30-6		Two (2) Thin films units equipped with scrubber.	
EU30-7		Four (4) Wet chemistry processes equipped with scrubber.	
EU30-8		Four (4) Photolithography processes equipped with scrubber.	
Char-broilers			
EU92-1	8-0186	Four (4) Char-broilers.	1991
EU92-2	8-0187		
EU92-3	8-0188		

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

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

2. ACRONYMS

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM ₁₀	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

SO ₂	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

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

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

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

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

5. PERMIT RENEWAL

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

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

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

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

7. PERMIT ACTIONS

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

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

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

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;
- c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or
- d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

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

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

[COMAR 26.11.03.20B]

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

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

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

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

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

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.
- c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.
- d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

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

- a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.
- b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.
- c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal,

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

including the requirements for applications, public participation, and review by affected states and EPA, except:

- (1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;
 - (2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.
- d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).
 - e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.
 - f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.
 - g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

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

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- (1) Does not result in a violation of any applicable requirement of the Clean Air Act;
- (2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:
 - (a) Adding new requirements,
 - (b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or
 - (c) Changing from one approved test method for a pollutant and source category to another;
- (3) Does not require or modify a:
 - (a) Case-by-case determination of a federally enforceable emissions standard,
 - (b) Source specific determination for temporary sources of ambient impacts, or
 - (c) Visibility or increment analysis;
- (4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:
 - (a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification, and
 - (b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act;
- (5) Is not a Title I modification; and

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

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

b. Application for a Minor Permit Modification

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

- (1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;
- (2) The proposed minor permit modification;
- (3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:
 - (a) The proposed change meets the criteria for a minor permit modification, and
 - (b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;
- (4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

- (1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.
- (2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):
 - (a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- (b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.
- d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.
- e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

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

- a. An application for an administrative permit amendment shall:
 - (1) Be in writing;
 - (2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment; and
 - (3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.
- b. An administrative permit amendment:
 - (1) Is a correction of a typographical error;

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- (2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;
 - (3) requires more frequent monitoring or reporting by the Permittee;
 - (4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);
 - (5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);
 - (6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);
 - (7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or
 - (8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.
- c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.
 - d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

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

15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

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

- a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:
 - (1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (2) The change is not subject to any requirements under Title IV of the Clean Air Act;
 - (3) The change is not a Title I modification; and
 - (4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.
- b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.
- c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.
- d. The Permittee shall keep a record describing:

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- (1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and
- (2) The emissions resulting from those changes.
- e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.
- f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.
- g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.
- h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

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

- a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:
 - (1) The change is not a Title I modification;
 - (2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;
 - (3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- (4) The change does not violate an applicable requirement of the Clean Air Act;
 - (5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;
 - (6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;
 - (7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and
 - (8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.
- b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:
- (1) A description of the proposed change;
 - (2) The date on which the change is proposed to be made;
 - (3) Any change in emissions resulting from the change, including the pollutants emitted;
 - (4) Any new applicable requirement of the Clean Air Act; and
 - (5) Any permit term or condition that would no longer apply.
- c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.
- d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.
- f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.
- g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.
- h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

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

- a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.
- b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.
- c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

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

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;
- f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;
- g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.
- h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

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

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

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

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

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

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

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

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

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

- a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;
- b. Have access to and make copies of records required by the permit;
- c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

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

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

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

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

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

24. COMPLIANCE REQUIREMENTS

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

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

- a. Enforcement action,
- b. Permit revocation or revision,
- c. Denial of the renewal of a Part 70 permit, or

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

d. Any combination of these actions.

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

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

25. CREDIBLE EVIDENCE

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

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

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

27. CIRCUMVENTION

[COMAR 26.11.01.06]

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

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

- a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;
- b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;
- c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;
- d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or
- e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

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

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

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

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

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

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;
- b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;
- c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;
- d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.
- e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

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

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

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

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

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

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

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

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

- a. 40 CFR 60, appendix A
- b. 40 CFR 51, appendix M
- c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

8. EMISSIONS CERTIFICATION REPORT

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

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

- a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;
- b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:
 - (1) Familiar with each source for which the certifications forms are submitted, and
 - (2) Responsible for the accuracy of the emissions information;
- c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:
 - (1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
 - (2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
 - (3) Amounts, types and analyses of all fuels used;
 - (4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;
 - (5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- (a) Significant maintenance performed,
 - (b) Malfunctions and downtime, and
 - (c) Episodes of reduced efficiency of all equipment;
- (6) Limitations on source operation or any work practice standards that significantly affect emissions; and
- (7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

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

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

- a. The compliance certification shall include:
- (1) The identification of each term or condition of this permit which is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether the compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of each source, currently and over the reporting period; and
 - (5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.
- b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

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

The certification shall be in the following form:

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

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

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

- a. The location as specified in this permit, and the date and time that samples and measurements are taken;
- b. All pertinent operating conditions existing at the time that samples and measurements are taken;
- c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;
- d. The identity of the Permittee, individual, or other entity that performed the analysis;
- e. The analytical techniques and methods used; and

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

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

These records and support information shall include:

- a. All calibration and maintenance records;
- b. All original data collected from continuous monitoring instrumentation;
- c. Records which support the annual emissions certification; and
- d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

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

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

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

- a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.155.
- e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.157.

16. ACID RAIN PERMIT

Not applicable

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

SECTION IV PLANT SPECIFIC CONDITIONS

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

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

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

Table IV – 1	
1.0	<p><u>Emissions Unit Number(s): EU24-1 thru EU24-5 - Boilers</u></p> <p>EU24-1, EU24-2 & EU24-4: Three (3) Nebraska natural gas/landfill gas/No. 2 fuel oil fired boilers each rated at 49.5 MMBtu/hr. and each equipped with low NO_x burners. Landfill gas and natural gas are the primary fuel sources; No. 2 fuel oil is only burned during periods of curtailment. [5-0808, 5-0809 & 5-0811]</p> <p>EU24-3 & EU24-5: Two (2) Nebraska natural gas/No. 2 fuel oil fired boilers each rated at 49.5 MMBtu/hr. and each equipped with low NO_x burners. Natural gas is the primary fuel source; No. 2 fuel oil is only burned during periods of curtailment. [5-0810 & 5-0812]</p>
1.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u> COMAR 26.11.09.05 - Visible Emissions. “A. Fuel Burning Equipment. (2) Areas III and IV. 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,</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 1

emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

(3) Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, 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 Part 60 Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 MMBtu/hr. but greater than 10 MMBtu/hr. for construction began after June 9, 1989.

§60.43c - Standard for particulate matter (PM).

“(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall 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. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.”

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.

B. Control of Sulfur Oxides

COMAR 26.11.09.07 - Control of Sulfur Oxides From Fuel Burning Equipment.

“**A. Sulfur Content Limitations for Fuel.** A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 1

40 CFR Part 60 Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 MMBtu/hr but greater than 10 MMBtu/hr for construction began after June 9, 1989.

§60.42c - Standard for sulfur dioxide (SO₂).

“(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ 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.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr.).

(i) The SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.”

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;

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 1	
	<p>(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.”</p> <p><u>D. Operational Limits</u> [Reference: MDE PTC No. 033-5-0808 thru 5-0812 issued April 27, 2005]</p> <p>(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. (2) The total 12-month rolling heat input consumed by the five (5) boilers shall not exceed 750,000 MMBtu. (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. (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.</p>
1.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u> <u>§60.44c - Compliance and performance test methods and procedures for sulfur dioxide.</u> (h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis for each installation at least once each year. [Reference: COMAR 26.11.09.08E(2)]</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 1	
	<p>D. <u>Operational Limits</u> 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 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]</p> <p><u>Note:</u> The Permittee does not need to operate on No. 2 fuel oil solely for the purpose of conducting this test.</p>
1.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> 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]</p> <p>The Permittee shall perform the following, if visible emissions are observed: Inspect combustion control system and boiler operations; Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; Document in writing the results of the inspections, adjustments, and/or repairs to the boiler; and 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]</p> <p>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)]</p> <p><u>Note:</u> The Permittee does not need to operate on No. 2 fuel oil solely for the purpose of conducting this test.</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 1

	<p>B. <u>Control of Sulfur Oxides</u> §60.46c - <u>Emission monitoring for sulfur dioxide.</u> (e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under §60.48c(f), as applicable.</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall optimize combustion based on the combustion analysis. [Reference: COMAR 26.11.09.08E(2)]</p> <p>D. <u>Operational Limits</u> The Permittee shall:</p> <ol style="list-style-type: none"> (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 (5) 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. <p>[Reference: MDE PTC 033-5-0808 thru 5-0812, issued April 27, 2005]</p>
1.4	<p><u>Record Keeping Requirements:</u> 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)]</p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall maintain the following:</p> <ol style="list-style-type: none"> (1) An operations manual and preventative maintenance plan and records of maintenance performed that relates to combustion performance.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 1

	<p>(2) Records of the maintenance performed on the boiler that relate to preventing visible emissions</p> <p>(3) A log of visible emission observations performed. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u> §60.48c - Reporting and recordkeeping requirements. “(e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.</p> <p>(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.</p> <p>(f) Fuel supplier certification shall include the following information:</p> <p>(1) For distillate oil:</p> <p>(i) The name of the oil supplier;</p> <p>(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and</p> <p>(iii) The sulfur content or maximum sulfur content of the oil.”</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall maintain on site records of the following:</p> <p>(1) Results of the annual combustion analysis; and</p> <p>(2) Training program attendance for each operator. [Reference: COMAR 26.11.09.08E(5)]</p> <p>D. <u>Operational Limits</u> The Permittee shall maintain records of the following:</p> <p>(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.</p> <p>(2) Calculated total rolling 12-month heat input to the five boilers.</p> <p>(3) Average NO_x emission rate from all five (5) boilers on calendar monthly basis.</p> <p>(4) Total annual SO_x emissions from all five (5) boilers on a 12-month rolling basis.</p>
--	--

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 1	
	[Reference: MDE PTC 033-5-0808 thru 5-0812, issued April 27, 2005]
1.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Sulfur Oxides</u> §60.48c - Reporting and recordkeeping requirements. (e)(11) The report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period. (g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day. (j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.</p> <p>C. <u>Control of Nitrogen Oxides</u> 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 the training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08E(5)]</p> <p>D. <u>Operational Limits</u> The Permittee shall report as part of the Annual Emissions 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 total annual SO_x emissions from all five (5) boilers on a 12-month rolling basis.</p> <p>[Reference: MDE PTC 033-5-0808 thru 5-0812, issued April 27, 2005]</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 1	
	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. [Reference: COMAR 26.11.03.06C]

A permit shield shall cover the applicable requirements identified for the emission units listed in the table above.

Table IV – 2	
2.0	<p><u>Emissions Unit Number(s): EU35-1, EU35-2, EU97-1, EU302-1 & EU302-3 – Boilers: Space Heaters</u></p> <p>EU35-1: One (1) Lochinvar, natural gas fired space heating boiler rated at 1.5 MMBtu/hr. [5-1531]</p> <p>EU35-2: One (1) Lochinvar, natural gas fired space heating boiler rated at 1.5 MMBtu/hr. [5-1532]</p> <p>EU97-1: One (1) Lochinvar, natural gas fired boiler rated at 1.118 MMBtu/hr. [5-0846]</p> <p>EU302-1: One (1) natural gas fired boiler rated at 1.7 MMBtu/hr. [5-0831]</p> <p>EU302-3: One (1) natural gas fired boiler rated at 1.44 MMBtu/hr. [5-1533]</p>
2.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u> COMAR 26.11.09.05 - Visible Emissions.</p> <p>A. <u>Fuel Burning Equipment.</u></p> <p>(2) Areas III and IV. 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.</p> <p>(3) <u>Exceptions.</u> Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 2	
	<p>(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.”</p> <p>B. <u>Control of Nitrogen Oxides</u> COMAR 26.11.09.08F. - <u>Requirements for Space Heaters.</u> “(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.”</p> <p>C. <u>Operational Limits</u> The Permittee shall burn only natural gas, unless approval is obtained from the Department. [Reference: COMAR 26.11.02.09A(6)]</p>
2.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u> See Monitoring Requirements</p> <p>C. <u>Operational Limits</u> See Record Keeping Requirements</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 2	
2.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall properly operate and maintain the boiler in a manner to prevent visible emissions. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u> 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)]</p> <p>C. <u>Operational Limits</u> See Record Keeping Requirements</p>
2.4	<p><u>Record Keeping Requirements:</u></p> <p><u>Note:</u> 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)]</p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall keep records of the maintenance performed on the boilers. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u> The Permittee shall:</p> <ol style="list-style-type: none"> (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 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] <p>C. <u>Operational Limits</u> 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</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 2	
	for each boiler and make available to the Department upon request. [Reference: COMAR 26.11.03.06C]
2.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Nitrogen Oxides</u> 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)]</p> <p>C. <u>Operational Limits</u> See Record Keeping Requirements.</p>

A permit shield shall cover the applicable requirements identified for the emission units listed in the table above.

Table IV – 3	
3.0	<p><u>Emissions Unit Number(s): EU7-2, EU7-3, EU10-3, EU24C-1 thru EU24C-4, EU24C-6, EU24C-8, EU31-1 thru EU31-5, EU28-1, EU29-1, and EU30-9 – Emergency Engines</u></p> <p>EU7-2: One (1) emergency generator rated at 500 kW and firing No. 2 fuel oil. [9-1045].</p> <p>EU7-3: One (1) emergency generator rated at 500 kW and firing No. 2 fuel oil. [9-1433]</p> <p>EU10-3: One (1) emergency generator rated at 500 kW and firing No. 2 fuel oil. [9-1047].</p> <p>EU24C-1 through EU24C-4 and EU24C-8: Five (5) Caterpillar emergency generators each rated at 1,000 kW and firing No. 2 fuel oil. [9-1054 thru 9-1058]</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 3	
	<p>EU24C-6: One (1) MTU Detroit Diesel emergency generator rated at 1,000 kW and firing No. 2 fuel oil. [9-1366] See Table IV-3a for additional requirements.</p> <p>EU28-1: One (1) diesel fired Kohler emergency generator rated at 755 horsepower (563 kW). [9-1535] See Table IV-3a for additional requirements.</p> <p>EU29-1: One (1) emergency generator rated at 1,000 kW (1,341 HP) and firing No. 2 fuel oil. [9-1422] See Table IV-3a for additional requirements.</p> <p>EU31-1 thru EU31-5: Five (5) Caterpillar emergency generators each rated at 1,450 kW and firing No. 2 fuel oil. [9-1049 thru 9-1053]</p> <p>EU30-9: One (1) emergency generator rated at 1,000 kW (1,341 HP) and firing No. 2 fuel oil. [9-1652]</p>
3.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u> COMAR 26.11.09.05E. - Stationary Internal Combustion Engine Powered Equipment. “(2) Emissions During Idle Mode. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. (3) Emissions During Operating Mode. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. (4) Exceptions. (a) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. (b) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service: 30 minutes; (ii) All other engines: 15 minutes. (c) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.”</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 3

	<p>B. <u>Control of Sulfur Oxides</u> COMAR 26.11.09.07 - <u>Control of Sulfur Oxides From Fuel Burning Equipment.</u> “A. <u>Sulfur Content Limitations for Fuel.</u> 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.”</p> <p>C. <u>Control of Nitrogen Oxides</u> COMAR 26.11.09.08G. - <u>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.</u> “(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.”</p>
<p>3.2</p>	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u> See Monitoring Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis and optimize combustion at least once annually when fuel-burning equipment operates</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 3	
	for more than 500 hours in a calendar year. [Reference: COMAR 26.11.09.08G(1)(b)]
3.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall perform preventive maintenance to optimize combustion performance. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u> 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]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall calculate the capacity factor of each unit within 30 days after the end of each month. [Reference: COMAR 26.11.03.06C]</p>
3.4	<p><u>Record Keeping Requirements:</u></p> <p>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)]</p> <p>A. <u>Control of Visible Emissions</u> 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]</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall maintain records of fuel supplier’s certification or sulfur in fuel analyses. [Reference: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u> 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)]</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 3	
	<p>(2) Retain records of training program attendance for each operator. [Reference: COMAR 26.11.09.08G(1)(e)]</p> <p>(3) Retain monthly records of the calculated capacity factors. [Reference: COMAR 26.11.03.06C]</p>
3.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Sulfur Oxides</u> 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]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall submit a record of the training program attendance for each operation to the Department upon request. [Reference: COMAR 26.11.09.08G(1)(e)]</p> <p>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]</p>

A permit shield shall cover the applicable requirements identified for the emission units listed in the table above.

Table IV – 3a	
3a.0	<p><u>Emissions Unit Number(s): EU24C-6, EU28-1, EU29-1, and EU30-9 – Emergency Engines (Cont’d)</u></p> <p>EU24C-6: One (1) MTU Detroit Diesel emergency generator rated at 1,000 kW and firing No. 2 fuel oil. [9-1366]</p> <p>EU28-1: One (1) diesel fired Kohler emergency generator rated at 755 horsepower (563 kW). [9-1535]</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 3a	
	<p>EU29-1: One (1) emergency generator rated at 1,000 kW (1,341 HP) and firing No. 2 fuel oil. [9-1422]</p> <p>EU30-9: One (1) emergency generator rated at 1,000 kW (1,341 HP) and firing No. 2 fuel oil. [9-1652]</p>
3a.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u> The exhaust opacity from the emergency generators shall not exceed: (1) 20 percent during the acceleration mode; (2) 15 percent during the lugging mode; and (3) 50 percent during the peaks in either the acceleration or lugging modes. [Ref: 40 CFR §60.4205(b), §60.4202(b)(2), and §1039]</p> <p>B. <u>Control of Sulfur Oxides</u> 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. [Ref: 40 CFR §60.4207(b) and §1090.305]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee must not exceed the following emission requirement: NMHC + NO_x: 6.4 grams per kilowatt hour. [Reference: 40 CFR §60.4205(b), §60.4202(a)(2), and §1039]</p> <p>D. <u>Control of Particulate Matter</u> 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), §1039, and 40 CFR §89.112(a) Table 1]</p> <p>E. <u>Control of Carbon Monoxide</u> 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), and §1039]</p> <p>F. <u>Operational Limitations</u> The Permittee must install and operate a non-resettable hourly time meter on each engine. [Reference: 40 CFR §60.4209(a)]</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 3a

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 manufacturers 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) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(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.

(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.

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 3a	
	<p>(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:</p> <ul style="list-style-type: none"> (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. <p>[Reference: 40 CFR §60.4211(f)]</p>
3a.2	<p><u>Testing Requirements:</u></p> <ul style="list-style-type: none"> A. <u>Control of Visible Emissions</u> See Monitoring Requirements. B. <u>Control of Sulfur Oxides</u> See Record Keeping Requirements. C. <u>Control of Nitrogen Oxides</u> See Monitoring Requirements. D. <u>Control of Particulate Matter</u> See Monitoring Requirements. E. <u>Control of Carbon Monoxide</u> See Monitoring Requirements. F. <u>Operational Limitations</u> See Record Keeping Requirements.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 3a	
3a.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [Reference: 40 CFR §60.4211(c)]</p> <p>B. <u>Control of Sulfur Oxides</u> See Record Keeping Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [Reference: 40 CFR §60.4211(c)]</p> <p>D. <u>Control of Particulate Matter</u> The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [Reference: 40 CFR §60.4211(c)]</p> <p>E. <u>Control of Carbon Monoxide</u> The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [Reference: 40 CFR §60.4211(c)]</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 3a	
	<p>F. <u>Operational Limitations</u> See Record Keeping Requirements.</p>
3a.4	<p><u>Record Keeping Requirements:</u> 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)]</p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u> 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 §1090.305. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u> 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. [Reference: COMAR 26.11.03.06C]</p> <p>D. <u>Control of Particulate Matter</u> 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. [Reference: COMAR 26.11.03.06C]</p> <p>E. <u>Control of Carbon Monoxide</u> 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. [Reference: COMAR 26.11.03.06C]</p> <p>F. <u>Operational Limitations</u> 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</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 3a	
	operation (i.e. maintenance, operational testing, power outage, etc.). [Reference: COMAR 26.11.03.06C]
3a.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u> See Record Keeping Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u> See Record Keeping Requirements.</p> <p>D. <u>Control of Particulate Matter</u> See Record Keeping Requirements.</p> <p>E. <u>Control of Carbon Monoxide</u> See Record Keeping Requirements.</p> <p>F. <u>Operational Limitations</u> §60.4214 (d) – “If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section. (1) 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 specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii). (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii). (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</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 3a	
	<p>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.</p> <p>(2) 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.</p> <p>(3) 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) (https://cdx.epa.gov/). 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 § 60.4. Beginning on February 26, 2025, submit annual report electronically according to paragraph (g) of this section.</p>

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 4	
4.0	<p><u>Emissions Unit Number(s): EU4-2, EU4-3, EU4-6 and EU5A-3 – Surface Coating</u></p> <p>EU4-2, EU4-3 & EU4-6: Surface Coating Operation - coats instruments and structural members for spacecraft. There are two (2) paint booths and an electric curing oven. [6-1101]</p> <p>EU5A-3 - One (1) paint spray booth equipped with a filter. Used for painting of spaceflight hardware. [6-1323]</p>
4.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u> COMAR 26.11.06.02C - <u>Visible Emission Standards</u>. “(2) 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 - <u>General Exceptions</u> “(2) The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if:</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 4

(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 – Particulate Matter from Confined Sources

“(2) 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 Emissions

COMAR 26.11.19.13-1 – Aerospace Coating Operations

A. 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).”

C. 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)

<i>Coating Types</i>	<i>Pounds/Gallon (Grams/Liter)</i>
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.	
<i>Coating</i>	<i>Pounds/Gallon (Grams/Liter)</i>
Ablative Coating	5.0 (600)

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 4	
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

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 4

	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/Rollable/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)
	<p>(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.</p> <p>(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.</p> <p>(5) <u>Cleanup Requirements</u>. A person who owns or operates an aerospace coating operation shall:</p> <p>(a) Store all waste materials containing VOC, including cloth or paper, in closed containers;</p> <p>(b) Maintain lids on surface preparation and cleanup materials when not in use; and</p> <p>(c) Use enclosed containers or VOC recycling equipment to clean spray gun equipment.</p>	
4.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p>	

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 4	
	<p>B. <u>Control of Particulate Matter</u> See Monitoring Requirements</p> <p>C. <u>Control of VOC Emissions</u> See Record Keeping Requirements.</p>
4.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> 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)]</p> <p>B. <u>Control of Particulate Matter</u> 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 and shall maintain a log with records of the dates that maintenance was performed. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Control of VOC Emissions</u> See Record Keeping Requirements.</p>
4.4	<p><u>Record Keeping Requirements:</u> 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)]</p> <p>A. <u>Control of Visible Emissions</u></p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 4	
	<p>The Permittee shall maintain a log of visible emission observations performed. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Particulate Matter</u> The Permittee shall maintain records of maintenance activities designed to minimize air emissions and make available to the Department upon request. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Control of VOC Emissions</u> COMAR 26.11.19.13-1C(6) - <u>Record Keeping.</u> “(a) 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. (b) Records shall be retained for not less than 3 years and be made available to the Department upon request.”</p> <p>The Permittee shall maintain a copy of SDS/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]</p> <p>The Permittee shall maintain records of the following information: (1) Quantity of materials used in the paint spray booth and the hours of operation of the booth. (2) Material usage for the surface coating operation on site. [Reference: MDE Permit to Construct No. 033-6-1323 issued August 2, 2006]</p>
4.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Particulate Matter</u> See Record Keeping Requirements.</p> <p>C. <u>Control of VOC Emissions</u></p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 4	
	The Permittee shall report material usage and VOC content of coatings in the annual Emission Certification Report. [Reference: COMAR 26.11.02.19C & D]

A permit shield shall cover the applicable requirements identified for the emission units listed in the table above.

Table IV – 5	
5.0	<p><u>Emissions Unit Number(s): EU5-2, EU5-4 & EU5-6 – Electro Chemical Plating Shop</u></p> <p>EU5-2: Electro-chemical plating acid process line A equipped with scrubber. Tanks A-1, A-2, A-4, A-6, A-8, A-9, and A-11. [6-0852]</p> <p>EU5-4: Electro-chemical plating acid process line N equipped with scrubber. Tanks N-1, N-3A, N-3B, N-5A, N-5B, N-5C, N-7, and N-8. [6-0854]</p> <p>EU5-6 - Electro-chemical plating acid process line B and E equipped with scrubber. Tanks B-1A, B-1B, B-3, B-4A, B-4B, B-6, B-7, B-8, B-10, E-1, E-2, E-3, E-5, E-7, and E-8. [6-0862]</p>
5.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u> COMAR 26.11.06.02C. - Visible Emission Standards. “(2) 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 - General Exceptions “(2) The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications 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.”</p> <p>B. <u>Control of Particulate Matter</u> COMAR 26.11.06.03B – Particulate Matter from Confined Sources “(2) 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).”</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 5	
	<p>C. <u>Operational Limit</u> Prior to engaging in chromium electroplating or chromium anodizing, the source 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. [Reference: MDE Permit to Construct No. 16-6-0855 N issued in 1997]</p>
5.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Particulate Matter</u> See Monitoring Requirements</p> <p>C. <u>Operational Limit</u> See Record Keeping Requirements.</p>
5.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> 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)]</p> <p>B. <u>Control of Particulate Matter</u> 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)]</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 5	
	<p>C. <u>Operational Limit</u> See Reporting Requirements.</p>
5.4	<p><u>Record Keeping Requirements:</u> 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)]</p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall maintain a log of visible emission observations performed. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Particulate Matter</u> The Permittee shall maintain records of maintenance activities designed to minimize air emissions and make available to the Department upon request. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Operational Limit</u> See Reporting Requirements</p>
5.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Particulate Matter</u> See Record Keeping Requirements.</p> <p>C. <u>Operational Limits</u> 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: MDE Permit to Construct No. 16-6-0855 N issued in 1997]</p>

A permit shield shall cover the applicable requirements identified for the emission units listed in the table above.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 6	
6.0	<p><u>Emissions Unit Number(s): EU27-2 & EU27-3 – Fuel Storage and Dispensing Facility</u></p> <p>EU27-2: One (1) 5,000 gallon AST storing E85 which is a gasoline/ethanol mixture. The tank is equipped with a Stage I vapor recovery system. [9-1168]</p> <p>EU27-3: Two (2) 5,000 gallon ASTs storing gasoline and equipped with a Stage I vapor recovery system. [9-1331]</p>
6.1	<p><u>Applicable Standards/Limits:</u></p> <p><u>Control of VOC Emissions</u></p> <p>COMAR 26.11.13.04C. - Small Storage Tanks.</p> <p>(1) <u>Applicability.</u> “This section applies to a person who owns or operates:</p> <p>(a) A gasoline storage tank that has a tank capacity greater than 2,000 gallons but less than 40,000 gallons; or</p> <p>(b) A gasoline tank truck used to transfer gasoline into a storage tank that is listed in §C(1)(a) of this regulation.”</p> <p>(2) <u>Stage I Vapor Recovery.</u> 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.</p> <p>COMAR 26.11.13.04D. General Standards. “A person may not cause or permit gasoline or VOC having a TVP of 1.5 psia (10.3 kilonewtons/square meter) or greater to be loaded into any tank truck, railroad tank car, or other contrivance unless the:</p> <p>(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</p> <p>(2) Equipment is maintained and operated in a manner to prevent avoidable liquid leaks during loading or unloading operations.”</p>
6.2	<p><u>Testing Requirements:</u></p> <p><u>Control of VOC Emissions</u> See Monitoring Requirements.</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 6	
6.3	<p><u>Monitoring Requirements:</u></p> <p><u>Control of VOC Emissions</u> 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:</p> <ol style="list-style-type: none"> (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. <p>[Reference: COMAR 26.11.03.06C]</p>
6.4	<p><u>Record Keeping Requirements:</u></p> <p>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)]</p> <p><u>Control of VOC Emissions</u> 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 on request.”</p>
6.5	<p><u>Reporting Requirements:</u></p> <p><u>Control of VOC Emissions</u> See Record Keeping Requirements.</p>

A permit shield shall cover the applicable requirements identified for the emission units listed in the table above.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 7	
7.0	<p><u>Emissions Unit Number(s): EU30-1 thru EU30-8: Clean Room Semiconductor Development and Fabrication</u></p> <p>EU30-1: Chemical Vapor Deposition process followed by three (3) gas reactor columns and scrubber.</p> <p>EU30-3: Dry chemistry process equipped with a scrubber.</p> <p>EU30-4: Oxidation process equipped with a scrubber.</p> <p>EU30-5: Blasting process equipped with a scrubber.</p> <p>EU30-6: Two (2) thin film units equipped with a scrubber.</p> <p>EU30-7: Four (4) wet chemistry processes equipped with a scrubber.</p> <p>EU30-8: Four (4) photolithography processes equipped with a scrubber.</p> <p>[6-0903]</p>
7.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u> COMAR 26.11.06.02C. - Visible Emission Standards. “(2) 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 - General Exceptions “(2) The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications 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.”</p> <p>B. <u>Control of Particulate Matter</u> COMAR 26.11.06.03B – Particulate Matter from Confined Sources “(2) 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).”</p> <p>C. <u>Control of VOC Emissions</u> COMAR 26.11.06.06B. - Control of VOC from Installations. “(1) 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,</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 7	
	<p>1972, in excess of 20 pounds (9.07 kilograms) per day unless the discharge is reduced by 85 percent or more overall.”</p> <p>D. <u>Operational Limit</u> 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 the 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]</p>
7.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Particulate Matter</u> See Monitoring Requirements</p> <p>C. <u>Control of VOC Emissions</u> See Monitoring Requirements</p> <p>D. <u>Operational Limit</u> See Record Keeping Requirements.</p>
7.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> 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 annual 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 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]</p>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

Table IV – 7

	<p>B. <u>Control of Particulate Matter</u> 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]</p> <p>C. <u>Control of VOC Emissions</u> The operator shall check SDS 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]</p> <p>D. <u>Operational Limit</u> See Record Keeping Requirements.</p>
7.4	<p><u>Record Keeping Requirements:</u> 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)]</p> <p>A. <u>Control of Visible Emissions</u> The Permittee must maintain records of visible emissions observations. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Particulate Matter</u> See Monitoring Requirements</p> <p>C. <u>Control of VOC Emissions</u> 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 SDS/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]</p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 7	
	<p><u>D. Operational Limit</u> The Permittee shall maintain records of material usage. [Reference: COMAR 26.11.03.06C]</p>
7.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, “Report of Excess Emissions and Deviations”.</p> <p>B. <u>Control of Particulate Matter</u> See Monitoring Requirements</p> <p>C. <u>Control of VOC Emissions</u> 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]</p> <p>D. <u>Operational Limit</u> The Permittee shall report material usage to the Department as part of the annual Emissions Certification Report. [Reference: COMAR 26.11.03.06C]</p>

A permit shield shall cover the applicable requirements identified for the emission units listed in the table above.

Table IV – 8	
8.0	<p><u>Emissions Unit Number(s): Facility-Wide</u></p> <p>Facility-wide subject to COMAR 26.11.19</p>
8.1	<p><u>Applicable Standards/Limits:</u></p> <p><u>Control of VOC Emissions</u> COMAR 26.11.19.02I. - <u>Good Operating Practices, Equipment Cleanup, and VOC Storage.</u></p> <p>(1) <u>Applicability.</u> The requirements in this section apply to a person who owns or operates an installation that is subject to any requirement in this chapter.</p> <p>(2) <u>Good Operating Practices.</u></p>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 8

	<p>(a) A person who is subject to this section shall implement good operating practices to minimize VOC emissions into the atmosphere.</p> <p>(b) Good operating practices shall, at a minimum, include the following:</p> <p>(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;</p> <p>(ii) Maintenance of covers on containers and other vessels that contain VOC and VOC-containing materials when not in use;</p> <p>(iii) Minimize spills of VOC-containing cleaning materials;</p> <p>(iv) Convey VOC-containing cleaning materials from one location to another in closed containers or pipelines;</p> <p>(v) Minimize VOC emissions from cleaning of storage, mixing, and conveying equipment;</p> <p>(vi) As practical, scheduling of operations to minimize color or material changes when applying VOC coatings or other materials by spray gun;</p> <p>(vii) For spray gun applications of coatings, use of high volume low pressure (HVLP) or other high efficiency application methods where practical; and</p> <p>(viii) As practical, mixing or blending materials containing VOC in closed containers and taking preventive measures to minimize emissions for products that contain VOC.</p> <p>(c) A person subject to this regulation shall:</p> <p>(i) Establish good operating practices in writing;</p> <p>(ii) Make the written operating practices available to the Department upon request; and</p> <p>(iii) Display the good operating practices so that they are clearly visible to the operator or include them in operator training.</p> <p>(3) <u>Equipment Cleanup.</u></p> <p>(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.</p> <p>(b) Reasonable precautions for equipment cleanup shall, at a minimum, include the following:</p> <p>(i) Storing all wastes and waste materials, including cloth and paper that are contaminated with VOC, in closed containers;</p> <p>(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;</p>
--	--

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 8

	<p>(iii) Using enclosed spray gun cleaning, VOC-recycling systems and other spray gun cleaning methods where practical that reduce or eliminate VOC emissions; and</p> <p>(iv) Using, when practical, detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and process equipment.</p> <p>(4) <u>VOC Storage and Transfer.</u></p> <p>(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.</p> <p>(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.”</p> <p><u>COMAR 26.11.19.16 - Control of VOC Equipment Leaks</u></p> <p><u>C. General Requirements.</u> “A person subject to this regulation shall comply with all of the following requirements:</p> <p>(1) Visually inspect all components on the premises for leaks at least once each calendar month.</p> <p>(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.</p> <p>(3) Take immediate action to repair all observed VOC leaks that can be repaired within 48 hours.</p> <p>(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.</p> <p>(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.</p> <p>(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</p>
--	---

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 8800 GREENBELT ROAD
 GREENBELT, MARYLAND 20771
 DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Table IV – 8	
	<p>shall be maintained for a period of not less than 2 years from the date of their occurrence.”</p> <p>D. 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.”</p>
8.2	<p><u>Testing Requirements:</u></p> <p><u>Control of VOC Emissions</u> See Record Keeping Requirements.</p>
8.3	<p><u>Monitoring Requirements:</u></p> <p><u>Control of VOC Emissions</u> See Record Keeping Requirements.</p>
8.4	<p><u>Record Keeping Requirements:</u> 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)]</p> <p><u>Control of VOC Emissions</u> The Permittee shall maintain the following: (1) All written descriptions of “good operating practices” designed to minimize emissions of VOCs; and (2) 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. [Reference: COMAR 26.11.03.06C]</p>
8.5	<p><u>Reporting Requirements:</u></p> <p><u>Control of VOC Emissions</u> See Record Keeping Requirements.</p>

A permit shield shall cover the applicable requirements identified for the emission units listed in the table above.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

SECTION V INSIGNIFICANT ACTIVITIES

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

- (1) No. 4 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

[For Areas III and IV]

The *affected fuel burning units* are subject to the following requirements:

COMAR 26.11.09.05A(2), which establishes that the Permittee 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.

Exceptions: COMAR 26.11.09.05A(2) does not apply to emissions during load changing, 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.

[For Distillate Fuel Oil]

COMAR 26.11.09.07A(2)(b), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

- (2) No. 7 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The *affected units* are subject to the following requirements:

- (A) COMAR 26.11.09.05E(2), Emissions During Idle Mode:
The Permittee may not cause or permit the discharge of

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

emissions from any engine, operating at idle, greater than 10 percent opacity.

(B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(C) Exceptions:

(i) COMAR 26.11.09.05E(2) 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.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes

(b) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

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

(4) No. 5 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The *affected units* are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

(a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675

- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;
- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and
 - (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
- (5) Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
 - (6) Confection cookers where the products are edible and intended for human consumption;
 - (7) Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
 - (8) Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- (9) ✓ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;
- (10) Containers, reservoirs, or tanks used exclusively for:
- (a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;
- (b) No. 6 Storage of lubricating oils;
- (c) No. 21 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (d) No. 1 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;
- (11) ✓ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;
- (12) ✓ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (13) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (14) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

- (15) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

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

- (17) ✓ Laboratory fume hoods and vents;

For the following, attach additional pages as necessary:

- (18) any other emissions unit, not listed in this section, with a potential to emit less than the “de minimis” levels listed in COMAR 26.11.02.10X (list and describe units):

No. 7 Abrasive Blasters _____

No. 3 Milling and Grinding Machines _____

No. 2 Paint Booth _____

No. 8 3D printers _____

No. 1 XeF2 Abatement System _____

No. 3 Vacuum Chambers _____

No. 1 Dust Collector _____

No. 1 Sputterer _____

No. 1 E-Beam Deposit Tool _____

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

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

1. Applicable Regulations:

COMAR 26.11.06.08 - Nuisance.

"An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution."

COMAR 26.11.06.09 - Odors.

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

COMAR 26.11.15.05 - Control Technology Requirements.

"**A. New or Reconstructed Installations.** A person may not construct, reconstruct, operate, or cause to be constructed, reconstructed, or operated, any new installation or source that will discharge a toxic air pollutant to the atmosphere without installing and operating T-BACT."

COMAR 26.11.15.06 - Ambient Impact Requirement.

"A. Requirements for New Installations, Sources, or Premises.

(1) Except as provided in §A(2) of this regulation, a person may not construct, modify, or operate, or cause to be constructed, modified, or operated, any new installation or source without first demonstrating to the satisfaction of the Department using procedures established in this chapter that total allowable emissions from the premises of each toxic air pollutant discharged by the new installation or source will not unreasonably endanger human health.

(2) If a new installation or source will discharge a TAP that is not listed in COMAR 26.11.16.07 and will be part of an existing premises, then emissions of that TAP from existing sources or existing installations on the premises may be omitted from a screening analysis unless the TAP is added to COMAR 26.11.16.07."

Condition (D) applies to the char-broiler only. (ARA Registration Nos. 033-0675-8-0186)

COMAR 26.11.18.06B(2), which states that "A person who constructs, owns, or operates a char-broiler or pit barbecue not subject to §B(1), of this regulation, may not cause or permit the discharge of emissions greater than 30 percent opacity."

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
8800 GREENBELT ROAD
GREENBELT, MARYLAND 20771
DRAFT PART 70 OPERATING PERMIT NO. 24-033-0675**

Note: This requirement was revised per information provided with the Title V Renewal Application which stated that COMAR 26.11.18.06B(1) should not apply since the char-broilers are greater than 300 feet from the property line. As such, COMAR 26.11.18.06B(1) was revised to COMAR 26.11.18.06B(2) and COMAR 26.11.18.06C(1) was also removed as a condition in this permit.

2. Operating Conditions:

This condition applies to the Electroplating Process only (ARA Registration Nos. 033-0675-6-0852, 6-0854, and 6-0862)

To comply with T-BACT, the Permittee shall:

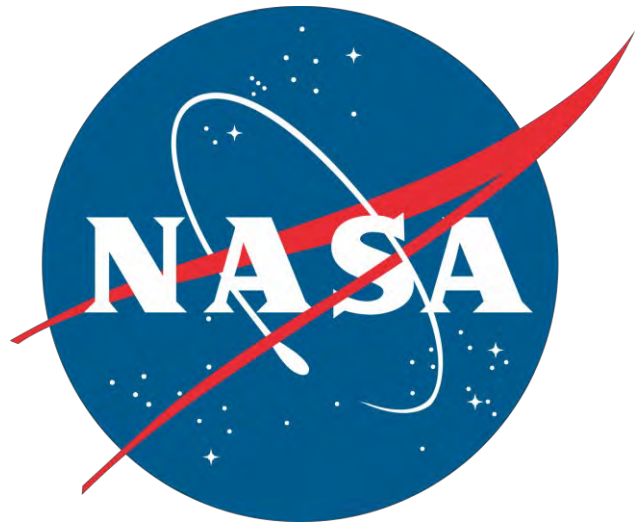
- (a) Use floating plastic balls to cover the liquid surface on Tanks A-1, A-2, A-4, and A-11 as a fume suppressant.
- (b) Keep tanks B-1A, B-1B, B-3, B-4A, B-4B, E-1, E-2, E-3, N-3B, N-5A, N-5B, N-5C, and N-8 covered when not in operation.
- (c) Keep tanks E-7 and E-8 covered at all times.

3. Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

PART 70 PERMIT RENEWAL APPLICATION



National Aeronautics and Space Administration

Goddard Space Flight Center

Greenbelt, Maryland

November 2023

TABLE OF CONTENTS

INTRODUCTION	1
PROCESS DESCRIPTION	1
EMISSION SOURCE SUMMARY	1
COMPLIANCE ASSURANCE MONITORING (CAM) PLAN APPLICABILITY	3
<u>APPLICATION FORMS:</u>	
Part 70 Permit Application for Renewal	6
SECTION 1 – Certification Statements	7
SECTION 2 – Facility Description Summary	9
SECTION 3A – Emissions Unit Descriptions	10
SECTION 3B – Citation to and Description of Applicable Federally Enforceable Requirements	60
SECTION 3C – Obsolete, Extraneous, or Insignificant Permit Conditions	84
SECTION 3D – Alternate Operating Scenarios	85
SECTION 3E – Citation to and Description of Federally Enforceable Requirements for an Alternate Operating Scenario	86
SECTION 4 – Control Equipment	87
SECTION 5 – Summary Sheet of Potential Emissions	98
SECTION 6 – Explanation of Proposed Exemption from Otherwise Applicable Federally Enforceable Requirements	99
SECTION 7 – Compliance Schedule for Noncomplying Emissions Units	103
State-only Enforceable Requirements	105
List of Insignificant Activities	112
Application Completeness Checklist	116
 TABLES	
Table 1: Summary of Proposed Changes to Emission Sources	1
Table 2: Summary of New Emission Sources	3
 FIGURES	
Figure 1: Facility Map	4
Figure 2: Process Flow Diagram	5
 APPENDICES	
Appendix A: 2022 Actual Emissions Data	
Appendix B: 2022 Annual Compliance Certification Report	
Appendix C: 2022 Emission and Greenhouse Gas Certification Report	
Appendix D: EU30-9 Permit to Construct Application Package	

INTRODUCTION

The National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC) facility is located in Greenbelt (GB) in Prince George's County, Maryland. GSFC-GB's vision is to revolutionize knowledge of the Earth and the universe through scientific discovery from space to enhance life on earth. Figure 1 illustrates the facility layout of GSFC-GB.

This Part 70 Permit Renewal Application is being submitted to renew GSFC-GB's Title V Permit. The current Title V Permit No. 24-033-00675 will expire on December 31, 2024.

PROCESS DESCRIPTION

Work activities at this facility include research, fabrication of equipment, and satellite tracking by the ground control station. Research activities are conducted in space and earth science disciplines and include the development and testing of instruments, propulsion systems, spacecraft and satellite antennas, and laboratory measurements. Fabrication activities include clean rooms, machine shops, electronic shops, plating shop, and acid etch facility. The satellite tracking system includes radar, telemetry, and optical devices.

EMISSION SOURCE SUMMARY

Table 1 provides a summary of the proposed changes to emissions sources in the current Title V permit. Table 2 provides a summary of added permitted sources to be incorporated into the Title V permit.

TABLE 1. Summary of Proposed Changes to Emission Sources

E.U. No.	MDE Reg. No.	Description	Summary of Requested Changes
EU24-1	5-0808	Nebraska natural gas/ landfill gas/ No. 2 fuel oil-fired boiler rated at 49.5 MMBtu/hr	No changes.
EU24-2	5-0809	Nebraska natural gas/ landfill gas/ No. 2 fuel oil-fired boiler rated at 49.5 MMBtu/hr	No changes.
EU24-3	5-0810	Nebraska natural gas/ No. 2 fuel oil-fired boiler rated at 49.5 MMBtu/hr	No changes.
EU24-4	5-0811	Nebraska natural gas/landfill gas/No. 2 fuel oil-fired boiler rated 49.5 MMBtu/hr	No changes.
EU24-5	5-0812	Nebraska natural gas/ No. 2 fuel oil-fired boiler rated at 49.5 MMBtu/hr	No changes.
EU35-1	5-1531	1.5 MMBtu/hr Natural gas boiler	No changes.
EU35-2	5-1532	1.5 MMBtu/hr Natural gas boiler	No changes.
EU97-1	5-0846	1.118 MMBtu/hr Natural gas boiler	No changes.
EU302-1	5-0831	1.7 MMBtu/hr Natural gas boiler	No changes.

TABLE 1. Summary of Proposed Changes to Emission Sources

E.U. No.	MDE Reg. No.	Description	Summary of Requested Changes
EU302-3	5-1533	1.44 MMBtu/hr Natural gas boiler	No changes.
EU7-2	9-1045	500 kW Emergency generator	No changes.
EU10-3	9-1047	500 kW Emergency generator	No changes.
EU24C-1	9-1054	1,000 kW Emergency generator	No changes.
EU24C-2	9-1055	1,000 kW Emergency generator	No changes.
EU24C-3	9-1056	1,000 kW Emergency generator	No changes.
EU24C-4	9-1057	1,000 kW Emergency generator	No changes.
EU24C-6	9-1366	1,000 kW Emergency generator	No changes.
EU24C-8	9-1058	1,000 kW Emergency generator	No changes.
EU31-1	9-1049	1,450 kW Emergency generator	No changes.
EU31-2	9-1050	1,450 kW Emergency generator	No changes.
EU31-3	9-1051	1,450 kW Emergency generator	No changes.
EU31-4	9-1052	1,450 kW Emergency generator	No changes.
EU31-5	9-1053	1,450 kW Emergency generator	No changes.
EU29-1	9-1422	1,000 kW Emergency generator	No changes.
EU7-3	9-1433	500 kW Emergency generator	No changes.
EU4-2	6-1101	Paint Booth #1 with electric drying	No changes.
EU4-3	6-1101	Paint Booth #2	No changes.
EU4-6	6-1101	Curing oven	No changes.
EU5A-3	6-1323	Paint Booth #3	No changes.
EU5-2	6-0852	Process Line A	No changes.
EU5-4	6-0854	Process Line N	No changes.
EU5-6	6-0862	Process Line B & E	No changes.
EU27-2	9-1168	5,000-gallon E85 aboveground storage tank	No changes.
EU27-3	9-1331	Two 5,000-gallon gasoline aboveground storage tanks.	No changes.
EU30-1	6-0903	Chemical vapor deposition	No changes.
EU30-2	6-0903	Ion implantation process	No changes.
EU30-3	6-0903	Dry chemistry process	No changes.
EU30-4	6-0903	Oxidation process	No changes.
EU30-5	6-0903	Blasting process	No changes.
EU30-6	6-0903	Thin films processes	No changes.
EU30-7	6-0903	Wet chemistry processes	No changes.
EU30-8	6-0903	Photolithography process	No changes.
EU92-1	8-0186	Char-broiler	No changes.
EU92-2	8-0187	Char-broiler	No changes.
EU92-3	8-0188	Char-broiler	No changes.
EU92-4	8-0189	Char-broiler	No changes.
EU7-4	6-1459	Ultrasonic vapor degreaser	Removed.
EU28-1	9-1535	563 kW Emergency generator	No changes.

Table 2. Summary of New Emission Sources

E.U. No.	MDE Reg. No.	Description	Summary
EU30-9	TBD by MDE	1,000 kW Emergency generator	Generator permitted 09/26/2023

COMPLIANCE ASSURANCE MONITORING (CAM) PLAN APPLICABILITY

A CAM Plan has not been provided, as there are no emissions sources for which the potential emissions of any pollutant is above the major source threshold (i.e., 25 TPY for VOCs and total HAPs and 10 TPY for any individual HAP). Both VOC and HAP emissions rates are below major source thresholds at GSFC-GB; therefore, CAM does not apply.

Figure 1 – Facility Map

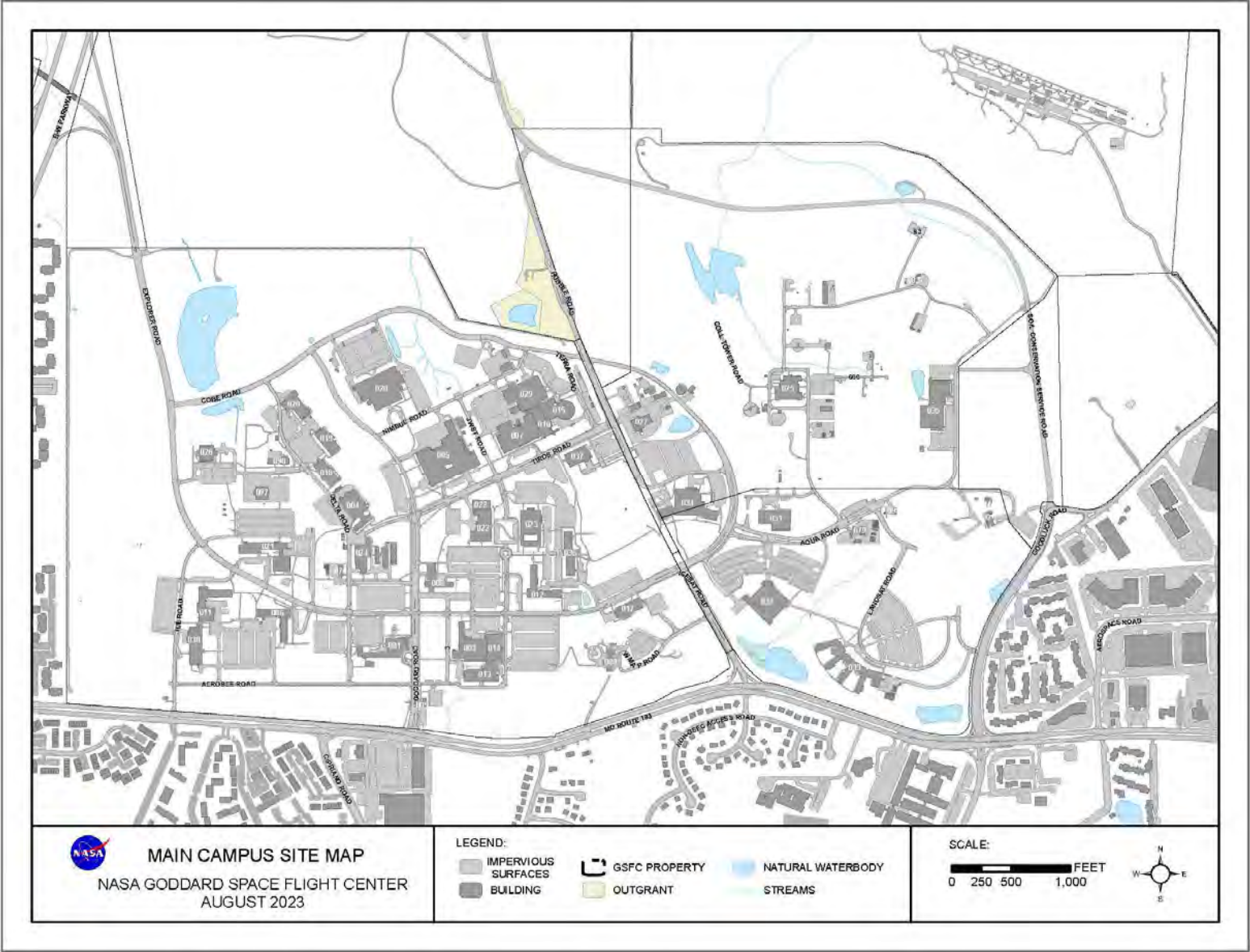
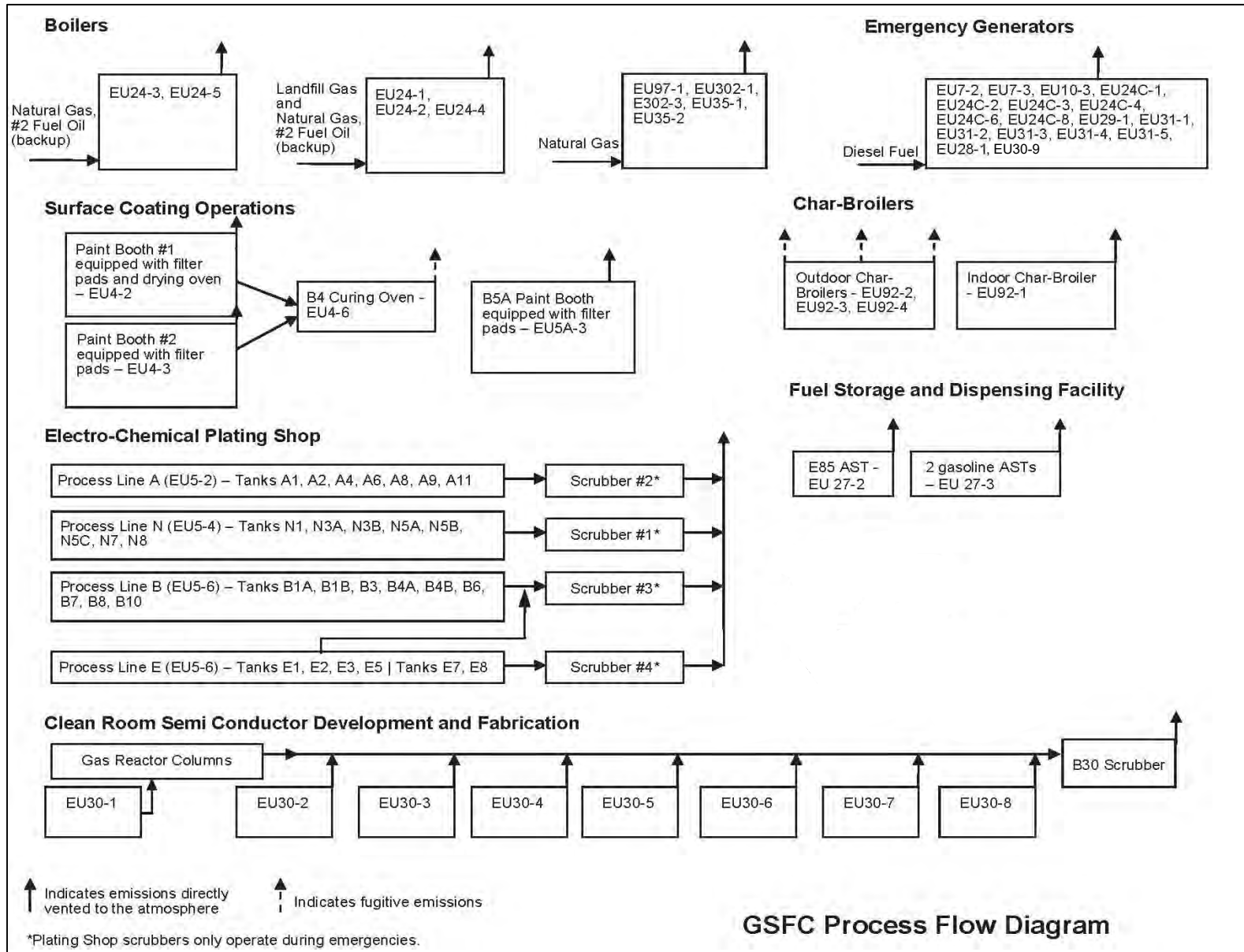


Figure 2 – Process Flow Diagram



**PART 70 PERMIT RENEWAL
APPLICATION**

GODDARD SPACE FLIGHT CENTER GREENBELT, MARYLAND

APPLICATION FORMS

PART 70 PERMIT APPLICATION FOR RENEWAL
AIR AND RADIATION ADMINISTRATION

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

Owner and Operator:

Name of Owner or Operator: NASA Goddard Space Flight Center		
Street Address: 8800 Greenbelt Road		
City: Greenbelt	State: MD	Zip Code: 20771
Telephone Number (301) 286-4230	Fax Number (301) 286-1644	

Facility Information:

Name of Facility: NASA Goddard Space Flight Center		
Street Address: 8800 Greenbelt Road		
City: Greenbelt	State: MD	Zip Code: 20771
Plant Manager: Kimberly Finch	Telephone Number: (301) 286-4230	Fax Number: (301) 286-1644
24-Hour Emergency Telephone Number for Air Pollution Matters: (301) 286-9111		

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



SECTION 1. CERTIFICATION STATEMENTS

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

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

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

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

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

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

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

4. Risk Management Plan Compliance

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

has been submitted;

will be submitted at a future date; or

does not need to be submitted.



5. Statement of Truth, Accuracy, and Completeness

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

RESPONSIBLE OFFICIAL:

X _____ 11/17/2023 _____

SIGNATURE

DATE

Kimberly Finch, P.E.

PRINTED NAME

Chief, Medical and Environmental Management Division

TITLE



SECTION 2. FACILITY DESCRIPTION SUMMARY

1. Major Activities of Facility

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

The National Aeronautics and Space Administration - Goddard Space Flight Center (GSFC) facility is located in Greenbelt (GB) in Prince George's County, Maryland. GSFC-GB's vision is to revolutionize knowledge of the Earth and the universe through scientific discovery from space to enhance life on earth. GSFC-GB is one of NASA's most comprehensive laboratory facilities. Work activities at this facility include research, fabrication of equipment, and satellite tracking by the ground control station. Research activities are conducted in space and earth science disciplines and include the development and testing of instruments, propulsion systems, spacecraft and satellite antennas and laboratory measurements. Fabrication activities include clean rooms, machine shops, electronic shops, plating shop, and acid etch facility. The satellite tracking system includes radar, telemetry, and optical devices. The primary SIC for this facility is 9661. The primary NAICS code for this facility is 927110.

2. Facility-Wide Emissions

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

Check appropriate box:

Actual Major

Potential Major

Solid Waste Incineration Unit Requiring Permit Under § 129(e) of CAA

B. List the actual facility-wide emissions below:

PM10 0.60 NOx 18.54 VOC 1.63 SOx 0.71 CO 22.19 HAPs 0.142

*From 2022 Actual Emissions Data

3. Include With the Application:

Flow Diagrams showing all emissions units, emission points, and control devices;

Emissions Certification Report (copy of the most recent submitted to the Department.)



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-1. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU24-1 1a. Date of installation (month/year): 11/1995	2. MDE Registration No.:(if applicable) 5-0808												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU24-1 (Boiler #1) is a Nebraska landfill gas/natural gas/No. 2 oil-fired boiler rated at 49.5 MMBtu per hour and equipped with a low NO_x burner. EU24-1 is permitted to burn landfill gas, natural gas, and No. 2 fuel oil during periods of gas curtailment. The primary purpose of this unit is to provide steam that is used to heat the campus. Emissions from this unit are vented through emission point EP24-1. This unit is located in Building 24.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table border="1"><thead><tr><th>Type(s) of Fuel</th><th>% Sulfur</th><th>Annual Usage (specify units)</th></tr></thead><tbody><tr><td>1. <u>No. 2 Fuel Oil</u></td><td><u>11.42 ppm (per 2022 fuel analysis)</u></td><td><u>250 gallons</u></td></tr><tr><td>2. <u>Natural Gas</u></td><td></td><td><u>63,763,427 cubic feet</u></td></tr><tr><td>3. <u>Landfill Gas</u></td><td><u>Less than 0.01% (lab analysis on LFG)</u></td><td><u>133,035,000 cubic feet</u></td></tr></tbody></table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>250 gallons</u>	2. <u>Natural Gas</u>		<u>63,763,427 cubic feet</u>	3. <u>Landfill Gas</u>	<u>Less than 0.01% (lab analysis on LFG)</u>	<u>133,035,000 cubic feet</u>
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>250 gallons</u>											
2. <u>Natural Gas</u>		<u>63,763,427 cubic feet</u>											
3. <u>Landfill Gas</u>	<u>Less than 0.01% (lab analysis on LFG)</u>	<u>133,035,000 cubic feet</u>											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x <u>3.08</u> SO _x <u>0.06</u> VOC <u>0.35</u> PM10 <u>0.12</u> HAPs _____													



SECTION 3A-2. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU24-2</p> <p>1a. Date of installation (month/year): 11/1995</p>	<p>2. MDE Registration No.:(if applicable) 5-0809</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p>EU24-2 (Boiler #2) is a Nebraska landfill gas/natural gas/No. 2 oil-fired boiler rated at 49.5 MMBtu per hour and equipped with a low NO_x burner. EU24-2 is permitted to burn landfill gas, natural gas, and No.2 fuel oil during periods of gas curtailment. The primary purpose of this unit is to provide steam that is used to heat the campus. Emissions from this unit are vented through emission point EP24-2. This unit is located in Building 24.</p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. No. 2 Fuel Oil</td> <td>11.42 ppm (per 2022 fuel analysis)</td> <td>434 gallons</td> </tr> <tr> <td>2. Natural Gas</td> <td></td> <td>79,657,152 cubic feet</td> </tr> <tr> <td>3. Landfill Gas</td> <td>Less than 0.01% (lab analysis on LFG)</td> <td>96,656,000 cubic feet</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. No. 2 Fuel Oil	11.42 ppm (per 2022 fuel analysis)	434 gallons	2. Natural Gas		79,657,152 cubic feet	3. Landfill Gas	Less than 0.01% (lab analysis on LFG)	96,656,000 cubic feet
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. No. 2 Fuel Oil	11.42 ppm (per 2022 fuel analysis)	434 gallons											
2. Natural Gas		79,657,152 cubic feet											
3. Landfill Gas	Less than 0.01% (lab analysis on LFG)	96,656,000 cubic feet											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>3.34</u> SO_x <u>0.06</u> VOC <u>0.35</u> PM10 <u>0.12</u> HAPs _____</p>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-3. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU24-3</p> <p>1a. Date of installation (month/year): 11/1995</p>	<p>2. MDE Registration No.:(if applicable) 5-0810</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU24-3 (Boiler #3) is a Nebraska natural gas/No. 2 oil-fired boiler rated at 49.5 MMBtu per hour and equipped with a low NO_x burner. EU24-3 is permitted to burn natural gas, and No.2 fuel oil during periods of gas curtailment. The primary purpose of this unit is to provide steam that is used to heat the campus. Emissions from this unit are vented through emission point EP24-3. This unit is located in Building 24.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: <u>Not Applicable</u></p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="margin-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Type(s) of Fuel</th> <th style="text-align: left; border-bottom: 1px solid black;">% Sulfur</th> <th style="text-align: left; border-bottom: 1px solid black;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">1. <u>No. 2 Fuel Oil</u></td> <td style="border-bottom: 1px solid black;"><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td style="border-bottom: 1px solid black;"><u>4,010 gallons</u></td> </tr> <tr> <td style="border-bottom: 1px solid black;">2. <u>Natural Gas</u></td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"><u>49,325,855 cubic feet</u></td> </tr> <tr> <td style="border-bottom: 1px solid black;">3. _____</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>4,010 gallons</u>	2. <u>Natural Gas</u>		<u>49,325,855 cubic feet</u>	3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>4,010 gallons</u>											
2. <u>Natural Gas</u>		<u>49,325,855 cubic feet</u>											
3. _____													
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>3.03</u> SO_x <u>0.10</u> VOC <u>0.14</u> PM10 <u>0.05</u> HAPs <u>_____</u></p>													



SECTION 3A-4. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU24-4</p> <p>1a. Date of installation (month/year): 11/1995</p>	<p>2. MDE Registration No.:(if applicable) 5-0811</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p>EU24-4 (Boiler #4) is a Nebraska landfill gas/natural gas/No. 2 oil-fired boiler rated at 49.5 MMBtu per hour and equipped with a low NO_x burner. EU24-4 is permitted to burn landfill gas, natural gas, and No.2 fuel oil during periods of gas curtailment. The primary purpose of this unit is to provide steam that is used to heat the campus. Emissions from this unit are vented through emission point EP24-4. This unit is located in Building 24.</p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. No. 2 Fuel Oil</td> <td>11.42 ppm (per 2022 fuel analysis)</td> <td>2,204 gallons</td> </tr> <tr> <td>2. Natural Gas</td> <td></td> <td>84,869,094 cubic feet</td> </tr> <tr> <td>3. Landfill Gas</td> <td>Less than 0.01% (lab analysis of LFG)</td> <td>156,544,000 cubic feet</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. No. 2 Fuel Oil	11.42 ppm (per 2022 fuel analysis)	2,204 gallons	2. Natural Gas		84,869,094 cubic feet	3. Landfill Gas	Less than 0.01% (lab analysis of LFG)	156,544,000 cubic feet
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. No. 2 Fuel Oil	11.42 ppm (per 2022 fuel analysis)	2,204 gallons											
2. Natural Gas		84,869,094 cubic feet											
3. Landfill Gas	Less than 0.01% (lab analysis of LFG)	156,544,000 cubic feet											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>3.96</u> SO_x <u>0.12</u> VOC <u>0.44</u> PM10 <u>0.15</u> HAPs <u> </u></p>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-5. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU24-5</p> <p>1a. Date of installation (month/year): 11/1995</p>	<p>2. MDE Registration No.:(if applicable) 5-0812</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU24-5 (Boiler #5) is a Nebraska natural gas/No. 2 oil-fired boiler rated at 49.5 MMBtu per hour and equipped with a low NO_x burner. EU24-5 is permitted to burn natural gas, and No.2 fuel oil during periods of gas curtailment. The primary purpose of this unit is to provide steam that is used to heat the campus. Emissions from this unit are vented through emission point EP24-5. This unit is located in Building 24.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 100px;">_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">1. No. 2 Fuel Oil</td> <td style="border-bottom: 1px solid black;">11.42 ppm (per 2022 fuel analysis)</td> <td style="border-bottom: 1px solid black;">4,625 gallons</td> </tr> <tr> <td style="border-bottom: 1px solid black;">2. Natural Gas</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;">35,864,472 cubic feet</td> </tr> <tr> <td style="border-bottom: 1px solid black;">3. _____</td> <td style="border-bottom: 1px solid black;"></td> <td style="border-bottom: 1px solid black;"></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. No. 2 Fuel Oil	11.42 ppm (per 2022 fuel analysis)	4,625 gallons	2. Natural Gas		35,864,472 cubic feet	3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. No. 2 Fuel Oil	11.42 ppm (per 2022 fuel analysis)	4,625 gallons											
2. Natural Gas		35,864,472 cubic feet											
3. _____													
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>2.22</u> SO_x <u>0.11</u> VOC <u>0.10</u> PM10 <u>0.04</u> HAPs <u> </u></p>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-6. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU35-1</p> <p>1a. Date of installation (month/year): 06/2013</p>	<p>2. MDE Registration No.:(if applicable) 5-1531</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU35-1 is a 1.5 MMBtu per hour natural gas fired Lochinvar space heating boiler. Emissions from this unit are vented through emission point EP35-1. This unit is located in Building 35.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 35%;">Type(s) of Fuel</th> <th style="text-align: left; width: 35%;">% Sulfur</th> <th style="text-align: left; width: 30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Natural Gas</u></td> <td></td> <td><u>1,961,250 cubic feet</u></td> </tr> <tr> <td>2. _____</td> <td></td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td></td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Natural Gas</u>		<u>1,961,250 cubic feet</u>	2. _____		_____	3. _____		_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Natural Gas</u>		<u>1,961,250 cubic feet</u>											
2. _____		_____											
3. _____		_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.15</u> SO_x <u><0.01</u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs <u> </u></p>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-7. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU35-2 1a. Date of installation (month/year): 06/2013	2. MDE Registration No.:(if applicable) 5-1532												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU35-2 is a 1.5 MMBtu per hour natural gas fired Lochinvar space heating boiler. Emissions from this unit are vented through emission point EP35-2. This unit is located in Building 35.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table><thead><tr><th>Type(s) of Fuel</th><th>% Sulfur</th><th>Annual Usage (specify units)</th></tr></thead><tbody><tr><td>1. <u>Natural Gas</u></td><td></td><td><u>1,961,250 cubic feet</u></td></tr><tr><td>2. _____</td><td></td><td>_____</td></tr><tr><td>3. _____</td><td></td><td>_____</td></tr></tbody></table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Natural Gas</u>		<u>1,961,250 cubic feet</u>	2. _____		_____	3. _____		_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Natural Gas</u>		<u>1,961,250 cubic feet</u>											
2. _____		_____											
3. _____		_____											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NOx <u>0.15</u> SOx <u><0.01</u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs <u>_____</u>													



SECTION 3A-8. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU97-1</p> <p>1a. Date of installation (month/year): 06/1990</p>	<p>2. MDE Registration No.:(if applicable) 5-0846</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU97-1 is a natural gas fired boiler rated 1.118 MMBtu per hour heat input. Emissions from this unit are vented through emission point EP97-1. This unit is located in Building 97.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Natural Gas</u></td> <td></td> <td><u>1,634,500 cubic feet</u></td> </tr> <tr> <td>2. _____</td> <td></td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td></td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Natural Gas</u>		<u>1,634,500 cubic feet</u>	2. _____		_____	3. _____		_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Natural Gas</u>		<u>1,634,500 cubic feet</u>											
2. _____		_____											
3. _____		_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.08</u> SO_x <u><0.01</u> VOC <u><0.01</u> PM₁₀ <u><0.01</u> HAPs <u>_____</u></p>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-9. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU302-1</p> <p>1a. Date of installation (month/year): 01/1990</p>	<p>2. MDE Registration No.:(if applicable) 5-0831</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU302-1 is a natural gas fired boiler rated at 1.7 MMBtu per hour heat input. Emissions from this unit are vented through emission point EP302-1. This unit is located in Area 300, Building 302.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table border="0"><thead><tr><th>Type(s) of Fuel</th><th>% Sulfur</th><th>Annual Usage (specify units)</th></tr></thead><tbody><tr><td>1. <u>Natural Gas</u></td><td></td><td><u>2,414,704 cubic feet</u></td></tr><tr><td>2. _____</td><td></td><td>_____</td></tr><tr><td>3. _____</td><td></td><td>_____</td></tr></tbody></table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Natural Gas</u>		<u>2,414,704 cubic feet</u>	2. _____		_____	3. _____		_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Natural Gas</u>		<u>2,414,704 cubic feet</u>											
2. _____		_____											
3. _____		_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.12</u> SO_x <u><0.01</u> VOC <u><0.01</u> PM₁₀ <u><0.01</u> HAPs <u>_____</u></p>													



SECTION 3A-10. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU302-3</p> <p>1a. Date of installation (month/year): 07/2013</p>	<p>2. MDE Registration No.:(if applicable) 5-1533</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU302-3 is a natural gas fired boiler rated at 1.44 MMBtu per hour heat input. Emissions from this unit are vented through emission point EP302-3. This unit located in Area 300, Building 302.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Natural Gas</u></td> <td></td> <td><u>2,045,396 cubic feet</u></td> </tr> <tr> <td>2. _____</td> <td></td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td></td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Natural Gas</u>		<u>2,045,396 cubic feet</u>	2. _____		_____	3. _____		_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Natural Gas</u>		<u>2,045,396 cubic feet</u>											
2. _____		_____											
3. _____		_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.10</u> SO_x <u><0.01</u> VOC <u><0.01</u> PM₁₀ <u><0.01</u> HAPs _____</p>													



SECTION 3A-11. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU7-2 1a. Date of installation (month/year): 1999	2. MDE Registration No.:(if applicable) 9-1045												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU7-2 is a 500-kW portable emergency generator that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP7-2. This unit is located at Building 28.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 63.6640 (f)</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>70.4 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>70.4 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>70.4 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x <u>0.02</u> SO _x <u><0.01</u> VOC <u><0.01</u> PM ₁₀ <u><0.01</u> HAPs <u>_____</u>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-12. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU10-3 1a. Date of installation (month/year): 1999	2. MDE Registration No.:(if applicable) 9-1047												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU10-3 is a 500-kW portable emergency generator that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP10-3. This unit is located at Building 35.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 63.6640 (f)</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: center;">% Sulfur</th> <th style="text-align: right;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td style="text-align: center;"><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td style="text-align: right;"><u>53.64 gallons</u></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>53.64 gallons</u>	2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>53.64 gallons</u>											
2. _____													
3. _____													
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x <u>0.01</u> SO _x <u><0.01</u> VOC <u><0.01</u> PM ₁₀ <u><0.01</u> HAPs <u> </u>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-13. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU24C-1 1a. Date of installation (month/year): 10/1996	2. MDE Registration No.:(if applicable) 9-1054												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU24C-1 is a Caterpillar emergency generator rated at 1,000-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP24C-1. This unit is located in Building 24C.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 63.6640 (f)</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)													
5. Fuel Consumption: <table border="0"><thead><tr><th>Type(s) of Fuel</th><th>% Sulfur</th><th>Annual Usage (specify units)</th></tr></thead><tbody><tr><td>1. <u>No. 2 Fuel Oil</u></td><td><u>11.42 ppm (per 2022 fuel analysis)</u></td><td><u>603.45 gallons</u></td></tr><tr><td>2. _____</td><td>_____</td><td>_____</td></tr><tr><td>3. _____</td><td>_____</td><td>_____</td></tr></tbody></table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x <u>0.14</u> SO _x <u>0.01</u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs _____													



SECTION 3A-14. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU24C-2 1a. Date of installation (month/year): 10/1996	2. MDE Registration No.:(if applicable) 9-1055												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU24C-2 is a Caterpillar emergency generator rated at 1,000-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP24C-2. This unit is located in Building 24C.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 63.6640 (f)</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>603.45 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x <u>0.14</u> SO _x <u>0.01</u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs <u>_____</u>													



SECTION 3A-15. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU24C-3 1a. Date of installation (month/year): 10/1996	2. MDE Registration No.:(if applicable) 9-1056												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU24C-3 is a Caterpillar emergency generator rated at 1,000-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP24C-3. This unit is located in Building 24C.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 63.6640 (f)</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>603.45 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x <u>0.14</u> SO _x <u>0.01</u> VOC <u><0.01</u> PM ₁₀ <u><0.01</u> HAPs _____													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-16. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU24C-4</p> <p>1a. Date of installation (month/year): 10/1996</p>	<p>2. MDE Registration No.:(if applicable) 9-1057</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p>EU24C-4 is a Caterpillar emergency generator rated at 1,000-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP24C-4. This unit is located in Building 24C.</p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:</p> <p>General Reference: <u>40 CFR 63.6640 (f)</u></p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p> _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>603.45 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.14</u> SO_x <u>0.01</u> VOC <u><0.01</u> PM₁₀ <u><0.01</u> HAPs _____</p>													



SECTION 3A-17. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU24C-6 1a. Date of installation (month/year): 11/2012	2. MDE Registration No.:(if applicable) 9-1366												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU24C-6 is an emergency generator rated at 1,000-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP24C-6. This unit is located in Building 24C.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 60.4211 (f)</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>603.45 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NOx <u>0.06</u> SOx <u><0.01</u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs <u>_____</u>													



SECTION 3A-18. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU24C-8</p> <p>1a. Date of installation (month/year): 10/1996</p>	<p>2. MDE Registration No.:(if applicable) 9-1058</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU24C-8 is a Caterpillar emergency generator rated at 1,000-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP24C-8. This unit is located in Building 24C.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:</p> <p>General Reference: <u>40 CFR 63.6640 (f)</u></p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>603.45 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>603.45 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.14</u> SO_x <u>0.01</u> VOC <u><0.01</u> PM₁₀ <u><0.01</u> HAPs _____</p>													



SECTION 3A-19. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU31-1</p> <p>1a. Date of installation (month/year): 10/1996</p>	<p>2. MDE Registration No.:(if applicable) 9-1049</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU31-1 is a Caterpillar emergency generator rated at 1,450-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP31-1. This unit is located in Building 31.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:</p> <p>General Reference: <u>40 CFR 63.6640 (f)</u></p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year _____ ≤ 100 hours/year (for non-emergency purposes.)</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>1166.67 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.28</u> SO_x <u>0.03</u> VOC <u><0.01</u> PM₁₀ <u><0.01</u> HAPs _____</p>													



SECTION 3A-20. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU31-2</p> <p>1a. Date of installation (month/year): 10/1996</p>	<p>2. MDE Registration No.:(if applicable) 9-1050</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU31-2 is a Caterpillar emergency generator rated at 1,450-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP31-2. This unit is located in Building 31.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:</p> <p>General Reference: <u>40 CFR 63.6640 (f)</u></p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>1166.67 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.28</u> SO_x <u>0.03</u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs _____</p>													



SECTION 3A-21. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU31-3</p> <p>1a. Date of installation (month/year): 10/1996</p>	<p>2. MDE Registration No.:(if applicable) 9-1051</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU31-3 is a Caterpillar emergency generator rated at 1,450-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP31-3. This unit is located in Building 31.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:</p> <p>General Reference: <u>40 CFR 63.6640 (f)</u></p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>1166.67 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NOx <u>0.28</u> SOx <u>0.03</u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs _____</p>													



SECTION 3A-22. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU31-4 1a. Date of installation (month/year): 10/1996	2. MDE Registration No.:(if applicable) 9-1052												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU31-4 is a Caterpillar emergency generator rated at 1,450-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP31-4. This unit is located in Building 31.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 63.6640 (f)</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>1166.67 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x <u>0.28</u> SO _x <u>0.03</u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs _____													



SECTION 3A-23. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU31-5 1a. Date of installation (month/year): 10/1996	2. MDE Registration No.:(if applicable) 9-1053												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU31-5 is a Caterpillar emergency generator rated at 1,450-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP31-5. This unit is located in Building 31.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 63.6640 (f)</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>1166.67 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>1166.67 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x <u>0.28</u> SO _x <u>0.03</u> VOC <u><0.01</u> PM ₁₀ <u><0.01</u> HAPs _____													



SECTION 3A-24. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU29-1		2. MDE Registration No.:(if applicable) 9-1422
1a. Date of installation (month/year): 01/2013		
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU29-1 is an emergency generator rated at 1,000-kW that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP29-1. This unit is located outside of Building 29.</u>		
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 60.4211 (f)</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)		
5. Fuel Consumption:		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>140.81 gallons</u>
2. _____	_____	_____
3. _____	_____	_____
6. Emissions in Tons: (From Appendix A)		
A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)		
B. Actual Emissions: NO _x <u>0.01</u> SO _x <u><0.01</u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs _____		



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-25. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU7-3</p> <p>1a. Date of installation (month/year): Spring 2003 Operation Date: September 2003</p>	<p>2. MDE Registration No.:(if applicable) 9-1433</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU7-3 is a 500-kW emergency generator that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP7-3. The unit is located outside of Building 7.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:</p> <p>General Reference: <u>40 CFR 63.6640 (f)</u></p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)</p>													
<p>5. Fuel Consumption:</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>239.70 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>239.70 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>239.70 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.05</u> SO_x <u><0.01</u> VOC <u><0.01</u> PM₁₀ <u><0.01</u> HAPs _____</p>													



SECTION 3A-26. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU28-1</p> <p>1a. Date of installation (month/year): 9/2018</p>	<p>2. MDE Registration No.:(if applicable) 9-1535</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU28-1 is a 563-kW emergency generator that fires No. 2 fuel oil. Emissions from this unit are vented through emission point EP28-1. The unit is located outside of Building 28.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:</p> <p>General Reference: <u>40 CFR 60.4211 (f)</u></p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td><u>98.15 gallons</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>98.15 gallons</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>	<u>98.15 gallons</u>											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u>0.02</u> SO_x <u><0.01</u> VOC <u><0.01</u> PM₁₀ <u><0.01</u> HAPs _____</p>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-27. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU4-2, EU4-3, & EU4-6</p> <p>Date of installation (month/year): 01/1984 (Paint Booth #1), 1960 (Paint Booth #2), 01/1991 (oven)</p>	<p>2. MDE Registration No.:(if applicable) 6-1011</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>This is a surface coating operation, which coats instruments and structural members for spacecraft. There are two paint booths and an electric curing oven located in Room 195 of Building 4. Coatings are mixed under the fume hoods and used in Paint Booth #1 (EU4-2) and Paint Booth #2 (EU4-3). Paint Booth #2 uses mostly silicone-based paints. For some parts, coatings are dried in curing oven (EU4-6). Emissions from EU4-2, EU4-3, and EU4-6 are vented through emission points EP4-2, EP4-3, and EP4-6, respectively.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption: Not Applicable</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Type(s) of Fuel</th> <th style="width: 20%;">% Sulfur</th> <th style="width: 40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u> </u> SO_x <u> </u> VOC <u>0.02*</u> PM₁₀ <u><0.01*</u> HAPs <u>0.003*</u></p> <p style="text-align: center;">*Total emissions for Building 4 (EU4-2, EU4-3 and EU4-6)</p>													



SECTION 3A-28. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU5A-3 1a. Date of installation (month/year): 8/2006	2. MDE Registration No.:(if applicable) 6-1323
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): EU5A-3 is a paint spray booth located in Building 5A and is used for the painting of spaceflight hardware. The paint spray booth has one stack and is equipped with a 90% efficiency filter to limit emissions. Emissions from EU5A-3 are vented through emission point EP5A-3.	
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year	
5. Fuel Consumption: Not Applicable Type(s) of Fuel % Sulfur Annual Usage (specify units) 1. _____ 2. _____ 3. _____	
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NOx <u> </u> SOx <u> </u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs <u> </u> <u> </u>	



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-29. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU5-2 1a. Date of installation (month/year): 7/1994	2. MDE Registration No.:(if applicable) 6-0852												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU5-2 is electro-chemical plating acid process line A and includes Tanks A-1, A-2, A-4, A-6, A-8, A-9, and A-11. The tanks are located in Building 5. Emissions from these tanks are collected by an exhaust line and vented through a common stack (EP5-2). During emergencies emissions are controlled by Scrubber #2 (CE5-2).</u> - Tank A-1 is a 160-gallon capacity aluminum soaker cleaner tank. The tank contains Oakite 61B (6 oz/gallon), disodium phosphate <5% (0.3 oz/gal), and tetra sodium pryophosphate (7%). - Tank A-2 is a 160-gallon capacity aluminum etch cleaner tank. The tank contains Oakite 160 (5 oz/gal), sodium hydroxide 80-90% (4-4.5 oz/gal), and sodium carbonate (0.5 oz/gal). - Tank A-4 is a 160-gallon capacity aluminum deoxidizer tank. The tank contains a 17.5% Deoxidizer LNC solution, 15% nitric acid, 25% hydrofluoric acid, and 25% ferric sulfate. - Tank A-6 is a 160-gallon capacity sulfuric anodize type II tank. The tank contains sulfuric acid (2 g/L).													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Not Applicable <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%; text-align: left;">Type(s) of Fuel</th> <th style="width:20%; text-align: center;">% Sulfur</th> <th style="width:40%; text-align: right;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NOx__ SOx__ VOC__ PM10 <0.01 HAPs__													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-30. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU5-2 (continued) 1a. Date of installation (month/year): 7/1994	2. MDE Registration No.:(if applicable) 6-0852												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): - Tank A-8 is a 120-gallon capacity black dye tank. The tank contains Sandoz Fast Black MLW solution (2.3 lb/gal) mixed with chromium (0.08 oz/gal). - Tank A-9 is a 120-gallon capacity anodize sealer tank. The tank contains Sandoz Sealing Salt AS (1 oz/gal), benzoicacid (10%), and nickel acetate (20%). - Tank A-11 is a 160-gallon capacity aluminum iridite tank. The tank contains Iridite 14-2 (1.25 oz/gal), sodium silicofluoride <2% (<0.025 oz/gal), chromic acid <2% (<0.025 oz/gal), and barium nitrate <2% (<0.025 oz/gal).													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Not Applicable <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr><td>1. _____</td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td></tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
6. Emissions in Tons: See Section 3A-29. A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 _____ HAPs _____													



SECTION 3A-31. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU5-4</p> <p>1a. Date of installation (month/year): 7/1994</p>	<p>2. MDE Registration No.:(if applicable) 6-0854</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU5-4 is electro-chemical plating acid process line N and includes Tanks N-1, N-3A, N-3B, N-5A, N-5B, N-5C, N-7, and N-8. The tanks are located in Building 5. Emissions from these tanks are collected by an exhaust line and vented through a common stack (EP5-2). During emergencies emissions are controlled by Scrubber #1 (CE5-3).</u></p> <p><u>- Tank N-1 is a 120-gallon capacity electro cleaner tank. The tank contains Oakite 90 (6 oz/gallon), sodium hydroxide (50% by weight), sodium metasilicate (25% by weight), sodium carbonate (10% by weight), and tetrasodium pyrophosphate (10% by weight).</u></p> <p><u>- Tank N-3A is a 28.5-gallon capacity stainless steel etch tank. The tank contains chromic chloride (10.2 oz/gal), ferric chloride (33.7 oz/gal), ferric nitrate (17.92 oz/gal), hydrochloric acid (8.78 oz/gal), nickel chloride (14.17 oz/gal), and hydrofluoric acid (6.08 oz/gal).</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="margin-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption: Not Applicable</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 60%;">Type(s) of Fuel</th> <th style="text-align: left; width: 20%;">% Sulfur</th> <th style="text-align: left; width: 20%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x__ SO_x__ VOC__ PM10 <u><0.01</u> HAPs__ ____</p>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-33. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU5-6</p> <p>1a. Date of installation (month/year): 7/1994</p>	<p>2. MDE Registration No.:(if applicable) 6-0862</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU5-6 is electro-chemical plating acid process lines B and E and includes Tanks B-1A, B-1B, B-3, B-4A, B-4B, B-6, B-7, B-8, B-10, E-1, E-2, E-3, E-5, E-7, and E-8. The tanks are located in Building 5. Emissions are collected by an exhaust line and vented through a common stack (EP5-2). During emergencies Scrubbers #3 and #4 (CE5-3 and CE5-4) control the emissions.</u></p> <p><u>- Tank B-1A is a 56-gallon capacity hydrochloric acid dip tank. The tank contains hydrochloric acid (30%).</u></p> <p><u>- Tank B-1B is a 56-gallon capacity hydrochloric acid dip tank. The tank contains hydrochloric acid (30%).</u></p> <p><u>- Tank B-3 is a 120-gallon capacity aluminum zincate tank. The tank contains Fidelity 3116 Zincate (25%) and sodium hydroxide (7.5%)</u></p> <p><u>- Tank B-4A is a 60-gallon capacity nitric acid/ammonium bifluoride tank. The tank contains nitric acid (75%) and ammonium bifluoride (25%).</u></p> <p><u>- Tank B-4B is a 60-gallon capacity nitric acid dip tank. The tank contains nitric acid (50% by volume).</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption: Not Applicable</p> <table style="width: 100%; border-collapse: collapse;"><thead><tr><th style="text-align: left;">Type(s) of Fuel</th><th style="text-align: center;">% Sulfur</th><th style="text-align: right;">Annual Usage (specify units)</th></tr></thead><tbody><tr><td>1. _____</td><td></td><td></td></tr><tr><td>2. _____</td><td></td><td></td></tr><tr><td>3. _____</td><td></td><td></td></tr></tbody></table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u> </u> SO_x <u> </u> VOC <u> </u> PM10 <u><0.01</u> HAPs <u> </u> _____</p>													



SECTION 3A-34. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU5-6 (continued) 1a. Date of installation (month/year): 7/1994	2. MDE Registration No.:(if applicable) 6-0862												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): /"Vcpm!D/8'ku'c"334/i cmrp"ecr cek{ "Y qqf u'P lengn!utkng"vcpn0Vj g"vcpm!eqpvc!ps hydrochloric acid (16 oz/gal) and nickel chloride (32 oz/gal). - Tank B-7 is a 112-gallon capacity black nickel tank. The tanks contains nickel sulfate (10 oz/gal), nickel ammonium sulfate (6 oz/gal), zinc sulfate (5 oz/gal), and sodium thiocyanate (2 oz/gal). - Tank B-8 is a 120-gallon capacity Watts Nickel tank. The tank contains nickel sulfate (40 oz/gal), boric acid (5.4%), Lectroc Nic 1003 (1.3% by volume), and Anode Activator (240 ml/gal), - Tank B-10 is a 120-gallon capacity acid copper tank. The tanks contains copper sulfate (26 oz/gal), sulfuric acid (9 oz/gal), chloride ions (50 ml/L), and UBAC #1 (0.20% by volume). - Tank E-1 is a 45-gallon capacity nickel strip tank. The tank contains nitric acid (50% by volume). - Tank E-2 is a 45-gallon capacity Iridite strip tank. The tank contains nitric acid (2 parts), DI water (1 part), and ammonium bifluoride (7.5 gm/gal).													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Not Applicable <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
6. Emissions in Tons: See Section 3A-33. A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 _____ HAPs _____													



SECTION 3A-35. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU5-6 (continued) 1a. Date of installation (month/year): 7/1994	2. MDE Registration No.:(if applicable) 6-0862
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>- Tank E-3 is a 45-gallon capacity tungsten etch tank. The tank contains ammonium bifluoride (2.6 lbs/gal).</u> <u>- Tank E-5 is a 45-gallon capacity Copper Bright dip tank. The tank contains nitric acid (75% by volume) and DI water (25% by volume).</u> <u>- Tank E-7 is a 35-gallon capacity electroless nickel tank. The tank contains Ethone 623A (6% by volume), nickel sulfate (4.5%), sodium hydroxide (15% by volume), sodium hypophosphite (1.35%), ammonium hydroxide (4 oz/gal), and Ethone 623B (15% by volume).</u> <u>- Tank E-8 is a 105-gallon capacity electroless nickel tank. The tank contains Ethone 623A (6% by volume), nickel sulfate (4.5%), sodium hydroxide (15 % by volume), sodium hypophosphite (1.35%), ammonium hydroxide (4 oz/gal), and Ethone 623B (15% by volume).</u>	
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year	
5. Fuel Consumption: Not Applicable Type(s) of Fuel % Sulfur Annual Usage (specify units) 1. _____ 2. _____ 3. _____	
6. Emissions in Tons: See Section 3A-33. A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NO _x _____ SO _x _____ VOC _____ PM ₁₀ _____ HAPs _____	



SECTION 3A-36. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU27-2</p> <p>1a. Date of installation (month/year): 1/2004</p>	<p>2. MDE Registration No.:(if applicable) 9-1168</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU27-2 is a 5,000-gallon aboveground storage tank containing E85 fuel located outside of Building 27 Motor Pool. EU27-2 is equipped with a stage I vapor recover system.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Type(s) of Fuel</th> <th style="width: 30%;">% Sulfur</th> <th style="width: 30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>E85</u></td> <td></td> <td style="text-align: right;"><u>10,379.4 gallons</u></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>E85</u>		<u>10,379.4 gallons</u>	2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>E85</u>		<u>10,379.4 gallons</u>											
2. _____													
3. _____													
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u> </u> SO_x <u> </u> VOC <0.01 <u> </u> PM₁₀ <0.01 <u> </u> HAPs <u> </u></p>													



SECTION 3A-37. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU27-3 1a. Date of installation (month/year): 2010	2. MDE Registration No.:(if applicable) 9-1331												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU27-3 includes two 5,000-gallon aboveground storage tanks containing gasoline. EU27-3 is located outside of Building 27 Motor Pool. EU27-3 is equipped with a stage I vapor recovery system.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Type(s) of Fuel</th> <th style="text-align: left; width: 30%;">% Sulfur</th> <th style="text-align: left; width: 30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Gasoline</u></td> <td></td> <td><u>25,674.44 gallons</u></td> </tr> <tr> <td>2. _____</td> <td></td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td></td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Gasoline</u>		<u>25,674.44 gallons</u>	2. _____		_____	3. _____		_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Gasoline</u>		<u>25,674.44 gallons</u>											
2. _____		_____											
3. _____		_____											
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NOx <u> </u> SOx <u> </u> VOC <u><0.01</u> PM10 <u><0.01</u> HAPs <u> </u>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-38. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU30-1 1a. Date of installation (month/year): 11/1997	2. MDE Registration No.:(if applicable) 6-0903
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): EU30-1 is located in the Clean Room of Building 30. This unit consists of a chemical vapor deposition (CVD) process. It includes several units such as atomic layer deposition (ALD), plasma enhanced CVD, and Ni CVD. Emissions from the process are vented through three gas reactor columns (CE30-2, CE30-3, CE30-4) and through a wet scrubber (CE30-1), and out of emission point EP30-1.	
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year	
5. Fuel Consumption: Not Applicable Type(s) of Fuel % Sulfur Annual Usage (specify units) 1. _____ 2. _____ 3. _____	
6. Emissions in Tons: (From Appendix A) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x <u> </u> SO _x <u> </u> VOC <u>0.10*</u> PM10 <u><0.01*</u> HAPs <u>0.009*</u> *Total Emissions for EU30-1 to EU30-8	



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-39. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU30-2 1a. Date of installation (month/year): 11/1997	2. MDE Registration No.:(if applicable) 6-0903												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU30-2 is located in the Clean Room of Building 30. This unit consists of an ion implantation process. EU30-2 is a part of the electron device development process. Specific gases, such as boron trifluoride, phosphorous pentafluoride, or silicon tetrachloride are used to add ions to the wafers to make them electrically conductive. A wet scrubber (CE30-1) controls emissions from this process. Emissions from EU30-2 are vented through emission point EP30-1.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Not Applicable <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;">Type(s) of Fuel</th> <th style="width:20%;">% Sulfur</th> <th style="width:40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____	_____	_____	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____	_____	_____											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: (See Section 3A-38.) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x _____ SO _x _____ VOC _____ PM10 _____ HAPs _____ Refer to page 47 for total emissions for EU30-1 to EU30-8													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-40. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU30-3 1a. Date of installation (month/year): 11/1997	2. MDE Registration No.:(if applicable) 6-0903												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): EU30-3 is located in the Clean Room of Building 30. This unit consists of a dry chemistry process. EU30-3 is part of the electron device development process. CF4, CHF3, SF6, C4F8, Polytech 907 (Matheson Gas - NO and CF4), BCl3, Cl2, HF, Ar, and O2 are used to form a plasma used in dry etching. The gas is excited by radio energy frequency, and the resulting plasma is used to etch the wafer and strip off photoresist (the process varies). Freon 14 or Freon 116 can also be used for dry etching. A wet scrubber (CE30-1) controls emissions from this process. Emissions from EU30-3 are vented through emission point EP30-1.													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Not Applicable <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;">Type(s) of Fuel</th> <th style="width:20%;">% Sulfur</th> <th style="width:40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
6. Emissions in Tons: (See Section 3A-38.) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 _____ HAPs _____ Refer to page 47 for total emissions for EU30-1 to EU30-8													



SECTION 3A-41. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU30-4 1a. Date of installation (month/year): 11/1997	2. MDE Registration No.:(if applicable) 6-0903												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): EU30-4 is located in the Clean Room of Building 30. This unit consists of an oxidation process. EU30-4 is part of the electron device development process. Oxygen and water are used at high temperatures to grow SiO ₂ film on the silicon wafers, which will eventually be etched to form circuitry. The process includes a pre-cleaning step that uses "piranha clean", which is a mixture of hydrogen peroxide and sulfuric acid. A wet scrubber (CE30-1) controls emissions from this process. Emissions from EU30-4 are vented through emission point EP30-1.													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Not Applicable <table style="width:100%; border: none;"> <thead> <tr> <th style="text-align: left; border: none;">Type(s) of Fuel</th> <th style="text-align: left; border: none;">% Sulfur</th> <th style="text-align: left; border: none;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td style="border: none;">1. _____</td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">2. _____</td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">3. _____</td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
6. Emissions in Tons: (See Section 3A-38.) <table style="width:100%; border: none;"> <tr> <td style="width:15%; border: none;">A.</td> <td style="border: none;">Actual Major: <u>N/A</u></td> <td style="border: none;">Potential Major: <u>N/A</u></td> <td style="border: none;">(note: before control device)</td> </tr> <tr> <td style="border: none;">B.</td> <td style="border: none;">Actual Emissions: NO_x_____</td> <td style="border: none;">SO_x_____</td> <td style="border: none;">VOC_____</td> </tr> <tr> <td colspan="2" style="border: none;"></td> <td style="border: none;">PM₁₀_____</td> <td style="border: none;">HAPs_____</td> </tr> </table> <p style="margin-left: 40px; border: none;">Refer to page 47 for total emissions for EU30-1 to EU30-8</p>		A.	Actual Major: <u>N/A</u>	Potential Major: <u>N/A</u>	(note: before control device)	B.	Actual Emissions: NO _x _____	SO _x _____	VOC_____			PM ₁₀ _____	HAPs_____
A.	Actual Major: <u>N/A</u>	Potential Major: <u>N/A</u>	(note: before control device)										
B.	Actual Emissions: NO _x _____	SO _x _____	VOC_____										
		PM ₁₀ _____	HAPs_____										



SECTION 3A-42. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU30-5</p> <p>1a. Date of installation (month/year): 11/1997</p>	<p>2. MDE Registration No.:(if applicable) 6-0903</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p>EU30-5 is located in the basement of Building 30 in Room L009F9. The unit consists of a blasting process. The bead blaster is a wet slurry bead blaster that uses a combination of water and glass beads (amorphous) to clean pieces of equipment. The wet slurry is mainly used to clean ion implanter parts that have been coated with Phosphine and Boron Trifluoride. A wet scrubber (CE30-1) controls emissions from this process. Emissions from EU30-5 are vented through emission point EP30-1.</p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 100px;">_____ days/year</p>													
<p>5. Fuel Consumption: Not Applicable</p> <table style="width: 100%;"><thead><tr><th style="width: 30%;">Type(s) of Fuel</th><th style="width: 30%;">% Sulfur</th><th style="width: 40%;">Annual Usage (specify units)</th></tr></thead><tbody><tr><td>1. _____</td><td></td><td></td></tr><tr><td>2. _____</td><td></td><td></td></tr><tr><td>3. _____</td><td></td><td></td></tr></tbody></table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
<p>6. Emissions in Tons: (See Section 3A-38.)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 _____ HAPs _____</p> <p style="padding-left: 20px;">Refer to page 47 for total emissions for EU30-1 to EU30-8</p>													



SECTION 3A-43. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU30-6 1a. Date of installation (month/year): 11/1997	2. MDE Registration No.:(if applicable) 6-0903												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU30-6 is located in the Clean Room of Building 30. EU30-6 consists of two thin films units, which are part of the electron device development process. Metals such as aluminum or zinc sulfide are layered onto the wafers to make interconnections for circuits across the wafer. The process includes both sputtering and evaporation. Sputtering involves heating metal under a vacuum in a planetary cage. The wafer rotates in planetary motion in a bell jar under a vacuum while the metal is being heated. As the metal melts and sputters, it gets driven off by an electron beam, and disperses inside the bell jar. As a result, the rotating wafers and the bell jar get a uniform film of the metal coating. A wet scrubber (CE30-1) controls emissions from this process. Emissions from EU30-6 are vented through emission point EP30-1.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Not Applicable <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%; text-align: left;">Type(s) of Fuel</th> <th style="width: 20%; text-align: center;">% Sulfur</th> <th style="width: 40%; text-align: right;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
6. Emissions in Tons: (See Section 3A-38.) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">A.</td> <td style="width: 40%;">Actual Major: <u>N/A</u></td> <td style="width: 20%;">Potential Major: <u>N/A</u></td> <td style="width: 20%;">(note: before control device)</td> </tr> <tr> <td>B.</td> <td>Actual Emissions: NO_x _____ SO_x _____ VOC _____ PM10 _____ HAPs _____</td> <td colspan="2">Refer to page 47 for total emissions for EU30-1 to EU30-8</td> </tr> </table>		A.	Actual Major: <u>N/A</u>	Potential Major: <u>N/A</u>	(note: before control device)	B.	Actual Emissions: NO _x _____ SO _x _____ VOC _____ PM10 _____ HAPs _____	Refer to page 47 for total emissions for EU30-1 to EU30-8					
A.	Actual Major: <u>N/A</u>	Potential Major: <u>N/A</u>	(note: before control device)										
B.	Actual Emissions: NO _x _____ SO _x _____ VOC _____ PM10 _____ HAPs _____	Refer to page 47 for total emissions for EU30-1 to EU30-8											



SECTION 3A-44. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU30-7 1a. Date of installation (month/year): 11/1997	2. MDE Registration No.:(if applicable) 6-0903												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>EU30-7 is located in the Clean Room of Building 30. This unit consists of wet chemistry processes. EU30-7 is a part of the electron device development process. The circuitry image (mask) exposed during photolithography is etched during the wet chemistry process. Acids and bases are used for the etching including sodium hydroxide, potassium hydroxide, hydrochloric acid, phosphoric acid, nitric acid, ammonium fluoride, and hydrogen fluoride buffered etch. The remainder of the photoresist is also stripped off the wafers during this step using sulfuric acid, chromium trioxide, and a solution of acetic acid and phosphoric acid (aluminum etch). A wet scrubber (CE30-1) controls emissions from this process. Emissions from EU30-7 are vented through emission point EP30-1.</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Not Applicable <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;">Type(s) of Fuel</th> <th style="width:20%;">% Sulfur</th> <th style="width:40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
6. Emissions in Tons: (See Section 3A-38.) A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device) B. Actual Emissions: NO _x _____ SO _x _____ VOC _____ PM10 _____ HAPs _____ Refer to page 47 for total emissions for EU30-1 to EU30-8													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-45. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU30-8</p> <p>1a. Date of installation (month/year): 11/1997</p>	<p>2. MDE Registration No.:(if applicable) 6-0903</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU30-8 is located in the Clean Room of Building 30. This unit consists of four photolithography processes. EU30-8 is a part of the electron device development process. Photoresist is applied to either silicon or mercury cadmium telluride to mercad (HgCd) wafers or super lattice structure wafers. The silicon wafers have a 4-8 inch diameter and the HgCd have a 1/4 inch diameter. Photoresist may be negative or positive. Solvents are used to strip off the photoresist. The negative photoresist is xylene based and is stripped using solvents. The positive photoresist is stripped with acetone. A wet scrubber (CE30-1) controls emissions from this process. Emissions from EU30-8 are vented through emission point EP30-1.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption: Not Applicable</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%; text-align: left;">Type(s) of Fuel</th> <th style="width: 25%; text-align: center;">% Sulfur</th> <th style="width: 30%; text-align: right;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
<p>6. Emissions in Tons: (See Section 3A-38.)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x _____ SO_x _____ VOC _____ PM10 _____ HAPs _____</p> <p>Refer to page 47 for total emissions for EU30-1 to EU30-8</p>													



SECTION 3A-46. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU92-1</p> <p>1a. Date of installation (month/year): 01/1991</p>	<p>2. MDE Registration No.:(if applicable) 8-0186</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU92-1 is a char-broiler located in Building 92. Emissions from this unit are vented through emission point EP92-1. Based on the most current information available, it has been determined that EU92-1 is more than 300-feet from a property line of any habitable dwelling.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption: Not Applicable</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Type(s) of Fuel</th> <th style="text-align: left; border-bottom: 1px solid black;">% Sulfur</th> <th style="text-align: left; border-bottom: 1px solid black;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">1. _____</td> <td style="border-bottom: 1px solid black;">_____</td> <td style="border-bottom: 1px solid black;">_____</td> </tr> <tr> <td style="border-bottom: 1px solid black;">2. _____</td> <td style="border-bottom: 1px solid black;">_____</td> <td style="border-bottom: 1px solid black;">_____</td> </tr> <tr> <td style="border-bottom: 1px solid black;">3. _____</td> <td style="border-bottom: 1px solid black;">_____</td> <td style="border-bottom: 1px solid black;">_____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____	_____	_____	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____	_____	_____											
2. _____	_____	_____											
3. _____	_____	_____											
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NOx <u> </u> SOx <u> </u> VOC <u><0.01</u> PM10 <u>0.02</u> HAPs <u>0.033</u></p>													



SECTION 3A-48. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU92-3		2. MDE Registration No.:(if applicable)	
1a. Date of installation (month/year): 01/1984		8-0188	
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):			
<u>EU92-3 is a char-broiler located outside Building 92. Based on the most current information available, it has been determined that EU92-3 is more than 300-feet from a property line of any habitable dwelling.</u>			
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable			
General Reference: _____			
Continuous Processes: _____ hours/day _____ days/year			
Batch Processes: _____ hours/batch _____ batches/day			
_____ days/year			
5. Fuel Consumption: Not Applicable			
Type(s) of Fuel		% Sulfur	Annual Usage (specify units)
1. _____			
2. _____			
3. _____			
6. Emissions in Tons: (From Appendix A)			
A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)			
B. Actual Emissions: NO _x <u> </u> SO _x <u> </u> VOC <u><0.01</u> PM ₁₀ <u>0.02</u> HAPs <u>0.033</u> <u> </u>			



SECTION 3A-49. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU92-4</p> <p>1a. Date of installation (month/year): 01/1991</p>	<p>2. MDE Registration No.:(if applicable) 8-1089</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU92-4 is a char-broiler located in Building 92. Based on the most current information available, it has been determined that EU92-4 is more than 300-feet from a property line of any habitable dwelling.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable</p> <p>General Reference: _____</p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p style="padding-left: 150px;">_____ days/year</p>													
<p>5. Fuel Consumption: Not Applicable</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
<p>6. Emissions in Tons: (From Appendix A)</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NOx <u> </u> SOx <u> </u> VOC <u><0.01</u> PM10 <u>0.02</u> HAPs <u>0.033</u> _____</p>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A-50. EMISSIONS UNIT DESCRIPTIONS

<p>1. Emissions Unit No.: EU30-9</p> <p>1a. Date of installation (month/year): April 2024 Operation Date: TBD</p>	<p>2. MDE Registration No.:(if applicable) TBD - Pending Construction</p>												
<p>3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):</p> <p><u>EU30-9 is a 1,000-kW emergency generator that fires No. 2 fuel oil. Emissions from this unit will be vented through emission point EP30-9. The unit will be located outside of Building 30.</u></p>													
<p>4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:</p> <p>General Reference: <u>40 CFR 60.4211 (f)</u></p> <p>Continuous Processes: _____ hours/day _____ days/year</p> <p>Batch Processes: _____ hours/batch _____ batches/day</p> <p>_____ days/year <u>≤100</u> hours/year (for non-emergency purposes.)</p>													
<p>5. Fuel Consumption: TBD - Pending Construction</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;">Type(s) of Fuel</th> <th style="width:30%;">% Sulfur</th> <th style="width:30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>No. 2 Fuel Oil</u></td> <td><u>11.42 ppm (per 2022 fuel analysis)</u></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>		2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>No. 2 Fuel Oil</u>	<u>11.42 ppm (per 2022 fuel analysis)</u>												
2. _____													
3. _____													
<p>6. Emissions in Tons: TBD - Pending Construction</p> <p>A. Actual Major: <u>N/A</u> Potential Major: <u>N/A</u> (note: before control device)</p> <p>B. Actual Emissions: NO_x <u> </u> SO_x <u> </u> VOC <u> </u> PM₁₀ <u> </u> HAPs <u> </u></p>													



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B-1. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU24-1 through EU24-5 General Reference: COMAR 26.11.09.05A(2) and (3), 40 CFR 60 Subpart Dc §60.43c, COMAR 26.11.09.07A(2)(b) 40 CFR 60, Subpart Dc §60.42c, COMAR 26.11.09.08E, MDE PTC 033-5-0808 through 5-0912

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.09.05A(2) and (3) - Fuel Burning Equipment

(2) "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."

(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, Subpart Dc §60.43c - NSPS for Small Industrial- Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 million Btu/hour but greater than 10 million Btu/hour for which construction began after June 9, 1989.

(c) GSFC-GB "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. "

(d) "The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction."

Note: Compliance with the "No Visible Emission" requirements of COMAR 26.11.09.05A(4) will be used to show compliance with this NSPS standard.

COMAR 26.11.09.07A(2)(b) - Sulfur Content Limitation for Fuel.

GSFC-GB shall "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: Distillate fuel oils, 0.3 percent."

40 CFR 60, Subpart Dc §60.42c - NSPS for Small Industrial- Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 million Btu/hour but greater than 10 million Btu/hour for which construction began after June 9, 1989.

(d) GSFC-GB shall not cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/million Btu) heat input; or, as an alternative, GSFC-GB shall not combust oil in the affected facility that contains greater than 0.5 weight percent sulfur.

(i) "The SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction."



SECTION 3B-1. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU24-1 through EU24-5 General Reference: See previous page.

COMAR 26.11.09.08E - Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less.

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 USEPA 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 US 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.

MDE PTC 033-5-0808 through 5-0912 (April 27, 2005)

1. Each boiler is subject to a NOx emission limit of 0.1 pounds per MMBtu for a 24-hour average when burning natural gas.
2. The total 12-month rolling heat input consumed by the five boilers shall not exceed 750,000 MMBtu.
3. The combined average NOx emissions from all five 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.
4. The combined average SOx emissions for the five 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.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- Quarterly Monitoring Report: _____
 Annual Compliance Certification: April 1st
 Semi-Annual Monitoring Report: January 30th, July 30th

Methods used to demonstrate compliance:

Monitoring: Reference:

COMAR 26.11.03.06C, 40 CFR 60, Subpart Dc §60.46c, COMAR 26.11.09.08E(2)

Describe:

GSFC-GB 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. GSFC-GB 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. GSFC-GB does not need to operate on No.2 fuel oil solely for the purpose of conducting the test.

GSFC-GB 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



SECTION 3B-1. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU24-1 through EU24-1 General Reference: See previous page.

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.

40 CFR 60, Subpart Dc §60.46c - Emission monitoring for sulfur dioxide

(e) "The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under § 60.48c(f) (1), (2), or (3), as applicable."

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

COMAR 26.11.09.08E(2)

GSFC-GB shall optimize combustion based on the combustion analysis.

MDE PTC 033-5-0808 through 5-0912 (April 27, 2005)

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.

Testing: Reference:

40 CFR 60, Subpart Dc §60.44c, COMAR 26.11 .09.08E(2)], COMAR 26.11.03.06C

Describe:

40 CFR 60, Subpart Dc §60.44c

Compliance and performance test methods and procedures for sulfur dioxide (h) "For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under § 60.48c(f)(1), (2), or (3), as applicable."

COMAR 26.11.09.08E(2)

GSFC-GB shall perform a combustion analysis for each installation at least once each year.

COMAR 26.11.03.06C

GSFC-GB shall conduct a stack test of NO_x, SO_x, and PM on one of the boiler capable of burning all three fuels as specified by the Department. GSFC-GB does not need to operate on No.2 fuel oil solely for the purpose of conducting this test.



SECTION 3B-1. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU24-1 through EU24-5 General Reference: See previous page.

Record Keeping: Reference:

COMAR 26.11.03.06C(5)(g), COMAR 26.11.03.06C, 40 CFR 60, Subpart Dc §60.48c, COMAR 26.11.09.08E(5)

Describe:

COMAR 26.11.03.06C(5)(g)

All records will be maintained for a period of at least 5 years and be made available to the Department upon request.

COMAR 26.11.03.06C

1. GSFC-GB shall maintain an operations manual and preventative maintenance plan and records of maintenance performed that relates to combustion performance.
2. GSFC-GB shall maintain records of the maintenance performed on the boiler that relate to preventing visible emissions.
3. GSFC-GB shall maintain a log of visible emission observations performed.

40 CFR 60, Subpart Dc §60.48c - Reporting and record keeping requirements

(e) "The owner or operator of each affected facility subject to the SOx emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.43c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f) (1), (2), or (3) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

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

(iii) The sulfur content of maximum sulfur content in the oil."

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

COMAR 26.11.09.08E(5)

GSFC-GB shall maintain on site records of:

- (1) The results of the annual combustion analysis; and
- (2) Training program attendance for each operator.

MDE PTC 033-5-0808 through 5-0912 (April 27, 2005)

GSFC-GB shall maintain records of:

1. NOx 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 NOx emission rate from all five boilers on a calendar monthly basis.
4. The total annual SOx emissions from all five boilers on a 12-month rolling basis.



SECTION 3B-1. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU24-1 through EU24-5 General Reference: See previous page.

Reporting: Reference:

COMAR 26.11.01.07, COMAR 26.11.03.06C(7), 40 CFR 60, Subpart Dc §60.48c, COMAR 26.11.09.08E

Describe:

GSFC-GB shall report incidents of visible emissions in accordance with COMAR 26.11.01.07 and COMAR 26.11.03.06C(7).

40 CFR 60, Subpart Dc §60.48c - Reporting and recordkeeping requirements

(g)(1) GSFC-GB shall report and maintain records of the amounts of each fuel combusted during each day.

(j) "The reporting period for the reports required under this subpart 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."

(e)(11) The report shall include a certified statement signed by GSFC-GB that the records of fuel supplier certifications submitted represent all of the fuel oil combusted during the reporting period.

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

COMAR 26.11.09.08E

GSFC-GB shall submit:

1. The results of combustion analysis to the department and the EPA upon request.
2. A record of training program attendance for each operator to the Department upon request.

MDE PTC 033-5-0808 through 5-0912 (April 27, 2005)

GSFC-GB 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 NOx emission rate from all five boilers for each calendar month.
3. The total annual SOx emissions from all five boilers on a 12-month rolling basis.

GSFC-GB shall report to the Department if there is an exceedance of the flue gas NOx limit within seven days. Within 30 days, GSFC-GB shall submit a root cause analysis and preventative action plan for the exceedance.

Frequency of submittal of the compliance demonstration: Annual, Semi-Annual



SECTION 3B-2. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU35-1, EU35-2, EU97-1, EU302-1, EU302-3 General Reference: COMAR 26.11.09.05A, COMAR 26.11.09.08F, COMAR 26.11.02.09A

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.09.05A(2) and (3) - Fuel Burning Equipment.

(1) "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."

(2) 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."

COMAR 26.11.09.08F - Requirements for Space Heaters.

(1) "A person who owns or operates a space heater 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 NOx 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 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."

COMAR 26.11.02.09A(6)

GSFC-GB shall burn only natural gas, unless approval is obtained from the Department.

Permit Shield Request: Yes.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: April 1st

Semi-Annual Monitoring Report: January 30th, July 30^h

Methods used to demonstrate compliance:

Monitoring: Reference: COMAR 26.11.03.06C & COMAR 26.11.09.08F(1)(b)

Describe:

COMAR 26.11.03.06C

GSFC-GB shall properly operate and maintain the boiler in a manner to prevent visible emissions.



SECTION 3B-2. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU35-1, EU35-2, EU97-1, EU302-1, EU302-3 General Reference: See previous page.

COMAR 26.11.09.08F(1)(b)

GSFC-GB shall maintain an operating and maintenance plan to minimize NOx emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience.

Testing: Reference: None Describe: None

Record Keeping: COMAR 26.11.03.06C(5)(g), COMAR 26.11.03.06C, COMAR 26.11.09.08F(1)(c), COMAR 26.11.09.08F(1)(e), COMAR 26.11.09.08G(1)(e), COMAR 26.11.09.08K(3)

Describe:

COMAR 26.11.03.06C(5)(g)

All records will be maintained for a period of at least 5 years and be made available to the Department upon request.

COMAR 26.11.09.08F(1)(c)

GSFC-GB shall 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.

COMAR 26.11.09.08F(1)(e)

GSFC-GB shall 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.

COMAR 26.11.09.08G(1)(e)

GSFC-GB shall retain records of training program attendance for each operator for at least 5 years.

COMAR 26.11.09.08K(3)

Maintain records of fuel usage that demonstrates that each boiler meets the definition of space heater.

COMAR 26.11 .03.06C

GSFC-GB shall maintain an operations manual and preventative maintenance plan and records of the maintenance performed based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience.

GSFC-GB 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.

Reporting: Reference: COMAR 26.11.09.08F(1)(e)

Describe:

COMAR 26.11.09.08F(1)(e)

GSFC-GB shall submit a record of training program attendance for each operator to the Department upon request.

Frequency of submittal of the compliance demonstration: Annual, Semi-Annual



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

Emissions Unit No.: EU7-2, EU10-3, EU24C-1 through 4, EU24C-6, EU24C-8, EU31-1 through 5, EU29-1, EU7-3, EU28-1, EU30-9 General Reference: COMAR 26.11.09.05E(2,3, & 4), COMAR 26.11.09.07A(2)(b), COMAR 26.11.09.08G(1)

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.09.05E(2,3, & 4) - Stationary Internal Combustion Engine Powered Equipment

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

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

(4) "Exceptions:

(a) Section E(2) 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.

(c) Section E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for a maximum period of 30 minutes for engines that are idled continuously when not in service; or for a maximum period of 15 minutes for all other engines.

(d) Section E(2) and (3) does not apply when maintenance, repair, or testing is being performed by qualified mechanics."

COMAR 26.11.09.07A(2)(b) - Sulfur Content Limitation for Fuel

GSFC-GB shall "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: Distillate fuel oils, 0.3 percent."

COMAR 26.11.09.08G(1) -Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 percent or less.

(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 and any stack tests 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 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."

Operational Limitation: None

Permit Shield Request: Yes.



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

Emissions Unit No.: EU7-2, EU10-3, EU24C-1 through 4, EU24C-6, EU24C-8, EU31-1 through 5, EU29-1,

EU7-3, EU28-1, EU30-9 General Reference: See previous page. Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: April 1st

Semi-Annual Monitoring Report: January 30th, July 30th

Methods used to demonstrate compliance:

Monitoring: Reference: COMAR 26.11.03.06C

Describe:

COMAR 26.11.03.06C

GSFC-GB shall perform preventive maintenance to optimize combustion performance.

GSFC-GB 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.

GSFC-GB shall calculate the capacity factor of each unit within 30 days after the end of each month.

Testing: Reference: COMAR 26.11.09.08G(1)(b)

Describe:

COMAR 26.11.09.08G(1)(b)

GSFC-GB 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.

Record Keeping: Reference: COMAR 26.11.03.06C(5)(g), COMAR 26.11.03.06C, COMAR 26.11.09.07C,

COMAR 26.11.09.08G(1)(c), COMAR 26.11.09.08G(1)(e)

Describe:

COMAR 26.11.03.06C(5)(g)

All records will be maintained for a period of at least 5 years and be made available to the Department upon request.

COMAR 26.11.03.06C

GSFC-GB shall:

1. Maintain an operation manual and prevention maintenance plan; and
2. Maintain a record of the maintenance performed that relates to combustion performance.
3. Retain records of the calculated capacity factors.

COMAR 26.11.09.07C

GSFC-GB shall maintain records of fuel supplier's certification or sulfur in fuel analyses and shall make records available to the Department upon request.



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

Emissions Unit No.: EU7-2, EU10-3, EU24C-1 through 4, EU24C-6, EU24C-8, EU31-1 through 5, EU29-1, EU7-3, EU28-1, EU30-9 General Reference: See previous page.

COMAR 26.11.09.08G(1)

GSFC-GB shall:

1. Maintain the results of the combustion analysis performed when the hours of operation exceed 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)]

COMAR 26.11.03.06

GSFC-GB shall maintain for at least five years, an operating log for each generator, listing dates, hours of operation, and reason for generator operation (i.e. maintenance, operational testing, power outage, etc.)

Reporting: Reference: COMAR 26.11.09.07C, COMAR 26.11.09.08G(1)(e), COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C

Describe:

COMAR 26.11.09.07C

GSFC-GB shall report fuel supplier certification or a copy of the sulfur in fuel analyses to the Department upon request.

COMAR 26.11.09.08G(1)(e)

GSFC-GB shall submit a record of the training program attendance for each operator to the Department upon request.

COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C

GSFC-GB shall provide certification of the capacity factor of the equipment to the Department in writing as part of the annual Emissions Certification Report.

COMAR 26.11.03.06C

GSFC-GB shall submit a record of the total generator operating hours in writing as part of the annual Emission Certification Report.

Frequency of submittal of the compliance demonstration: Annual, Semi-Annual



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B-4. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU24C-6, EU29-1, EU28-1, EU30-9 General Reference: COMAR 26.11.03.06C, 40 CFR §60.4205(b), 40 CFR §60.4202(a)(2), 40 CFR §60.4207(b), 40 CFR §60.4211(a), (c)&(f), 40 CFR §60.4209(a), 40 CFR §60.4206, 40 CFR §60.4214(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

40 CFR §60.4205(b), §60.4202(a)(2), §89.113(a)

GSFC-GB must not exceed the following opacity emission standards [§89.113(a)]:

- (1) 20 percent during the acceleration mode;
- (2) 15 percent during the lugging mode; and
- (3) 50 percent during the peaks in either the acceleration or lugging modes.

40 CFR Part §60.4207(b), §1090.305

Emergency diesel generators must combust diesel fuel meeting the requirements of 40 CFR §1090.305:

- (b) sulfur standard: 15 ppm maximum.
- (c)(1) a minimum cetane index of 40, or (2) a maximum aromatic content of 35 volume percent.

40 CFR §60.4205(b), §60.4202(a)(2), §89.112(a)

GSFC-GB must not exceed the following exhaust emission standards [§89.112(a), Table 1]:

- NMHC + NOx: 6.4 grams per kilowatt hour;
PM: 0.2 grams per kilowatt hour;
CO: 3.5 grams per kilowatt hour.

40 CFR §60.4209(a)

GSFC-GB must install and operate a non-resettable hourly time meter on each engine.

40 CFR §60.4206

GSFC-GB must operate and maintain the engines in a manner that achieves the emission standards of the entire life of the engine.

40 CFR §60.4211(a)

- (1) GSFC-GB must operate and maintain the engines and control devices according to the manufacturer's emission related written instruction.
- (2) GSFC-GB may change only those emission related settings that are approved by the manufacturer.

40 CFR §60.4211(f)

GSFC-GB must operate the emergency engines as follows:

- (1) There is no time limit on the use of emergency stationary ICE in emergency situations.
- (2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year.



SECTION 3B-4. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU24C-6, EU29-1, EU28-1, EU30-9 General Reference: See previous page.

(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.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: April 1st

Semi-Annual Monitoring Report: January 30th, July 30th

Methods used to demonstrate compliance:

Monitoring: Reference: 40 CFR §60.4211(c)

Describe:

40 CFR §60.4211(c)

GSFC-GB must comply by purchasing an engine certified to the emission standards in § 60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

Testing: Reference: None

Record Keeping: Reference: COMAR 26.11.03.06C

Describe:

COMAR 26.11.03.06C

GSFC-GB shall maintain for at least five years and make available to the Department upon request records of:

1. 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 §1090.305.
2. Certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211.
3. 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.).



SECTION 3B-4. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU24C-6, EU29-1, EU28-1, EU30-9 General Reference: See previous page.

Reporting: Reference: 40 CFR §60.4214(b)

Describe:

40 CFR §60.4214(b)

If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

40 CFR §60.4214(d)

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:

(1) 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.

(2) 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.

(3) 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.

Frequency of submittal of the compliance demonstration: Annual, Semi-Annual



SECTION 3B-5. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU4-2, EU4-3, EU4-6, EU5A-3 General Reference: COMAR 26.11.06.02C, COMAR 26.11.06.02A, COMAR 26.11.06.03B(2)(a), COMAR 26.11.19.13-1, COMAR 26.11.19.13-1C, COMAR 26.11.01.07 and COMAR 26.11.03.06C(7), PTC 033-6-1323

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.06.02C - Visible Emission Standards Areas III & IV

(2) "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 - Visible Emissions General Exceptions

(2) Exceptions. "The visible emissions standards in §C of this regulation do not apply to emissions during startup 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 sixty-minute period."

COMAR 26.11.06.03B(2) - Particulate Emissions Limitation in 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."

COMAR 26.11.19.13-1 Aerospace Coating Operations

(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 standard established in Sec. §C(2) of this regulation does not apply to tooling and touch-up and repair operations.

(3) A person subject to the standards in Sec. §C(2) of this regulation may comply with those standards by using an air pollution control device.

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 – see COMAR 26.11.19.13-1C(2) for maximum allowable VOC coating standards.

(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.

Permit Shield Request: Yes.



SECTION 3B-5. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU4-2, EU4-3, EU4-6, EU5A-3 General Reference: See previous page.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: April 1st

Semi-Annual Monitoring Report: January 30th, July 30th

Methods used to demonstrate compliance:

Monitoring: Reference: COMAR 26.11.03.06C

Describe:

COMAR 26.11.03.06C

GSFC-GB 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, GSFC-GB 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, GSFC-GB 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, GSFC-GB shall perform daily 18-minute visual observation for opacity in accordance with EPA Reference Method 9 when operating the spray booth.

GSFC-GB shall maintain a preventative maintenance plan for the spray booth system that describes the maintenance activity and time schedule for completing each activity. GSFC-GB shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates that maintenance was performed.

Testing: Reference: None Describe: None

Record Keeping: Reference: COMAR 26.11.03.06C(5)(g), COMAR 26.11.03.06C,

Describe:

COMAR 26.11.03.06C(5)(g)

All records will be maintained for a period of at least 5 years and be made available to the Department upon request.

COMAR 26.11.03.06C

GSFC-GB shall maintain:

- A log of visible emission observations performed.
- Records of maintenance activities designed to minimize air emissions.
- 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.



SECTION 3B-5. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU4-2, EU4-3, EU4-6, EU5A-3 General Reference: See previous page.

COMAR 26.11.19.13-1C(6) – Aerospace Coating Operations – Recordkeeping

(a) GSFC-GB 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.

(b) Records to be retained for not less than 3 years and be made available to the Department upon request.

PTC 033-6-1323 (August 2, 2006)

GSFC-GB shall maintain records of the following information:

Quantity of materials used in the paint spray booth and the hours of operation of the booth;

Material usage for the surface coating operation on-site.

Reporting: Reference: COMAR 26.11.01.07 and COMAR 26.11.03.06C(7)

Describe:

GSFC-GB shall report incidents of visible emissions in accordance with COMAR 26.11.01.07 and COMAR 26.11.03.06C(7).

COMAR 26.11.02.19C & D

GSFC-GB shall report material usage and VOC content of coatings in the annual Emission Certification Report.

Frequency of submittal of the compliance demonstration: Annual, Semi-Annual



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B-6. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU5-2 through EU5-6 General Reference: COMAR 26.11.06.02A&C,
COMAR 26.11.06.03B(2)(a), COMAR 26.11.03.06C, COMAR 26.11.01.07, PTC 16-6-0855

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.06.02C - Visible Emission Standards Areas III & IV

(2) "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 - Visible Emissions General Exceptions

(2) Exceptions. "The visible emissions standards in §C of this regulation do not apply to emissions during startup 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 sixty-minute period."

COMAR 26.11.06.03B(2) - Particulate Emissions Limitation in 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."

PTC 16-6-0855

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.

Permit Shield Request: Yes.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: April 1st

Semi-Annual Monitoring Report: January 30th, July 30th

Methods used to demonstrate compliance:

Monitoring: Reference: COMAR 26.11.03.06C

Describe:

COMAR 26.11.03.06C

GSFC-GB 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, GSFC-GB 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, GSFC-GB must inspect the plating line for the cause of visible emissions and perform necessary adjustments or repairs within 24-hours or prior to operating the plating line.



SECTION 3B-6. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU5-2 through EU5-6 General Reference: See previous page.

GSFC-GB shall maintain a preventative maintenance plan for the plating shop that describes the maintenance activity to minimize air emissions and time schedule for completing each activity. GSFC-GB shall perform maintenance activities within the time-frames established in the plan and shall maintain a log with records of the dates that maintenance was performed.

Testing: Reference: None Describe: None

Record Keeping: Reference: COMAR 26.11.03.06C(5)(g), COMAR 26.11.03.06C,

Describe:

COMAR 26.11.03.06C(5)(g)

All records will be maintained for a period of at least 5 years and be made available to the Department upon request.

COMAR 26.11.03.06C

GSFC-GB shall maintain:

A log of visible emission observations performed.

Records of maintenance activities designed to minimize air emissions.

Reporting: Reference: COMAR 26.11.01.07 and COMAR 26.11.03.06C(7)

Describe:

COMAR 26.11.01.07 and COMAR 26.11.03.06C(7)

GSFC-GB shall report incidents of visible emissions in accordance with COMAR 26.11.01.07 and COMAR 26.11.03.06C(7).

PTC 166-0855N

GSFC-GB shall submit for approval, a demonstration of compliance with 40 CFR Part 63, Subpart N, National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks, prior to engaging in chromium electroplating or chromium anodizing activities.

Frequency of submittal of the compliance demonstration: Annual, Semi-Annual



SECTION 3B-7. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU27-2 & EU27-3 General Reference: COMAR 26.11.13.04C & D

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.13.04C - Small Storage Tanks - Stage I 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 total vapor pressure greater than 1.5 psia 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) The equipment is maintained and operated in a manner to prevent avoidable liquid leaks during loading or unloading operations."

Permit Shield Request: Yes.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: April 1st

Semi-Annual Monitoring Report: January 30th, July 30th

Methods used to demonstrate compliance:

Monitoring: Reference: COMAR 26.11.03.06C

Describe:

COMAR 26.11.03.06C

GSFC-GB 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, GSFC-GB 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.



SECTION 3B-7. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU27-2 & EU27-3 General Reference: See previous page.

Testing: Reference: None

Describe: None

Record Keeping: Reference: COMAR 26.11.03.06C(5)(g), COMAR 26.11.03.06C,

Describe:

COMAR 26.11.03.06C(5)(g)

All records will be maintained for a period of at least 5 years and be made available to the Department upon request.

COMAR 26.11.24.07D - Requirements for Gasoline Dispensing Facilities Exempted by Regulation .02C of this chapter

GSFC-GB shall create and maintain records on gasoline throughput and tank sizes and make the records available to the Department upon request.

Reporting: Reference: None

Describe: None

Frequency of submittal of the compliance demonstration: Annual, Semi-Annual



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B-8. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU30-1 through 8 General Reference: COMAR 26.11.06.02C, COMAR 26.11.06.02A, COMAR 26.11.06.03B(2)(a), COMAR 26.11.06.06B(l)(b), MDE PTC 16-6-0903, COMAR 26.11.03.06C

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.06.02C - Visible Emission Standards Areas III & IV

(2) "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 - Visible Emissions General Exceptions

(2) Exceptions. "The visible emissions standards in §C of this regulation do not apply to emissions during startup 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 sixty-minute period."

COMAR 26.11.06.03B(2) - Particulate Emissions Limitation in 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."

COMAR 26.11.06.06B(l)(b) - Control of VOC in Areas III and IV

"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 per day unless the discharge is reduced by 85 percent or more overall."

MDE PTC 16-6-0903 (August 26, 1997)

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 the application and operating procedures that were specified in the application by the equipment vendors.

Permit Shield Request: Yes.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: April 1st

Semi-Annual Monitoring Report: January 30th, July 30th



SECTION 3B-8. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU30-1 through 8 General Reference: See previous page.

Methods used to demonstrate compliance:

Monitoring: Reference: COMAR 26.11.03.06C

Describe:

COMAR 26.11.03.06C

GSFC-GB shall conduct an annual one-minute visual observation 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, GSFC-GB 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, GSFC-GB must inspect the scrubber and clean room operations for cause of visible emissions and perform necessary adjustments or repairs within 24-hours or prior to operating the clean room processes. If visible emissions have not been eliminated, GSFC-GB shall perform daily 18-minute visual observation for opacity in accordance with EPA Reference Method 9 when operating the clean room operations.

GSFC-GB shall maintain a preventative maintenance plan for the scrubber that describes the maintenance activity and time schedule for completing each activity. GSFC-GB shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates that maintenance was performed.

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.

Testing: Reference: None

Describe: None

Record Keeping: Reference: COMAR 26.11.03.06C(5)(g), COMAR 26.11.03.06C, and PTC 16-6-0903

Describe:

COMAR 26.11.03.06C(5)(g)

All records will be maintained for a period of at least 5 years and be made available to the Department upon request.

COMAR 26.11.03.06C

GSFC-GB shall maintain records of visible emissions observations.

COMAR 26.11.03.06C and PTC 16-6-0903

GSFC-GB 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.



SECTION 3B-8. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU30-1 through 8 General Reference: See previous page.

Reporting: Reference: COMAR 26.11.03.06C(7)

Describe:

COMAR 2 COMAR 26.11.03.06C(7)

1. GSFC-GB shall report incidents of visible emissions in accordance with COMAR 26.11.01.07 and COMAR 26.11.03.06C(7).
2. Records of material usage and calculated HAPs, TAP and VOC emissions shall be submitted to the Department as part of the Annual Emission Certification Report.
3. GSFC-GB shall report material usage to the Department as part of the Annual Emission Certification Report.

Frequency of submittal of the compliance demonstration: Annual, Semi-Annual



SECTION 3B-9. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU92-1 through 4 General Reference: COMAR 26.11.18.06B(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.18.06B – Emissions from Certain Food Preparation Installations

(2) "A person who owns or operates a char-broiler or pit barbecue not subject to §B(1), of this regulation, may not cause or permit the discharge of emissions greater than 30 percent opacity."

Permit Shield Request: Yes.

Compliance Demonstration:

Check appropriate reports required to be submitted:

Quarterly Monitoring Report: _____

Annual Compliance Certification: April 1st

Semi-Annual Monitoring Report: January 30th, July 30th

Methods used to demonstrate compliance:

Monitoring: Reference: None

Describe: None

Testing: Reference: None

Describe: None

Record Keeping: Reference: None

Describe: None

Reporting: Reference: None

Describe: None

Frequency of submittal of the compliance demonstration: Annual, Semi-Annual



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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

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

Emissions Unit No.: Not Applicable Permit to Construct No. _____

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion



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

Scenario No.: Not Applicable

Emissions Unit No.: Not Applicable **General Reference:** Not Applicable

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

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: _____

Testing: Reference _____ Describe: _____

Record Keeping: Reference _____ Describe: _____

Reporting: Reference _____ Describe: _____

Frequency of submittal of the compliance demonstration: _____



SECTION 4-1. CONTROL EQUIPMENT

<p>1. <u>Associated Emissions Units No.</u> : EU4-2, EU4-3, and EU5A-3</p>	<p>2. <u>Emissions Point No.:</u> EP4-2, EP4-3, and EP5A-3</p>
<p>3. <u>Type and Description of Control Equipment:</u></p> <p><u>Paint booths are equipped with filters in the booth interior to control particulate matter emissions from the coating processes.</u></p>	
<p>4. <u>Pollutants Controlled:</u></p>	<p><u>Control Efficiency:</u></p>
<p>Particulate Matter</p>	<p>96%</p>
<p></p>	<p></p>
<p></p>	<p></p>
<p></p>	<p></p>
<p></p>	<p></p>
<p></p>	<p></p>
<p></p>	<p></p>
<p>5. <u>Capture Efficiency:</u> 99%</p>	



SECTION 4-2. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : EU5-2	2. <u>Emissions Point No.</u> : EP5-2
3. <u>Type and Description of Control Equipment:</u> Scrubber #2 (Control Equipment No. CE5-2).	
4. Pollutants Controlled:	Control Efficiency:
Hydrofluoric Acid	<32%
Hydrochloric Acid	<73%
Nickel Compounds	<73%
Chromium Compounds	<63%
Nitric Acid	<5%
Sulfuric Acid	<86%
Barium Compounds	<57%
Zinc Compounds	<22%
5. Capture Efficiency: 99%	



SECTION 4-3. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : EU5-4	2. <u>Emissions Point No.:</u> EP5-4
3. <u>Type and Description of Control Equipment:</u> Scrubber #1 (Control Equipment No. CE5-1).	
4. Pollutants Controlled:	Control Efficiency:
Hydrofluoric Acid	<32%
Hydrochloric Acid	<73%
Nickel Compounds	<73%
Chromium Compounds	<63%
Nitric Acid	<5%
Sulfuric Acid	<86%
Barium Compounds	<57%
Zinc Compounds	<22%
5. Capture Efficiency: 99%	



SECTION 4.4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : EU5-6 (B Tanks and E Tanks E-1 through E-5)	2. <u>Emissions Point No.:</u> EP5-6
3. <u>Type and Description of Control Equipment:</u> Scrubber #3 (Control Equipment No. CE5-3).	
4. Pollutants Controlled:	Control Efficiency:
Hydrofluoric Acid	<32%
Hydrochloric Acid	<73%
Nickel Compounds	<73%
Chromium Compounds	<63%
Nitric Acid	<5%
Sulfuric Acid	<86%
Barium Compounds	<57%
Zinc Compounds	<22%
5. Capture Efficiency: 99%	



SECTION 4.5. CONTROL EQUIPMENT

<p>1. <u>Associated Emissions Units No.</u> : EU5-6 (Tanks E7 and E8)</p>	<p>2. <u>Emissions Point No.:</u> EP5-6</p>
<p>3. <u>Type and Description of Control Equipment:</u> Scrubber #4 (Control Equipment No. CE5-4).</p>	
<p>4. Pollutants Controlled:</p>	<p>Control Efficiency:</p>
<p>Hydrofluoric Acid</p>	<p><32%</p>
<p>Hydrochloric Acid</p>	<p><73%</p>
<p>Nickel Compounds</p>	<p><73%</p>
<p>Chromium Compounds</p>	<p><63%</p>
<p>Nitric Acid</p>	<p><5%</p>
<p>Sulfuric Acid</p>	<p><86%</p>
<p>Barium Compounds</p>	<p><57%</p>
<p>Zinc Compounds</p>	<p><22%</p>
<p>5. Capture Efficiency: 99%</p>	



SECTION 4-6. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : EU27-2	2. <u>Emissions Point No.:</u> EP27-2
3. <u>Type and Description of Control Equipment:</u> Stage I Vapor Recovery.	
4. Pollutants Controlled:	Control Efficiency:
Benzene	90%
Cumene	90%
Ethylbenzene	90%
Hexane	90%
Methyl Tert-butyl Ether	90%
Toluene	90%
2,2,4-Trimethylpentane	90%
Total Xylene	90%
5. Capture Efficiency: 90%	



SECTION 4-7. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : EU27-3	2. <u>Emissions Point No.:</u> EP27-3
3. <u>Type and Description of Control Equipment:</u> Stage I Vapor Recovery.	
4. Pollutants Controlled:	Control Efficiency:
Benzene	90%
Cumene	90%
Ethylbenzene	90%
Hexane	90%
Methyl Tert-butyl Ether	90%
Toluene	90%
2,2,4-Trimethylpentane	90%
Xylene	90%
5. Capture Efficiency: 90%	



SECTION 4.8. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : EU30-1 through EU30-8	2. <u>Emissions Point No.:</u> EP30-1
<p>3. <u>Type and Description of Control Equipment:</u></p> <p>Scrubber (Control Equipment No. CE30-1).</p>	
4. <u>Pollutants Controlled:</u>	<u>Control Efficiency:</u>
Toluene	90%
VOC	90%
PM10	90%
Benzene	90%
Chromium Compounds	90%
Hydrogen Chloride	90%
Hydrogen Fluoride	90%
Methanol	90%
Phosphine	90%
TCE	90%
Total Xylene	90%
5. <u>Capture Efficiency:</u> 99%	



SECTION 4-9. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : EU30-1	2. <u>Emissions Point No.</u> : EP30-1
<p>3. <u>Type and Description of Control Equipment:</u></p> <p>Gas Reactor Column #1 (Control Equipment No. CE30-2).</p>	
4. Pollutants Controlled:	Control Efficiency:
Silane	90%
5. Capture Efficiency: 99%	



SECTION 4-10. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : EU30-1	2. <u>Emissions Point No.:</u> EP30-1
3. <u>Type and Description of Control Equipment:</u> Gas Reactor Column #2 (Control Equipment No. CE30-3).	
4. Pollutants Controlled:	Control Efficiency:
Silane	90%
5. Capture Efficiency: 99%	



SECTION 4-11. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : EU30-1	2. <u>Emissions Point No.:</u> EP30-1
<p>3. <u>Type and Description of Control Equipment:</u></p> <p>Gas Reactor Column #3 (Control Equipment No. CE30-4).</p>	
4. Pollutants Controlled:	Control Efficiency:
Silane	90%
5. Capture Efficiency: 99%	



SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant					
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					

Per MDE's Part 70 Permit Application for Renewal Instructions, Section 5 has not been provided as GSFC-GB is not:

- 1) Claiming an exemption based on an emissions level cutoff in a standard that has been issued; or
- 2) Resolving a dispute over whether a particular requirement is applicable or whether a source is major for a particular pollutant.



SECTION 6-1. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

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

1. Applicable Requirement:

40 CFR Part 63, JJJJJ - NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources

2. Brief Description:

40 CFR Part 63, Subpart JJJJJ applies to industrial, commercial, and institutional boilers at area sources of HAPs.

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

Per 63.11195, 40 CFR Part 63, Subpart JJJJJ does not apply to gas-fired boilers. GSFC-GB's boilers meet the definition of gas-fired as they only operate on liquid fuel during periods of gas curtailment, gas supply interruptions, startups, or periodic testing on liquid fuel.



SECTION 6-2. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

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

1. Applicable Requirement:

40 CFR Part 63, Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines

2. Brief Description:

40 CFR Part 63, Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAPs) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions.

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

40 CFR 63, Subpart ZZZZ is not applicable to existing emergency generators (defined as units constructed prior to June 12, 2006) as GSFC-GB is classified as "Institutional". Therefore existing generators (EUs 7-2, 7-3, 10-3, 24C-1, 24C-2, 24C-3, 24C-4, 24C-8, 31-1, 31-2, 31-3, 31-4, and 31-5) are exempt from the requirements of this subpart. Emergency generators constructed or reconstructed after June 12, 2006 (EUs 24C-6, 29-1, 28-1, and 30-9) are subject to Subpart ZZZZ.



SECTION 6-3. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

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

1. Applicable Requirement:

40 CFR Part 60, Subpart IIII - NSPS for Stationary Compression Ignition Internal Combustion Engines

2. Brief Description:

40 CFR Part 60, Subpart IIII establishes emission and operating limitations for hazardous air pollutants (HAPs) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions.

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

40 CFR Part 60, Subpart IIII is not applicable to existing emergency generators (defined as units constructed prior to July 11, 2005). Therefore, existing generators (EUs 7-2, 7-3, 10-3, 24C-1, 24C-2, 24C-3, 24C-4, 24C-8, 31-1, 31-2, 31-3, 31-4, and 31-5) are exempt from the requirements of this subpart. Emergency generators constructed or reconstructed after June 12, 2005 (EUs 24C-6, 29-1, 28-1, and 30-9) are subject to Subpart IIII.



SECTION 6-4.

**EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS**

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

1. Applicable Requirement:

COMAR 26.11.06.02 - General Emission Standards, Prohibitions, and Restrictions - Visible Emissions

2. Brief Description:

COMAR 26.11.06.02 establishes visible emission standards.

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

COMAR 26.11.06.02A (1) (i) specifies that the visible emission standards of COMAR 26.11.06.02C do not apply to "emissions from food preparation installations subject to COMAR 26.11.18.06." therefore, GSFC-GB is exempt from this requirement.



SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS

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

2. Description of Plan to Achieve Compliance:

Not Applicable

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



This Page Intentionally Left Blank.



STATE-ONLY ENFORCEABLE REQUIREMENTS

Facility Information:

Name of Facility: National Aeronautics and Space Administration's Goddard Space Flight Center	County: Prince George's
Premises Number: 00675	
Street Address: Mail Code 250	
24-hour Emergency Telephone Number for Air Pollution Matters: (301) 286-9111	
Type of Equipment (List Significant Units): Boilers, Generators, Surface Coating, Electroplating, Tanks, Semi-Conductor Manufacturing, and Charbroilers.	



CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS

Registration No.: Not Applicable

Emissions Unit No.: Facility Wide General Reference: 26.11.06.08 & 09

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

This requirement prohibits the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

Methods used to demonstrate compliance:

Maintaining permit compliance and operational equipment in good working order.



CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS

Registration No.: Not Applicable

Emissions Unit No.: Facility Wide General Reference: 26.11.15.05

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

This requirement requires that the Permittee implement "Best Available Control Technology for
Toxics" (T-BACT) to control emissions of toxic air pollutants.

Methods used to demonstrate compliance:

GSFC-GB shall submit certification of compliance with COMAR 26.11.15 in the Annual
Emission Certification Report.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS**

Registration No.: Not Applicable

Emissions Unit No.: Facility Wide

General Reference: 26.11.15.06

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

This requirement prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

Methods used to demonstrate compliance:

Maintaining permit compliance and operational equipment in good working order.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS**

Registration No.: Not Applicable

Emissions Unit No.: Facility Wide **General Reference:** 26.11.15 & 16

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

GSFC-GB shall submit to the Department by April 1 of each year, a written certification of the results of an analysis of emissions of toxic air pollutants from the facility during the previous calendar year. The analysis shall include either: a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

Methods used to demonstrate compliance:

Emissions Certification Report is submitted by April 1 of each year.



CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS

Registration No.: 6-0852, 6-0853, 6-0854, 6-0862

Emissions Unit No.: EU5-2 through EU5-6 General Reference: N/A

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

For the electroplating process to comply with T-BACT, the source shall:

- i.) Use floating plastic balls to cover the liquid surface on Tanks A1, A2, A4, and A11 as a fume suppressant.
- ii.) Keep tanks B1A, B1B, B3, B4A, B4B, E1, E2, E3, N3B, N5A, N5B, N5C, and N8 covered when not in operation.
- iii.) Keep Tanks E7 and E8 covered at all times.

Methods used to demonstrate compliance:

Operational procedures specify the requirements listed above.



CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS

Registration No.: 8-0186 through 8-1089

Emissions Unit No.: EU92-1 through 92-4 General Reference: 26.11.18.06(B) (2)

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

A person who constructs, owns, or operates a char-broiler or pit barbecue not subject to B(1) of this regulation may not cause or permit the discharge of emissions greater than 30% opacity.

Methods used to demonstrate compliance:

Following visible emission opacity standards.



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

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

Insignificant Activities

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

- (1) No. 4 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;
- (2) No. Fuel-burning equipment using solid fuel and having a heat input of less than 350,000 Btu (0.37 gigajoule) per hour;
- (3) No. 7 Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts) of power output
- (4) Space heaters utilizing direct heat transfer and used solely for comfort heat;
- (5) X Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;
- (6) No. 5 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;
- (7) X Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
- (8) Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;
- (9) X Confection cookers where the products are edible and intended for human consumption;
- (10) Die casting machines;
- (11) Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
- (12) X Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

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

- (13) X Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (14) ___ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (15) X Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;
- (16) Containers, reservoirs, or tanks used exclusively for:
- (a) ___ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;
 - (b) ___ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;
 - (c) X Storage of butane, propane, or liquefied petroleum, or natural gas;
 - (d) No. 6 Storage of lubricating oils;
 - (e) No. ___ Unheated storage of VOC with an initial boiling point of 300 °F (
 - (f) No. 21 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,
 - (g) No. ___ Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
 - (h) No. 1 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;
- (17) X Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;
- (18) Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride,

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

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

- (a) ___ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;
 - (b) ___ Magnesium or any alloy containing over 50 percent magnesium;
 - (c) ___ Lead or any alloy containing over 50 percent lead;
 - (d) ___ Tin or any alloy containing over 50 percent tin;
 - (e) ___ Zinc or any alloy containing over 50 percent zinc;
 - (f) ___ Copper;
 - (g) ___ Precious metals;
- (19) X Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (20) X First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (21) X Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (22) ___ Potable water treatment equipment, not including air stripping equipment;
- (23) ___ Firing and testing of military weapons and explosives;
- (24) ___ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;
- (25) X Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (26) ___ Grain, metal, or mineral extrusion presses;
- (27) ___ Breweries with an annual beer production less than 60,000 barrels;

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

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

(29) X Laboratory fume hoods and vents;

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

For the following, attach additional pages as necessary:

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

No. 4 3D Printers

No. 7 Abrasive Blasters

No. 2 Spray Booths

No. 3 Milling and Grinding Machines

No. 2 XeF2 Test Chambers

No. 3 Vacuum Chambers

No. 1 Dust Collector

No. 1 XeF2 Abatement System

No. 1 Sputterer

No. 1 E-Beam Deposition Tool

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

No. _____

No. _____

No. _____

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST**

VI .Application Completeness Checklist

The purpose of this part is to list the information required to achieve a Part 70 application shield.

Cover Page

- (X) Name and address of owner or operator, including telephone number.
- (X) Name and address of facility, including the plant manager's name and telephone number.
- (X) A 24-hour emergency telephone number for air pollution matters.

Section 1 CERTIFICATION STATEMENTS

- (X) The certification statement completed and signed by a responsible official.

Section 2 FACILITY DESCRIPTION SUMMARY

- (X) A brief description of each of the source's process(es), including all applicable SIC codes and end products.
- (X) Flow diagrams indicating all emissions units, emission points, and control devices.
- (X) A plot plan of the entire facility.
- (X) Emission Certification Report.
- (X) General Emissions Information.

Section 3 EMISSIONS UNIT DESCRIPTIONS –

This section must be completed for each emissions unit.

Part A

- (X) Emissions unit number.
- (X) Detailed description of unit, including all emission points.
- (X) Federally enforceable limit(s) on the operating schedule.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST**

- (X) Fuel consumption information for any emissions unit that consumes fuel including the type of fuel, percent sulfur, and annual usage of fuel.

Part B

- (X) A citation and description of each federally enforceable requirement, including all emission standards, for each emissions unit.
- (X) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- (X) The frequency of submittal of the compliance demonstration during the permit term.

Part C

- (X) Emissions unit number.
- (X) Permit to construct number.
- (X) Emissions point number(s).
- (X) Date(s) the permit to construct was issued.
- (X) Condition number(s) as indicated on the permit to construct.
- (X) Description of the permit condition(s) and the reason(s) why they are believed to be obsolete, extraneous, or insignificant.

Part D

- (N/A) Description of all alternate operating scenarios that apply to an emissions unit.
- (N/A) Number assigned to each scenario.
- (N/A) Emissions unit number.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST**

- (N/A) Description of the operating parameters for the emissions unit and other information which describes the how the operation of the unit will change under the different scenario.

Part E

- (N/A) A citation and description of each federally enforceable requirement triggered by an operating scenario, including all emission standards, for each emissions unit.
- (N/A) As an attachment, the date and results of the most recent compliance demonstration for each emission standard and/or emissions certification report with relevant supporting documentation.
- (N/A) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- (N/A) The frequency of submittal of the compliance demonstration during the permit term.

Section 4 CONTROL EQUIPMENT

- (X) The type of each piece of air pollution control equipment
- (X) The capture and control efficiencies of the control equipment.

Section 5 SUMMARY SHEET OF POTENTIAL EMISSIONS

- (N/A) Quantity of potential emissions for criteria pollutants and HAPs emitted in tons per year for each emissions unit.
- (N/A) Fugitive emission estimations for the entire facility for criteria pollutants and HAPs emitted in tons per year.
- (N/A) Basis for all emission calculations.

Section 6 AN EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

- (X) An explanation of the proposed exemption.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION CHECKLIST**

**Section 7 COMPLIANCE SCHEDULE FOR NONCOMPLYING
EMISSIONS UNITS**

(N/A) Identification of emissions unit(s) not in compliance, including the requirement being violated and the effective compliance date.

(N/A) Detailed description of methods to be used to achieve compliance.

(N/A) A schedule of remedial measures, including an enforceable sequence of actions with milestones.

Attachment

(X) Checklist of Insignificant Activities

(N/A) CAM Plan (If Applicable)

PART 70 PERMIT RENEWAL APPLICATION

GODDARD SPACE FLIGHT CENTER GREENBELT, MARYLAND

APPENDIX A

2022 Actual Emissions Data

2022 Actual Emissions Summary
Carbon Monoxide (CO)

GSFC
Facility ID: 24-033-00675

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (CO)		Operating Schedule (Actual)				TOSD Lbs/dy	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr		Hrs/dy	Start	End	
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0.00	1.25	0.00	0.00	0.01	0.04		0.00	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	2.74	52.37	6.88	2.01	14.95	104.62		2.82	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	2.68	63.32	5.56	1.62	12.08	84.59		0.88	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0.00	2.17	0.00	0.00	0.01	0.06		0.00	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	1.99	47.31	5.53	1.61	12.02	84.14		3.05	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	3.35	49.54	8.88	2.59	19.30	135.07		3.72	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0.01	20.05	0.04	0.01	0.08	0.59		0.00	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	2.07	39.51	6.90	2.01	14.98	104.88		1.67	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0.01	10.12	0.02	0.01	0.04	0.30		0.00	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s f	3.22	50.17	8.45	2.46	18.36	128.49		3.65	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s f	3.56	60.26	7.78	2.27	16.90	118.30		2.80	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s f	0.01	23.13	0.04	0.01	0.10	0.68		0.00	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s f	1.51	39.40	5.03	1.47	10.92	76.46		1.37	12:00 AM	11:59 PM	C1
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s f	0.03	66.38	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s f	0.03	66.38	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s f	0.03	66.38	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s f	0.03	66.38	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-8	20300101	DIESEL FUEL	s	0.03	66.38	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (CO)		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
9-1058			f											
1000KW DIESEL GENERATOR - BLDG 24C-6	20300101	DIESEL FUEL	s	0.00	9.27	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
9-1366			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.06	128.34	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1049			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.06	128.34	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1050			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.06	128.34	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1051			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.06	128.34	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1052			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.06	128.34	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1053			f											
500KW DIESEL GENERATOR - BLDG 7	20300101	DIESEL FUEL	s	0.00	7.74	0.01	0.00	0.01	0.09		0.01	12:00 AM	11:59 PM	C3
9-1045			f											
500KW DIESEL GENERATOR - BLDG 7	20300101	DIESEL FUEL	s	0.01	22.13	0.02	0.00	0.04	0.25		0.03	12:00 AM	11:59 PM	C3
9-1433			f											
500KW DIESEL GENERATOR - BLDG 10	20300101	DIESEL FUEL	s	0.00	5.90	0.00	0.00	0.01	0.07		0.01	12:00 AM	11:59 PM	C3
9-1047			f											
1000KW DIESEL GENERATOR - BLDG 29	20300101	DIESEL FUEL	s	0.00	2.16	0.01	0.00	0.01	0.09		0.02	12:00 AM	11:59 PM	C3
9-1422			f											
563KW DIESEL GENERATOR - BLDG 28	20300101	DIESEL FUEL	s	0.00	8.72	0.01	0.00	0.01	0.09		0.01	12:00 AM	11:59 PM	C3
9-1535			f											
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302	10300603	NATURAL GAS	s	0.10	0.56	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-0831			f											
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302	10300603	NATURAL GAS	s	0.09	0.47	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-1533			f											
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97	10300603	NATURAL GAS	s	0.06	0.35	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-0846			f											
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35	10300603	NATURAL GAS	s	0.12	0.68	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-1531			f											
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35	10300603	NATURAL GAS	s	0.12	0.68	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-1532			f											
TOTAL				22.16	1490.82									

2022 Actual Emissions Summary
Nitrogen Oxides (NOx)

GSFC
Facility ID: 24-033-00675

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (NOx)		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0.00	3.12	0.00	0.00	0.01	0.04	0.00	0.00	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	0.96	18.44	6.88	2.01	14.95	104.62	17.55	2.82	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	2.11	49.98	5.56	1.62	12.08	84.59	49.39	0.88	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0.00	5.41	0.00	0.00	0.01	0.06	0.00	0.00	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	0.70	16.66	5.53	1.61	12.02	84.14	15.75	3.05	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	2.64	39.10	8.88	2.59	19.30	135.07	30.98	3.72	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0.03	69.05	0.04	0.01	0.08	0.59	1.89	0.00	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	2.99	57.09	6.90	2.01	14.98	104.88	38.52	1.67	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0.01	25.22	0.02	0.01	0.04	0.30	0.00	0.00	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s f	1.13	17.67	8.45	2.46	18.36	128.49	16.07	3.65	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s f	2.81	47.56	7.78	2.27	16.90	118.30	40.51	2.80	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s f	0.04	79.64	0.04	0.01	0.10	0.68	0.00	0.00	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s f	2.18	56.94	5.03	1.47	10.92	76.46	42.95	1.37	12:00 AM	11:59 PM	C1
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s f	0.14	289.66	0.02	0.01	0.05	0.38	0.84	0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s f	0.14	289.66	0.02	0.01	0.05	0.38	0.84	0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s f	0.14	289.66	0.02	0.01	0.05	0.38	0.84	0.05	12:00 AM	11:59 PM	C3

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (NOx)		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s f	0.14	289.66	0.02	0.01	0.05	0.38	0.84	0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-8 9-1058	20300101	DIESEL FUEL	s f	0.14	289.66	0.02	0.01	0.05	0.38	0.84	0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-6 9-1366	20300101	DIESEL FUEL	s f	0.06	114.22	0.02	0.01	0.05	0.38	0.33	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1049	20300101	DIESEL FUEL	s f	0.28	560.01	0.03	0.01	0.07	0.50	1.22	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1050	20300101	DIESEL FUEL	s f	0.28	560.01	0.03	0.01	0.07	0.50	1.22	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1051	20300101	DIESEL FUEL	s f	0.28	560.01	0.03	0.01	0.07	0.50	1.22	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1052	20300101	DIESEL FUEL	s f	0.28	560.01	0.03	0.01	0.07	0.50	1.22	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1053	20300101	DIESEL FUEL	s f	0.28	560.01	0.03	0.01	0.07	0.50	1.22	0.05	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 7 9-1045	20300101	DIESEL FUEL	s f	0.02	33.79	0.01	0.00	0.01	0.09	0.11	0.01	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 7 9-1433	20300101	DIESEL FUEL	s f	0.05	96.55	0.02	0.00	0.04	0.25	0.21	0.03	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 10 9-1047	20300101	DIESEL FUEL	s f	0.01	25.75	0.00	0.00	0.01	0.07	0.11	0.01	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 29 9-1422	20300101	DIESEL FUEL	s f	0.01	26.65	0.01	0.00	0.01	0.09	0.10	0.02	12:00 AM	11:59 PM	C3
563KW DIESEL GENERATOR - BLDG 28 9-1535	20300101	DIESEL FUEL	s f	0.02	38.05	0.01	0.00	0.01	0.09	0.12	0.01	12:00 AM	11:59 PM	C3
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302 5-0831	10300603	NATURAL GAS	s f	0.12	0.66	24.00	7.00	52.00	365.00	0.52	24.00	12:00 AM	11:59 PM	C3
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302 5-1533	10300603	NATURAL GAS	s f	0.10	0.56	24.00	7.00	52.00	365.00	0.44	24.00	12:00 AM	11:59 PM	C3
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97 5-0846	10300603	NATURAL GAS	s f	0.08	0.41	24.00	7.00	52.00	365.00	0.38	24.00	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1531	10300603	NATURAL GAS	s f	0.15	0.81	24.00	7.00	52.00	365.00	0.71	24.00	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35	10300603	NATURAL GAS	s	0.15	0.81	24.00	7.00	52.00	365.00	0.71	24.00	12:00 AM	11:59 PM	C3

2022 Actual Emissions Summary
 Nitrogen Oxides (NOx)

GSFC
 Facility ID: 24-033-00675

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (NOx)		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
5-1532			f											
TOTAL				18.51	5072.48					267.66				

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (SOx)		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0.01	10.65	0.00	0.00	0.01	0.04		0.00	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	0.04	0.76	6.88	2.01	14.95	104.62		2.82	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	0.02	0.45	5.56	1.62	12.08	84.59		0.88	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0.01	18.49	0.00	0.00	0.01	0.06		0.00	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	0.03	0.69	5.53	1.61	12.02	84.14		3.05	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	0.02	0.35	8.88	2.59	19.30	135.07		3.72	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0.09	170.83	0.04	0.01	0.08	0.59		0.00	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	0.01	0.28	6.90	2.01	14.98	104.88		1.67	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0.04	86.22	0.02	0.01	0.04	0.30		0.00	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s f	0.05	0.73	8.45	2.46	18.36	128.49		3.65	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s f	0.03	0.43	7.78	2.27	16.90	118.30		2.80	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s f	0.10	197.03	0.04	0.01	0.10	0.68		0.00	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s f	0.01	0.28	5.03	1.47	10.92	76.46		1.37	12:00 AM	11:59 PM	C1
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s f	0.01	29.29	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s f	0.01	29.29	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s f	0.01	29.29	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s f	0.01	29.29	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-8	20300101	DIESEL FUEL	s	0.01	29.29	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (SOx)		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
9-1058			f											
1000KW DIESEL GENERATOR - BLDG 24C-6	20300101	DIESEL FUEL	s	0.00	0.15	0.02	0.01	0.05	0.38		0.05	12:00 AM	11:59 PM	C3
9-1366			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.03	56.63	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1049			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.03	56.63	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1050			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.03	56.63	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1051			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.03	56.63	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1052			f											
1450KW DIESEL GENERATOR - BLDG 31	20300101	DIESEL FUEL	s	0.03	56.63	0.03	0.01	0.07	0.50		0.05	12:00 AM	11:59 PM	C3
9-1053			f											
500KW DIESEL GENERATOR - BLDG 7	20300101	DIESEL FUEL	s	0.00	3.42	0.01	0.00	0.01	0.09		0.01	12:00 AM	11:59 PM	C3
9-1045			f											
500KW DIESEL GENERATOR - BLDG 7	20300101	DIESEL FUEL	s	0.00	9.76	0.02	0.00	0.04	0.25		0.03	12:00 AM	11:59 PM	C3
9-1433			f											
500KW DIESEL GENERATOR - BLDG 10	20300101	DIESEL FUEL	s	0.00	2.60	0.00	0.00	0.01	0.07		0.01	12:00 AM	11:59 PM	C3
9-1047			f											
1000KW DIESEL GENERATOR - BLDG 29	20300101	DIESEL FUEL	s	0.00	0.03	0.01	0.00	0.01	0.09		0.02	12:00 AM	11:59 PM	C3
9-1422			f											
563KW DIESEL GENERATOR - BLDG 28	20300101	DIESEL FUEL	s	0.00	3.85	0.01	0.00	0.01	0.09		0.01	12:00 AM	11:59 PM	C3
9-1535			f											
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302	10300603	NATURAL GAS	s	0.00	0.00	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-0831			f											
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302	10300603	NATURAL GAS	s	0.00	0.00	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-1533			f											
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97	10300603	NATURAL GAS	s	0.00	0.00	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-0846			f											
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35	10300603	NATURAL GAS	s	0.00	0.00	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-1531			f											
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35	10300603	NATURAL GAS	s	0.00	0.00	24.00	7.00	52.00	365.00		24.00	12:00 AM	11:59 PM	C3
5-1532			f											
TOTAL				0.68	936.64									

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (VOC)		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0.00	0.06	0.00	0.00	0.01	0.04	0.00	0.00	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	0.18	3.43	6.88	2.01	14.95	104.62	3.27	2.82	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	0.18	4.15	5.56	1.62	12.08	84.59	4.10	0.88	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0.00	0.11	0.00	0.00	0.01	0.06	0.00	0.00	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	0.13	3.10	5.53	1.61	12.02	84.14	2.93	3.05	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	0.22	3.24	8.88	2.59	19.30	135.07	2.57	3.72	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0.00	1.01	0.04	0.01	0.08	0.59	0.03	0.00	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	0.14	2.59	6.90	2.01	14.98	104.88	1.75	1.67	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0.00	0.51	0.02	0.01	0.04	0.30	0.00	0.00	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s f	0.21	3.29	8.45	2.46	18.36	128.49	2.99	3.65	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s f	0.23	3.95	7.78	2.27	16.90	118.30	3.36	2.80	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s f	0.00	1.17	0.04	0.01	0.10	0.68	0.00	0.00	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s f	0.10	2.58	5.03	1.47	10.92	76.46	1.95	1.37	12:00 AM	11:59 PM	C1
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s f	0.00	7.74	0.02	0.01	0.05	0.38	0.02	0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s f	0.00	7.74	0.02	0.01	0.05	0.38	0.02	0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s f	0.00	7.74	0.02	0.01	0.05	0.38	0.02	0.05	12:00 AM	11:59 PM	C3

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (VOC)		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s f	0.00	7.74	0.02	0.01	0.05	0.38	0.02	0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-8 9-1058	20300101	DIESEL FUEL	s f	0.00	7.74	0.02	0.01	0.05	0.38	0.02	0.05	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-6 9-1366	20300101	DIESEL FUEL	s f	0.00	1.94	0.02	0.01	0.05	0.38	0.01	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1049	20300101	DIESEL FUEL	s f	0.01	14.97	0.03	0.01	0.07	0.50	0.03	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1050	20300101	DIESEL FUEL	s f	0.01	14.97	0.03	0.01	0.07	0.50	0.03	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1051	20300101	DIESEL FUEL	s f	0.01	14.97	0.03	0.01	0.07	0.50	0.03	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1052	20300101	DIESEL FUEL	s f	0.01	14.97	0.03	0.01	0.07	0.50	0.03	0.05	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1053	20300101	DIESEL FUEL	s f	0.01	14.97	0.03	0.01	0.07	0.50	0.03	0.05	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 7 9-1045	20300101	DIESEL FUEL	s f	0.00	0.90	0.01	0.00	0.01	0.09	0.00	0.01	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 7 9-1433	20300101	DIESEL FUEL	s f	0.00	2.58	0.02	0.00	0.04	0.25	0.01	0.03	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 10 9-1047	20300101	DIESEL FUEL	s f	0.00	0.69	0.00	0.00	0.01	0.07	0.00	0.01	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 29 9-1422	20300101	DIESEL FUEL	s f	0.00	0.45	0.01	0.00	0.01	0.09	0.00	0.02	12:00 AM	11:59 PM	C3
563KW DIESEL GENERATOR - BLDG 28 9-1535	20300101	DIESEL FUEL	s f	0.00	1.02	0.01	0.00	0.01	0.09	0.00	0.01	12:00 AM	11:59 PM	C3
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302 5-0831	10300603	NATURAL GAS	s f	0.01	0.04	24.00	7.00	52.00	365.00	0.03	24.00	12:00 AM	11:59 PM	C3
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302 5-1533	10300603	NATURAL GAS	s f	0.01	0.03	24.00	7.00	52.00	365.00	0.02	24.00	12:00 AM	11:59 PM	C3
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97	10300603	NATURAL GAS	s	0.00	0.02	24.00	7.00	52.00	365.00	0.02	24.00	12:00 AM	11:59 PM	C3

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions (VOC)		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
5-0846			f											
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35	10300603	NATURAL GAS	s	0.01	0.04	24.00	7.00	52.00	365.00	0.04	24.00	12:00 AM	11:59 PM	C3
5-1531			f											
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35	10300603	NATURAL GAS	s	0.01	0.04	24.00	7.00	52.00	365.00	0.04	24.00	12:00 AM	11:59 PM	C3
5-1532			f											
GASOLINE DISPENSING AT BLDG 27	40200101	GASOLINE	s	0.00	5.00	24.00	7.00	52.00	365.00	7.00	24.00	8:00 AM	3:59 PM	C2
9-1331			f											
E85 DISPENSING AT BLDG 27	40600603	E85	s	0.00	2.00	24	7	52.00	365.00	3.00	24	8:00 AM	3:59 PM	C3
9-1168			f											
SURFACE COATING IN BLDG 4, RM 195	40200101		s	0.02	0.18	4.00	5.00	37.00	260.00	0.11	4.00	8:00 AM	3:59 PM	C2
6-1101			f											
SEMI-CONDUCTOR OPERATION IN B30	31306599		s	0.10	0.78	4.00	5.00	37.00	260.00	0.46	4.00	8:00 AM	3:59 PM	C2
6-0903			f											
SURFACE COATING IN BLDG 5A	40200101		s	0.00	0.00	4.00	5.00	37.00	260.00	0.00	4.00	8:00 AM	3:59 PM	C2
6-1323			f											
CHARBROILER AT BLDG 92	30201311	MEAT	s	0.01	0.23	10.00	5.00	9.00	60.00	0.23	10.00	8:00 AM	5:59 PM	C2
8-0186			f											
CHARBROILER AT BLDG 92	30201311	MEAT	s	0.01	0.23	10.00	5.00	9.00	60.00	0.23	10.00	8:00 AM	5:59 PM	C2
8-0187			f											
CHARBROILER AT BLDG 92	30201311	MEAT	s	0.01	0.23	10.00	5.00	9.00	60.00	0.23	10.00	8:00 AM	5:59 PM	C2
8-0188			f											
CHARBROILER AT BLDG 92	30201311	MEAT	s	0.01	0.23	10.00	5.00	9.00	60.00	0.23	10.00	8:00 AM	5:59 PM	C2
8-0189			f											
TOTAL				1.63	159.38					34.86				

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM10 - Filterable		PM2.5 - Filterable		PM Condensable		Operation	Emissions
				Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Methods
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0.00	0.50	0.00	0.25	0.00	0.06	0.00	0.33	0.04	C3
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	0.06	1.19	0.06	1.19	0.06	1.19	0.19	3.69	101.03	C3
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	0.06	1.37	0.06	1.37	0.06	1.37	0.18	4.12	88.17	C3
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0.00	0.87	0.00	0.43	0.00	0.11	0.00	0.56	0.06	C3
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	0.04	1.08	0.04	1.08	0.04	1.08	0.14	3.36	80.66	C3
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	0.08	1.09	0.08	1.09	0.08	1.09	0.23	3.28	138.55	C3
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0.00	8.02	0.00	4.01	0.00	1.00	0.00	5.21	0.59	C3
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	0.05	0.89	0.05	0.89	0.05	0.89	0.14	2.68	104.88	C3
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0.00	4.05	0.00	2.02	0.00	0.51	0.00	2.63	0.30	C3
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s f	0.07	1.14	0.07	1.14	0.07	1.14	0.22	3.54	123.87	C3
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s f	0.08	1.31	0.08	1.31	0.08	1.31	0.24	3.94	122.92	C3
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s f	0.00	9.25	0.00	4.63	0.00	1.16	0.00	6.01	0.68	C3
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s f	0.03	0.89	0.03	0.89	0.03	0.89	0.10	2.67	76.46	C3
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s f	0.00	5.24	0.00	4.19	0.00	4.05	0.00	0.65	0.38	C3
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s f	0.00	5.24	0.00	4.19	0.00	4.05	0.00	0.65	0.38	C3
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s f	0.00	5.24	0.00	4.19	0.00	4.05	0.00	0.65	0.38	C3
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s f	0.00	5.24	0.00	4.19	0.00	4.05	0.00	0.65	0.38	C3
1000KW DIESEL GENERATOR - BLDG 24C-8 9-1058	20300101	DIESEL FUEL	s f	0.00	5.24	0.00	4.19	0.00	4.05	0.00	0.65	0.38	C3

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM10 - Filterable		PM2.5 - Filterable		PM Condensable		Operation	Emissions
				Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Methods
1000KW DIESEL GENERATOR - BLDG 24C-6 9-1366	20300101	DIESEL FUEL	s f	0.00	5.24	0.00	4.19	0.00	4.05	0.00	0.65	0.38	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1049	20300101	DIESEL FUEL	s f	0.01	10.13	0.00	8.10	0.00	7.82	0.01	1.26	0.50	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1050	20300101	DIESEL FUEL	s f	0.01	10.13	0.00	8.10	0.00	7.82	0.01	1.26	0.50	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1051	20300101	DIESEL FUEL	s f	0.01	10.13	0.00	8.10	0.00	7.82	0.01	1.26	0.50	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1052	20300101	DIESEL FUEL	s f	0.01	10.13	0.00	8.10	0.00	7.82	0.01	1.26	0.50	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1053	20300101	DIESEL FUEL	s f	0.01	10.13	0.00	8.10	0.00	7.82	0.01	1.26	0.50	C3
500KW DIESEL GENERATOR - BLDG 7 9-1045	20300101	DIESEL FUEL	s f	0.00	0.61	0.00	0.49	0.00	0.47	0.00	0.08	0.09	C3
500KW DIESEL GENERATOR - BLDG 7 9-1433	20300101	DIESEL FUEL	s f	0.00	1.75	0.00	1.40	0.00	1.35	0.00	0.22	0.25	C3
1000KW DIESEL GENERATOR - BLDG 29 9-1422	20300101	DIESEL FUEL	s f	0.00	1.22	0.00	0.98	0.00	0.94	0.00	0.15	0.09	C3
563KW DIESEL GENERATOR - BLDG 28 9-1535	20300101	DIESEL FUEL	s f	0.00	0.69	0.00	0.55	0.00	0.53	0.00	0.09	0.09	C3
500KW DIESEL GENERATOR - BLDG 10 9-1047	20300101	DIESEL FUEL	s f	0.00	0.47	0.00	0.37	0.00	0.36	0.00	0.06	0	C3
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302 5-0831	10300603	NATURAL GAS	s f	0.00	0.01	0	0.00	0	0	0.01	0.04	365	C3
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302 5-1533	10300603	NATURAL GAS	s f	0.00	0.01	0	0	0	0	0.01	0.03	365	C3
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97 5-0846	10300603	NATURAL GAS	s f	0.00	0.01	0	0	0	0	0.00	0.02	365	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1531	10300603	NATURAL GAS	s f	0.00	0.01	0	0	0	0	0.01	0.03	365	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1532	10300603	NATURAL GAS	s f	0.00	0.02	0	0	0	0	0.01	0.06	365	C3
CHARBROILER AT BLDG 92 CHARBROILER AT BLDG 92	30201311	CHARCOAL	s f	0	0.00	0.02	0.74	0	0	0	0	60	C3

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM10 - Filterable		PM2.5 - Filterable		PM Condensable		Operation	Emissions
				Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Methods
CHARBROILER AT BLDG 92 8-0187	30201311	CHARCOAL	s f	0	0.00	0.02	0.74	0	0	0	0	60	C3
CHARBROILER AT BLDG 92 8-0188	30201311	CHARCOAL	s f	0	0.00	0.02	0.74	0	0	0	0	60	C3
CHARBROILER AT BLDG 92 8-0189	30201311	CHARCOAL	s f	0	0.00	0.02	0.74	0	0	0	0	60	C3
PROCESS LINE A, BLDG 5 6-0852	39999989	N/A	s f	0.13	0.97	0	0	0	0	0	0	260	C3
PROCESS LINE N, BLDG 5 6-0854	39999989	N/A	s f	0.13	0.97	0	0	0	0	0	0	260	C3
PROCESS LINE B AND E, BLDG 5 6-0862	39999989	N/A	s f	0.13	0.97	0	0	0	0	0	0	260	C3
SEMI-CONDUCTOR OPERATION IN B30 6-0903	31306599	N/A	s f	1.94	14.95	0	0	0	0	0	0	260	C3
TOTAL				2.86	136.37	0.60	92.71	0.51	78.85	1.53	52.98		

**PART 70 PERMIT RENEWAL
APPLICATION**

GODDARD SPACE FLIGHT CENTER GREENBELT, MARYLAND

APPENDIX B

2022 Annual Compliance Certification Report



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Goddard Space Flight Center
Medical and Environmental Management Division, Code 250
Greenbelt, Maryland 20771

2022 Annual Compliance Certification

Prepared By:



301 Lindenwood Drive, Suite 102
Malvern, PA 19355
Phone: 610.647.9500

Enclosure

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 (MI) _____

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 Ext. _____ 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) KIMBERLY FINCH  Digitally signed by KIMBERLY
FINCH
Date: 2023.03.29 15:55:34 -04'00'

Name (typed) Kimberly Finch, P.E. Date: ____/____/____

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 / 2022 End 12 / 31 / 2022

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 Michael C. Bonsteel Title Air Program Manager

Telephone (410) 422 - 7955 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): EU24-1 through EU24-5 - Boilers

Permit Term (Describe requirements and cross-reference)

1.1 Applicable Standards/Limits:

A. Control of Visible Emissions

COMAR 26.11.09.05 – Visible Emissions.

“A. Fuel Burning Equipment.

(2) Areas III and IV. 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.”

(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 Part 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 MMBtu/hr but greater than 10 MMBtu/hr for construction began after June 9, 1989.

§60.43c - Standards for Particulate Matter (PM).

“(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall 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. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.”

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.

B. Control of Sulfur Oxides

COMAR 26.11.09.07 – Control of Sulfur Oxides From Fuel Burning Equipment.

“A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: **(2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent”**

40 CFR Part 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 MMBtu/hr but greater than 10 MMBtu/hr for construction began after June 9, 1989.

§60.42.c - Standards for sulfur dioxide (SO₂).

“(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ 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.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(i) The SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.”

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 Limits

[Reference: MDE PTC No. 033-5-0808 thru 5-0812 issued April 27, 2005]

- (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.
- (2) The total 12-month rolling heat input consumed by the five (5) boilers shall not exceed 750,000 MMBtu.
- (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.
- (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.

1.2 Testing Requirements:

A. Control of Visible Emissions

See Monitoring Requirements.

B. Control of Sulfur Oxides

§60.44c – Compliance and performance test methods and procedures for sulfur dioxide.

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

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 Limits

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 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.

1.3 Monitoring Requirements:

A. Control of Visible Emissions

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]

The Permittee shall perform the following, if visible emissions are observed: Inspect combustion control system and boiler operations; Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; Document in writing the results of the inspections, adjustments, and/or repairs to the boiler; and 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

§60.46c - Emission monitoring for sulfur dioxide.

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

C. Control of Nitrogen Oxides

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

D. Operational Limits

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 (5) 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]

1.4 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. Control of Visible Emissions**

The Permittee shall maintain the following:

- (1) An operations manual and preventative maintenance plan and records of maintenance performed that relates to combustion performance.
- (2) Records of the maintenance performed on the boiler that relate to preventing visible emissions.
- (3) A log of visible emission observations performed.

[Reference: COMAR 26.11.03.06C]

B. Control of Sulfur Oxides**§60.48c – Reporting and recordkeeping requirements.**

"(e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable. (1) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

- (1) For distillate oil:
 - (i) The name of the oil supplier;
 - (ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and
 - (iii) The sulfur content or maximum sulfur content of the oil."

C. Control of Nitrogen Oxides

The Permittee shall maintain on site records of the following:

- (1) Results of the annual combustion analysis; and
- (2) Training program attendance for each operator.

[Reference: COMAR 26.11.09.08E(5)]

D. Operational Limits

The Permittee shall maintain records of the following:

- (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) Calculated total rolling 12-month heat input to the five boilers.
- (3) Average NO_x emission rate from all five (5) boilers on calendar monthly basis.
- (4) Total annual 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]

1.5 Reporting Requirements:**A. Control of Visible Emissions**

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**§60.48c – Reporting and recordkeeping requirements.**

(e)(11) The report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

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 the training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08E(5)]

D. Operational Limits

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 total annual 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. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):**1.1 Applicable Standards/Limits:**

- A. Control of Visible Emissions**
The NASA Goddard Space Flight Center, Greenbelt location (GSFC GB) 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 October 6, 2022. Annual six-minute visual observation of EU24-3 was conducted while the boiler was burning No. 2 fuel oil on October 7, 2022. Annual six-minute visual observation of EU24-4 was conducted while the boiler was burning No. 2 fuel oil on October 25, 2022. Annual six-minute visual observation of EU24-5 was conducted while the boiler was burning No. 2 fuel oil on October 21, 2022. No visual emissions were observed during these observations. Note that a visual observation of EU24-1 was not conducted in 2022.
- B. Control of Sulfur Oxides**
Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2023 (reporting period July 2022 – December 2022). These certifications demonstrate compliance with the SO₂ standards. The Semi-Annual Fuel Report referenced above certified that the No. 2 fuel oil burned during 2022 meets or exceeds the 0.3% maximum sulfur content limit and requirements identified in the Title V operating permit. GSFC GB does not sell or make available for sale any fuel. The fuel supplier certifications certify that all the No. 2 fuel oil burned in 2022 is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel with a minimum cetane index of 40.
- 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 28, 2022 (reporting period January 2022 to June 2022) and January 27, 2023 (reporting period July 2022 to December 2022).
 - (2) A combustion analysis for each installation is performed at least once each year, 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) Once every 3 years, each operator is required to attend an operator training program on combustion analysis, which is sponsored by the Department, EPA, or equipment vendors. The most recent training sessions occurred on October 14 and 21, 2020.
 - (5) Records of training program attendance for each operator are maintained onsite and these records are available to the Department upon request.
- D. Operational Limits**
[Reference: MDE PTC No. 033-5-0808 thru 5-0812 issued April 27, 2005]
- (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 emission 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.

1.2 Testing Requirements:

- A. Control of Visible Emissions**
See 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, 2023 (reporting period July 2022 – December 2022). These certifications demonstrate compliance with the SO₂ standards. The Semi-Annual Fuel Report referenced above certified that the No. 2 fuel oil burned during 2022 meets or exceeds the 0.3% maximum sulfur content limit and requirements identified in the Title V operating permit. GSFC GB does not sell or make available for sale any fuel. The fuel supplier certifications certify that all the No. 2 fuel oil burned in 2022 is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel with a minimum cetane index of 40.
- C. Control of Nitrogen Oxides**
A combustion analysis for each installation is performed at least once each year.
- D. Operational Limits**
Stack tests of NO_x, SO_x, and PM were performed on boiler #2 (EU24-2) burning natural gas and No. 2 fuel oil on January 10, 2023, and burning landfill on January 12, 2023. Even though the test dates were not within the first three years (by December 2022) of the issuance of the GSFC GB's Title V permit, the Department had approved performing the sampling activities on those dates following issues with landfill gas availability. A test protocol was submitted to the Department for approval at least 30 days prior to the test dates, on September 9, 2022. The stack test results were submitted to the Department within 45 days after the test dates, on February 22, 2023.

1.3 Monitoring Requirements:

- A. Control of Visible Emissions**
The GSFC GB 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 October 6, 2022. Annual

six-minute visual observation of EU24-3 was conducted while the boiler was burning No. 2 fuel oil on October 7, 2022. Annual six-minute visual observation of EU24-4 was conducted while the boiler was burning No. 2 fuel oil on October 25, 2022. Annual six-minute visual observation of EU24-5 was conducted while the boiler was burning No. 2 fuel oil on October 21, 2022. No visual emissions were observed during these observations. Note that a visual observation of EU24-1 was not conducted in 2022.

B. Control of Sulfur Oxides

Fuel supplier certifications were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2023 (reporting period July 2022 – December 2022). These certifications demonstrate compliance with the SO₂ standards. The Semi-Annual Fuel Report referenced above certified that the No. 2 fuel oil burned during 2022 meets or exceeds the 0.3% maximum sulfur content limit and requirements identified in the Title V operating permit. GSFC GB does not sell or make available for sale any fuel. The fuel supplier certifications certify that all the No. 2 fuel oil burned in 2022 is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel with a minimum cetane index of 40.

C. Control of Nitrogen Oxides

A combustion analysis for each installation is performed at least once each year, and combustion is optimized based on the analysis.

D. Operational Limits

- (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.

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.

A. Control of Visible Emissions

- (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 boilers 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. In addition, a certified statement by GSFC GB indicating that the records of fuel supplier certifications represent all the fuel combusted during the reporting period is included within the Semi-Annual Fuel Reports.

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 Limits

- (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 monthly.
- (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 total SO_x emissions from all five boilers on a 12-month rolling basis is calculated and maintained by the Medical and Environmental Management Division.

1.5 Reporting Requirements:

A. Control of Visible Emissions

There were no 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 and a certified statement by GSFC GB indicating that the records of fuel supplier certifications represent all the fuel combusted during the reporting period were included within the Semi-Annual Fuel Report, submitted to the Department on January 27, 2023 (reporting period July 2022 – December 2022).

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 October 14 and 21, 2020.

D. Operational Limits

The Annual Emission Certification will be submitted to the Department by April 1, 2023 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): EU35-1, EU35-2, EU97-1, EU302-1 and EU302-3 – Boilers: Space Heaters

Permit Term (Describe requirements and cross-reference)

2.1 Applicable Standards/Limits:

A. Control of Visible Emissions

COMAR 26.11.09.05 – Visible Emissions.

A. Fuel Burning Equipment.

(2) Areas III and IV. 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.

(3) Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustment 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 Limits

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

2.2 Testing Requirements:

A. Control of Visible Emissions

See Monitoring Requirements.

B. Control of Nitrogen Oxides

See Monitoring Requirements.

C. Operational Limits

See Record Keeping Requirements.

2.3 Monitoring Requirements:

A. Control of Visible Emissions

The Permittee shall properly operate and maintain the boilers 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 Limits

See Record Keeping Requirements

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. **Control of Visible Emissions**
The Permittee shall keep records of the maintenance performed on the boilers. [Reference: COMAR 26.11.03.06C]
- 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)(e)]
 - (2) Retain records of training program attendance for each operator. [Reference: COMAR 26.11.09.08G(1)(e)]
 - (3) Maintain an operations 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 Limits**
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 and make available to the Department upon request. [Reference: COMAR 26.11.03.06C]

2.5 **Reporting Requirements:**

- A. **Control of Visible Emissions**
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 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)]
- D. **Operational Limits**
See Record Keeping Requirements.

Compliance Methods for the Above (Description and Citation):

2.1 **Applicable Standards/Limits:**

- A. **Control of Visible Emissions**
Records maintained onsite indicate that there were no discharges of visible emissions from these units.
- 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 28, 2022 (reporting period January 2022 to June 2022) and January 27, 2023 (reporting period July 2022 to December 2022).
 - (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 October 14 and 21, 2020.
 - (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 GB no longer owns or operates an installation that qualifies as a space heater, GSFC GB 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 Limits**
Fuel usage records indicate that these units have only burned natural gas.

2.2 **Testing Requirements:**

- A. **Control of Visible Emissions**
See Monitoring Requirements.
- B. **Control of Nitrogen Oxides**
See Monitoring Requirements.
- C. **Operational Limits**
See Record Keeping Requirements.

2.3 **Monitoring Requirements:**

- A. **Control of Visible Emissions**
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 Limits**
See Record Keeping Requirements.

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. **Control of Visible Emissions**
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 October 14 and 21, 2020.
 - (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.
- C. **Operational Limits**
Records of the combined fuel usage by the boilers based on meter readings are maintained by the Medical and Environmental Management Division.

2.5 Reporting Requirements:

- A. **Control of Visible Emissions**
There were no 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 Nitrogen Oxides**
Records of training program attendance for each operator are maintained onsite and available to the department upon request.
- D. **Operational Limits**
See Record Keeping Requirements.

Status (Check one): Intermittent Compliance Continuous Compliance

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

Permit Term (Describe requirements and cross-reference)

3.1 Applicable Standards/Limits:

- A. **Control of Visible Emissions**
COMAR 26.11.09.05E. – Stationary Internal Combustion Engine Powered Equipment.
“(2) Emissions During Idle Mode. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.
(3) Emissions During Operating Mode. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.
(4) Exceptions.
(a) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
(b) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
(i) Engines that are idled continuously when not in service: 30 minutes;
(ii) All other engines: 15 minutes.
(c) Section E(2) and (3) of this regulation do not apply while maintenance repair, or testing is being performed by qualified mechanics.”
- B. **Control of Sulfur Oxides**
COMAR 26.11.09.07 – Control of Sulfur Oxides From Fuel Burning Equipment.
“A. Sulfur Content Limitations for Fuel. A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas II and IV: (b) Distillate fuel oils, 0.3 percent.”
- C. **Control of Nitrogen Oxides**
COMAR 26.11.09.08G. – Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent.
“(1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
(a) Provide certification of the capacity factor of the equipment to the Department in writing;

- (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- (c) Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- (e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.”

3.2 **Testing Requirements:**

- A. **Control of Visible Emissions**
See Monitoring Requirements.
- B. **Control of Sulfur Oxides**
See 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)]

3.3 **Monitoring Requirements:**

- A. **Control of Visible Emissions**
The Permittee shall perform preventive maintenance to optimize combustion performance. [Reference: COMAR 26.11.03.06C]
- B. **Control of Sulfur Oxides**
The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil is in compliance with the limitation on the sulfur content of the fuel oil 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 within 30 days after the end of each month. [Reference: COMAR 26.11.03.06C]

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. **Control of Visible Emissions**
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 exceed 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]

3.5 **Reporting Requirements:**

- A. **Control of Visible Emissions**
The Permittee shall report incidents of visible emissions in accordance with Permit Conditions 4, Section III, “Report of Excess Emissions and Deviations.”
- 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]

Compliance Methods for the Above (Description and Citation):

3.1 Applicable Standards/Limits:**A. Control of Visible Emissions**

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, 2023 (reporting period July 2022 – December 2022). These certifications demonstrate compliance with the SO₂ standards. The Semi-Annual Fuel Report referenced above certified that the No. 2 fuel oil burned during 2022 meets or exceeds the 0.3% maximum sulfur content limit and requirements identified in the Title V operating permit. GSFC GB does not sell or make available for sale any fuel. The fuel supplier certifications certify that all the No. 2 fuel oil burned in 2022 is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel with a minimum cetane index of 40.

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, 2023.
- b) A combustion analysis has not been required because the generators have not operated more than 500 hours during the 2022 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) 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. The most recent training sessions occurred on October 14 and 21, 2020 for Code 227 and May 17, 2021 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.

3.2 Testing Requirements:**A. Control of Visible Emissions**

See Monitoring Requirements.

B. Control of Sulfur Oxides

See 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.

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, 2023 (reporting period July 2022 – December 2022). These certifications demonstrate compliance with the SO₂ standards. The Semi-Annual Fuel Report referenced above certified that the No. 2 fuel oil burned during 2022 meets or exceeds the 0.3% maximum sulfur content limit and requirements identified in the Title V operating permit. GSFC GB does not sell or make available for sale any fuel. The fuel supplier certifications certify that all the No. 2 fuel oil burned in 2022 is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel with a minimum cetane index of 40.

C. Control of Nitrogen Oxides

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

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 regularly. 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.

3.5 Reporting Requirements:

- A. **Visible Emissions Limitations**
There were no 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, 2023 (reporting period July 2022 – December 2022).
- C. **Control of Nitrogen Oxides**
Records of training program attendance 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 October 14 and 21, 2020 for Code 227 and May 17, 2021 for Code 549.
- The Annual Emission Certification will be submitted to the Department by April 1, 2023 and will include monthly calculations of the capacity factor of each unit.

Status (Check one): Intermittent Compliance Continuous Compliance

Emission Unit ID(s): EU24C-6, EU28-1 and EU29-1 – Emergency Engines (Cont'd)

Permit Term (Describe requirements and cross-reference)

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

- A. **Control of Visible Emissions**
The exhaust opacity from the emergency generators shall not exceed:
(1) 20 percent during the acceleration mode;
(2) 15 percent during the lugging mode; and
(3) 50 percent during the peaks in either the acceleration or lugging modes.
[Ref: 40 CFR §60.4205(b), §60.4202(b)(2), and §89.113]
- 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.
[Ref: 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 + NO_x: 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) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for nonemergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
(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. [Reference: 40 CFR §60.4211(f)]

3a.2 Testing Requirements:

- A. **Control of Visible Emissions**
See Monitoring Requirements.
- B. **Control of Sulfur Oxides**
See Record Keeping Requirements.
- C. **Control of Nitrogen Oxides**
See Monitoring Requirements.
- D. **Control of Particulate Matter**
See Monitoring Requirements.
- E. **Control of Carbon Monoxide**
See Monitoring Requirements.
- F. **Operational Limitations**
See Record Keeping Requirements.

3a.3 Monitoring Requirements:

- A. **Control of Visible Emissions**
The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [Reference: 40 CFR §60.4211(c)]
- B. **Control of Sulfur Oxides**
See Record Keeping Requirements.
- C. **Control of Nitrogen Oxides**
The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [Reference: 40 CFR §60.4211(c)]
- D. **Control of Particulate Matter**
The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [Reference: 40 CFR §60.4211(c)]
- E. **Control of Carbon Monoxide**
The Permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [Reference: 40 CFR §60.4211(c)]
- F. **Operational Limitations**
See Record Keeping Requirements.

3a.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. **Control of Visible Emissions**
See Monitoring Requirements.
- B. **Control of Sulfur Oxides**
The Permittee shall maintain for at least five (5) years and make available 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). [Reference: COMAR 26.11.03.06C]
- 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. [Reference: COMAR 26.11.03.06C]
- 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. [Reference: COMAR 26.11.03.06C]

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. [Reference: COMAR 26.11.03.06C]

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. Control of Visible Emissions

See Monitoring Requirements.

B. Control of Sulfur Oxides

See Record Keeping Requirements.

C. Control of Nitrogen Oxides

See Record Keeping Requirements.

D. Control of Particulate Matter

See Record Keeping Requirements.

E. Control of Carbon Monoxide

See Record Keeping Requirements.

F. Operational Limitations

§60.4214 (d)- "If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) 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 specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).
- (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).
- (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.

(2) 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.

(3) 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 §60.4."

Compliance Methods for the Above (Description and Citation):

3a.1 Applicable Standards/Limits:

A. Control of Visible Emissions

To comply with this condition, an engine certified to the emission standards in 40 CFR §60.4205(b) must be purchased. The emissions standards at 40 CFR §60.4205(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 than 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, 2023 (reporting period July 2022 – December 2022). The fuel supplier certifications certify that all the No. 2 fuel oil burned in 2022 is a 15 ppm (maximum) dyed ultra-low sulfur diesel fuel with a minimum cetane index of 40.

C. Control of Nitrogen Oxides

To comply with this condition, an engine certified to the emission standards in 40 CFR §60.4205(b) must be purchased. The emissions standards at 40 CFR §60.4205(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 than the Tier 2 standards.

- D. Control of Particulate Matter**
To comply with this condition, an engine certified to the emission standards in 40 CFR §60.4205(b) must be purchased. The emissions standards at 40 CFR §60.4205(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 than the Tier 2 standards.
- E. Control of Carbon Monoxide**
To comply with this condition, an engine certified to the emission standards in 40 CFR §60.4205(b) must be purchased. The emissions standards at 40 CFR §60.4205(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 than 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 GB operated the emergency engines as described below.
Records indicate that the emergency generators did not operate close to the maximum 100 hours in calendar year 2022, they only operated for maintenance checks and readiness testing, and they did not operate in non-emergency situations.

3a.2 Testing Requirements:

- A. Control of Visible Emissions**
See Monitoring Requirements.
- B. Control of Sulfur Oxides**
See Record Keeping Requirements.
- C. Control of Nitrogen Oxides**
See Monitoring Requirements.
- D. Control of Particulate Matter**
See Monitoring Requirements.
- E. Control of Carbon Monoxide**
See Monitoring Requirements.
- F. Operational Limitations**
See Record Keeping Requirements.

3a.3 Monitoring Requirements:

- A. Control of Visible Emissions**
To comply with this condition, an engine certified to the emission standards in 40 CFR §60.4205(b) must be purchased. The emissions standards at 40 CFR §60.4205(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 than the Tier 2 standards.
- B. Control of Sulfur Oxides**
See Record Keeping Requirements.
- C. Control of Nitrogen Oxides**
To comply with this condition, an engine certified to the emission standards in 40 CFR §60.4205(b) must be purchased. The emissions standards at 40 CFR §60.4205(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 than the Tier 2 standards.
- D. Control of Particulate Matter**
To comply with this condition, an engine certified to the emission standards in 40 CFR §60.4205(b) must be purchased. The emissions standards at 40 CFR §60.4205(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 than the Tier 2 standards.
- E. Control of Carbon Monoxide**
To comply with this condition, an engine certified to the emission standards in 40 CFR §60.4205(b) must be purchased. The emissions standards at 40 CFR §60.4205(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 than the Tier 2 standards.
- F. Operational Limitations**
See 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. Control of Visible Emissions

See 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 40 CFR §80.510(b) (note that 40 CFR §80.510(b) has been vacated but is still a requirement of the GSFC GB's Title V operating permit), 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 40 CFR §60.4211 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 40 CFR §60.4211 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 40 CFR §60.4211 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. Control of Visible Emissions**

See Monitoring Requirements.

B. Control of Sulfur Oxides

See Record Keeping Requirements.

C. Control of Nitrogen Oxides

See Record Keeping Requirements.

D. Control of Particulate Matter

See Record Keeping Requirements.

E. Control of Carbon Monoxide

See Record Keeping Requirements.

F. Operational Limitations

In calendar year 2022, 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 GB does not have to submit an annual report to the Compliance and Emissions Data Reporting Interface.

Status (Check one): Intermittent Compliance Continuous Compliance

Emission Unit ID(s): EU4-2, EU4-3, EU4-6 and EU5A-3 – Surface Coating

Permit Term (Describe requirements and cross-reference)

4.1 Applicable Standards/Limits:**A. Control of Visible Emissions**

COMAR 26.11.06.02C. – Visible Emission Standards.

“(2) 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 – General Exceptions

“(2) The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications 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 – Particulate Matter from Confined Sources

“(2) 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 Emissions

COMAR 26.11.19.13-1 – Aerospace Coating Operations

A. 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).”

C. 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)**

<i>Coating Types</i>	<i>Pounds/Gallon (Grams/Liter)</i>
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.	
<i>Coating</i>	<i>Pounds/Gallon (Grams/Liter)</i>
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 (780)
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/Rollable/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.

4.2 Testing Requirements:

- A. **Control of Visible Emissions**
See Monitoring Requirements.
- B. **Control of Particulate Matter**
See Monitoring Requirements.
- C. **Control of VOC Emissions**
See Record Keeping Requirements.

4.3 Monitoring Requirements:

- A. **Control of Visible Emissions**
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 and shall maintain a log with records of the dates that maintenance was performed. [Reference: COMAR 26.11.03.06C]
- C. **Control of VOC Emissions**
See 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. **Control of Visible Emissions**
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 and make available to the Department upon request. [Reference: COMAR 26.11.03.06C]
- C. **Control of VOC Emissions**
COMAR 26.11.19.13-1C(6) - Record Keeping.
“(a) 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.
 (b) Records shall be retained for not less than 3 years and be made available to the Department upon request.”

The Permittee shall maintain a copy of SDS/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 the following information:

(1) Quantity of materials used in the paint spray booth and the hours of operation of the booth.

(2) Material usage for the surface coating operation on site. [Reference: MDE Permit to Construct No. 033-6-1323 issued August 2, 2006]

4.5 Reporting Requirements:

A. Control of Visible Emissions

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

B. Control of Particulate Matter

See Record Keeping Requirements.

C. Control of VOC Emissions

The Permittee shall report material usage and VOC content of coatings in the annual Emission Certification Report. [Reference: COMAR 26.11.02.19C & D]

Compliance Methods for the Above (Description and Citation):

4.1 Applicable Standards/Limits:

A. Control of Visible Emissions

Annual one-minute visual observations of the spray booth exhausts were conducted for EU4-2 and EU4-3 on March 30, 2022 and EU5A-3 on July 6, 2022. 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 Emissions

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, a review of monthly inspection checklists indicates that work practices are in compliance with cleanup requirements.

4.2 Testing Requirements:

A. Control of Visible Emissions

See Monitoring Requirements.

B. Control of Particulate Matter

See Monitoring Requirements.

C. Control of VOC Emissions

See Record Keeping Requirements.

4.3 Monitoring Requirements:

A. Control of Visible Emissions

Annual one-minute visual observations of the spray booth exhausts were conducted for EU4-2 and EU4-3 on March 30, 2022 and EU5A-3 on July 6, 2022. 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 Emissions

See 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. Control of Visible Emissions

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 Emissions

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

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

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

4.5 Reporting Requirements:**A. Control of Visible Emissions**

There were no known incidents of visible emissions reported within the 2022 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 Record Keeping Requirements.

C. Control of VOC Emissions

The Annual Emission Certification will be submitted to the Department by April 1, 2023 and will include material usage and VOC content of coatings from surface coating operations.

Status (Check one): Intermittent Compliance Continuous Compliance

Emission Unit ID(s): EU5-2, EU5-4 and EU5-6 – Electro Chemical Plating Shop

Permit Term (Describe requirements and cross-reference)

5.1 Applicable Standards/Limits:**A. Control of Visible Emissions**

COMAR 26.11.06.02C. – Visible Emission Standards.

"(2) 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 – General Exceptions.

"(2) 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 - Particulate Matter from Confined Sources.

"(2) 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. Operational Limit

Prior to engaging in chromium electroplating or chromium anodizing, the source 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. [Reference: MDE Permit to Construct No. 16-6-0855 N issued in 1997]

5.2 Testing Requirements:**A. Control of Visible Emissions**

See Monitoring Requirements.

B. Control of Particulate Matter

See Monitoring Requirements.

C. Operational Limit

See Record Keeping Requirements.

5.3 Monitoring Requirements:**A. Control of Visible Emissions**

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 Limit

See Reporting 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. Control of Visible Emissions

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 and make available to the Department upon request. [Reference: COMAR 26.11.03.06C]

C. Operational Limit

See Reporting Requirements.

5.5 Reporting Requirements:

A. Control of Visible Emissions

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 Record Keeping Requirements

C. Operational Limits

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: MDE Permit to Construct No. 16-6-0855 N issued in 1997]

Compliance Methods for the Above (Description and Citation):

5.1 Applicable Standards/Limits:

A. Control of Visible Emissions

Annual one-minute visual observations of EU5-2, EU5-4 and EU5-6 exhausts were conducted on April 15, 2022. No visual emissions were observed.

B. Control of Particulate Matter

No particulate matter in excess of 0.03 gr/SCFD was 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 Limit

GSFC GB only engages in approved operations.

5.2 Testing Requirements:

A. Control of Visible Emissions

See Monitoring Requirements.

B. Control of Particulate Matter

See Monitoring Requirements.

C. Operational Limit

See Record Keeping Requirements.

5.3 Monitoring Requirements:

A. Control of Visible Emissions

Annual one-minute visual observations of EU5-2, EU5-4, and EU5-6 exhausts were conducted on April 15, 2022. 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 Limit**
See Reporting 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. **Control of Visible Emissions**
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 Limit**
See Reporting Requirements.

5.5 **Reporting Requirements:**

- A. **Control of Visible Emissions**
There were no known incidents of visible emissions reported within the 2022 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 Record Keeping Requirements.
- C. **Operational Limits**
GSFC GB only engages in approved operations.

Status (Check one): Intermittent Compliance Continuous Compliance

Emission Unit ID(s): EU27-2 and EU27-3 – Fuel Storage and Dispensing Facility

Permit Term (Describe requirements and cross-reference)

6.1 **Applicable Standards/Limits:**

Control of VOC Emissions

COMAR 26.11.13.04C. – Small Storage Tanks.

(1) **Applicability.** "This section applies to a person who owns or operates:

- (a) A gasoline storage tank that has a tank capacity greater than 2,000 gallons but less than 40,000 gallons; or
(b) A gasoline tank truck used to transfer gasoline into a storage tank that is listed in §C(1)(a) of this regulation."

(2) **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. General Standards. "A person may not cause or permit gasoline or VOC having TVP of 1.5 psia (10.3 kilonewtons/square meter) or greater to be loaded into any tank truck, railroad tank car, or other contrivance unless the:

- (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."

6.2 **Testing Requirements:**

Control of VOC Emissions

See Monitoring Requirements.

6.3 **Monitoring Requirements:**

Control of VOC Emissions

The Permittee shall monitor a fuel drop to verify that the Stage I 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]**

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)]

Control of VOC Emissions

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 on request."

6.5 Reporting Requirements:**Control of VOC Emission**

See Record Keeping Requirements.

Compliance Methods for the Above (Description and Citation):**6.1 Applicable Standards/Limits:****Control of VOC Emissions**

EU27-2 and EU27-3 are equipped with Stage I vapor recovery systems. GSFC GB 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 GB'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.

6.2 Testing Requirements:**Control of VOC Emissions**

See Monitoring Requirements.

6.3 Monitoring Requirements:**Control of VOC Emissions**

At least once for every 10 fuel deliveries it is verified that the Stage I vapor balance system is used. GSFC GB'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. Immediate action is taken to repair all observed VOC leaks that can be repaired within 48 hours. 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.

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.

Control of VOC Emissions

- (a) The average monthly gasoline throughput at the facility is less than 10,000 gallons per month; therefore, the facility is exempted according to Regulation .02C of COMAR 26.11.24.
- (b) Records of gasoline throughput and tank sizes are maintained onsite and are available to the Department upon request.

6.5 Reporting Requirements:**Control of VOC Emissions**

See Record Keeping Requirements.

Status (Check one): Intermittent Compliance Continuous Compliance

Emission Unit ID(s): EU30-1 through EU30-8 – Clean Room Semiconductor Development and Fabrication

Permit Term (Describe requirements and cross-reference)**7.1 Applicable Standards/Limits:****A. Control of Visible Emissions**

COMAR 26.11.06.02C. - Visible Emission Standards.

"(2) 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 – General Exceptions

"(2) The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications 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 - Particulate Matter from Confined Sources

“(2) 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 Emissions

COMAR 26.11.06.06B. - Control of VOC from Installations.

“(1) 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 Limit

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 the 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. Control of Visible Emissions

See Monitoring Requirements.

B. Control of Particulate Matter

See Monitoring Requirements

C. Control of VOC Emissions

See Monitoring Requirements

D. Operational Limit

See Record Keeping Requirements.

7.3 Monitoring Requirements:

A. Control of Visible Emissions

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 annual 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 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 Emissions

The operator shall check SDS 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 Limit

See 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. Control of Visible Emissions

The Permittee must maintain records of visible emissions observations. [Reference: COMAR 26.11.03.06C]

B. Control of Particulate Matter

See Monitoring Requirements.

C. Control of VOC Emissions

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 SDS/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 Limit**
The Permittee shall maintain records of material usage. [Reference: COMAR 26.11.03.06C]

7.5 **Reporting Requirements:**

- A. **Control of Visible Emissions**
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 Monitoring Requirements.
- C. **Control of VOC Emissions**
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 Limit**
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. **Control of Visible Emissions**
Annual one-minute visual observations of EU30-1 through EU30-8 exhausts were conducted on July 19, 2022. 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 Emissions**
The calculated VOC discharge demonstrates that less than 20 pounds per day of VOCs are discharged from these units.
- D. **Operational Limit**
The Clean Room operation emissions are 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. **Control of Visible Emissions**
See Monitoring Requirements.
- B. **Control of Particulate Matter**
See Monitoring Requirements.
- C. **Control of VOC Emissions**
See Monitoring Requirements.
- D. **Operational Limit**
See Record Keeping Requirements.

7.3 **Monitoring Requirements:**

- A. **Control of Visible Emissions**
Annual one-minute visual observations of EU30-1 through EU30-8 exhausts were conducted on July 19, 2022. 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 Emissions**
Material usage records are collected by the Medical and Environmental Management Division on a quarterly basis. The calculated VOC discharge demonstrates that less than 20 pounds per day of VOCs are discharged from these units.
- D. **Operational Limit**
See 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. **Control of Visible Emissions**
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 Monitoring Requirements.
- C. **Control of VOC Emissions**
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;
(3) A copy of SDS/VOC data sheet for each material used is maintained in HMMS; and
(4) Preventive Maintenance records are maintained in the MAXIMO database.
- D. **Operational Limit**
Records of material usage are maintained onsite.

7.5 Reporting Requirements:

- A. **Control of Visible Emissions**
There were no known incidents of visible emissions reported within the 2022 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 Monitoring Requirements.
- C. **Control of VOC Emissions**
The Annual Emission Certification will be submitted to the Department by April 1, 2023 and will include records of material usage and calculated HAPs, TAPs, and VOCs.
- D. **Operational Limit**
The Annual Emission Certification will be submitted to the Department by April 1, 2023 and will include material usage for these units.

Status (Check one): Intermittent Compliance Continuous Compliance

Emission Unit ID(s): EU7-4 – Vapor Degreaser

Permit Term (Describe requirements and cross-reference)

8.1 Applicable Standards/Limits:

- A. **Control of Visible Emissions**
COMAR 26.11.06.02C. - Visible Emission Standards.
“(2) 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 – General Exceptions
“(2) 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 VOC Emissions**
COMAR 26.11.19.09E.- Requirements for Vapor Degreasing.
“(1) A person may not use VOC degreasing material in vapor degreasing unless the vapor degreasing is equipped with:
(a) A condenser; or
(b) An air pollution control device with an overall control efficiency of not less than 90 percent.
(2) Vapor degreasing shall include separate enclosed chambers that allow draining of the parts being cleaned, capture of the vapors, or other procedures or methods to minimize evaporative losses of degreasing material.”
- C. **Control of Hazardous Air Pollutants (HAPs)**
NESHAP Subpart T-National Emission Standards for Halogenated Solvent Cleaning
§63.460 - Applicability and designation of source.
“(a) The provisions of this subpart apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. The concentration of these solvents may be determined using EPA test method 18, material safety data sheets, or engineering calculations. Wipe cleaning activities, such as using a rag containing halogenated solvent or a spray cleaner

containing halogenated solvent are not covered under the provisions of this subpart."

8.2 Testing Requirements:

- A. **Control of Visible Emissions**
See Reporting Requirements.
- B. **Control of VOC Emissions**
See Record Keeping Requirements.
- C. **Control of Hazardous Air Pollutants (HAPs)**
See Record Keeping Requirements.

8.3 Monitoring Requirements:

- A. **Control of Visible Emissions**
See Reporting Requirements.
- B. **Control of VOC Emissions**
See Record Keeping Requirements.
- C. **Control of Hazardous Air Pollutants (HAPs)**
See Record Keeping Requirements.

8.4 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. **Control of Visible Emissions**
See Reporting Requirements.
- B. **Control of VOC Emissions**
The Permittee shall maintain monthly records of the total VOC degreasing material used in each ultrasonic vapor degreaser. [Reference: COMAR 26.11.03.06C]
- C. **Control of Hazardous Air Pollutants (HAPs)**
The Permittee shall keep records of the halogenated HAP solvent content for each solvent used. [Reference: COMAR 26.11.03.06C]

8.5 Reporting Requirements:

- A. **Control of Visible Emissions**
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 VOC Emissions**
See Record Keeping Requirements.
- C. **Operational Limit**
See Record Keeping Requirements.

Compliance Methods for the Above (Description and Citation):

This unit did not operate during calendar year 2022.

Status (Check one): Intermittent Compliance Continuous Compliance

Emission Unit ID(s): Facility Wide

Permit Term (Describe requirements and cross-reference)

9.1 Applicable Standards/Limits:

Control of VOC Emissions

COMAR 26.11.19.02I. - Good Operating Practices, Equipment Cleanup, and VOC Storage.

- (1) Applicability. The requirements in this section apply to a person who owns or operates an installation that is subject to any requirement in this chapter.
- (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.
- (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.
- (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 26.11.19.16, Control of VOC Equipment Leaks

C. 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."

D. 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."

9.2 Testing Requirements:

Control of VOC Emissions

See Record Keeping Requirements.

9.3 Monitoring Requirements:

Control of VOC Emissions

See Record Keeping Requirements.

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 Emissions

The Permittee shall maintain the following:

- (1) All written descriptions of "good operating practices" designed to minimize emissions of VOCs; and
- (2) 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. **[Reference: COMAR 26.11.03.06C]**

9.5 Reporting Requirements:**Control of VOC Emissions**

See Record Keeping Requirements.

Compliance Methods for the Above (Description and Citation):**9.1 Applicable Standards/Limits:****Control of VOC Emissions**

GSFC GB's operations subject to COMAR 26.11.19 are vapor degreasing, solvent cleaning, aerospace coating, and equipment leaks.

The only vapor degreaser at GSFC GB is EU7-4 – ultrasonic vapor degreaser with a solvent capacity of 9.2 gallons, located in building 7. This unit did not operate in 2022.

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 GB. 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.

9.2 Testing Requirements:**Control of VOC Emissions**

See Record Keeping Requirements.

9.3 Monitoring Requirements:**Control of VOC Emissions**

See Record Keeping Requirements.

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 Emissions

- (1) 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.
- (2) 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.

9.5 Reporting Requirements:**Control of VOC**

See Record Keeping Requirements.

Status (Check one): Intermittent Compliance Continuous Compliance

SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

Permit Term (Describe requirements and cross-reference)

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

1. Applicable Regulations:

COMAR 26.11.06.08 – Nuisance.

“An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”

COMAR 26.11.06.09 – Odors.

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

COMAR 26.11.15.05 – Control Technology Requirements.

“A. New or Reconstructed Installations. A person may not construct, reconstruct, operate, or cause to be constructed, reconstructed, or operated, any new installation or source that will discharge a toxic air pollutant to the atmosphere without installing and operating T-BACT.”

COMAR 26.11.15.06 – Ambient Impact Requirement.

“A. Requirements for New Installations, Sources, or Premises.

(1) Except as provided in §A(2) of this regulation, a person may not construct, modify, or operate, or cause to be constructed, modified, or operated, any new installation or source without first demonstrating to the satisfaction of the Department using procedures established in this chapter that total allowable emissions from the premises of each toxic air pollutant discharged by the new installation or source will not unreasonably endanger human health.

(2) If a new installation or source will discharge a TAP that is not listed in COMAR 26.11.16.07 and will be part of an existing premises, then emissions of that TAP from existing sources or existing installations on the premises may be omitted from a screening analysis unless the TAP is added to COMAR 26.11.16.07.”

Condition (D) applies to the four (4) char-broilers only. (ARA Registration Nos. 033-0675-8-0186, 8-0187, 8-0188, and 8-0189)

COMAR 26.11.18.06B(2), which states that “A person who constructs, owns, or operates a char-broiler or pit barbecue not subject to §B(1), of this regulation, may not cause or permit the discharge of emissions greater than 30 percent opacity.”

Note: This requirement was revised per information provided with the Title V Renewal Application which stated that COMAR 26.11.18.06B(1) should not apply since the char-broilers are greater than 300 feet from the property line. As such, COMAR 26.11.18.06B(1) was revised to COMAR 26.11.18.06B(2) and COMAR 26.11.18.06C(1) was also removed as a condition in this permit.

2. Operating Conditions:

This condition applies to the Electroplating Process only (ARA Registration Nos. 033-0675-6-0852, 6-0854, and 6-0862)

To comply with T-BACT, the Permittee shall:

- (a) Use floating plastic balls to cover the liquid surface on Tanks A-1, A-2, A-4, and A-11 as a fume suppressant.
- (b) Keep tanks B-1A, B-1B, B-3, B-4A, B-4B, E-1, E-2, E-3, N-3B, N-5A, N-5B, N-5C, and N-8 covered when not in operation.
- (c) Keep tanks E-7 and E-8 covered at all times.

3. Record Keeping and Reporting Requirements:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

Compliance Methods for the Above (Description and Citation):

1. Applicable Regulations:

No discharge of air pollutants has been emitted in a way such to cause a nuisance or create air pollution.

T-BACT is evaluated and implemented for all necessary emission units.

No discharge of toxic air pollutants has been emitted in a way such to endanger public health.

The four (4) char-broilers are not permitted the discharge of emissions greater than 30 percent opacity.

2. **Operating Conditions:**

To comply with T-BACT:

- (a) Periodic inspections indicate that the plating shop uses floating plastic balls to cover the liquid surface on tanks A-1, A-2, A-4, and A-11 as a fume suppressant.
- (b) Periodic inspections indicate that tanks B-1A, B-1B, B-3, B-4A, B-4B, E-1, E-2, E-3, N-3B, N-5A, N-5B, N-5C, and N-8 are covered when not in operation.
- (c) Periodic inspections indicate that tanks E-7 and E-8 are covered at all times.

3. **Record Keeping and Reporting:**

The Annual Emission Certification will be submitted to the Department by April 1, 2023 and will include an emission analysis of toxic air pollutants for the facility for the 2022 calendar year. This analysis will include either a statement of continued compliance from previous demonstrations of toxic air pollutants, or a revised compliance demonstration developed under the proper regulations.

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: No deviation from the permit terms.
Emission Units (unit IDs):
Deviation Start <u> / / </u> End: <u> / / </u>
Date Written Report Submitted <u> / / </u>

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 GB complies with this requirement under the Part 70 Operating Permit. Procedures for controlling particulate matter emissions are specified in GSFC GB's 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 GB complies with this requirement under the Part 70 Operating Permit. No unregulated open burning occurred during calendar year 2022. 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 GB 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 GB complies with this requirement under the Part 70 Operating Permit. The Department is notified of conditions for occurrences of excess emissions and deviations. No occurrences of excess emissions or deviations from the permit terms were reported to the Department in calendar year 2022. [COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

5. Accidental Release Provisions (if applicable)

NASA GSFC GB complies with this requirement under the Part 70 Operating Permit. GSFC GB did not become subject to 40 CFR Part 68 during the 2022 calendar year. [COMAR 26.11.03.03B(23)] and [40 CFR §68]

6. General Testing Requirements

NASA GSFC GB 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 GB 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 GB complies with this requirement under the Part 70 Operating Permit. The Emission Certification Report will be submitted to the Department by April 1, 2023. [COMAR 26.11.01.05-1], [COMAR 26.11.02.19C], and [COMAR 26.11.02.19D]

9. Compliance Certification Report

NASA GSFC GB 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, 2023. [COMAR 26.11.03.06G (6) and (7)]

10. Certification by Responsible Official

NASA GSFC GB complies with this requirement under the Part 70 Operating Permit. All application 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 GB 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 GB 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 GB's Construction Specifications for contractors. Section 13285 Asbestos Abatement specifies requirements to comply with 40 CFR §61, Subpart M, as applicable. [40 CFR §61, Subpart M]

15. Ozone Depleting Regulations (if applicable)

NASA GSFC GB 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

**PART 70 PERMIT RENEWAL
APPLICATION**

GODDARD SPACE FLIGHT CENTER GREENBELT, MARYLAND

APPENDIX C

2022 Emission and Greenhouse Gas Certification Report



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Goddard Space Flight Center
Medical and Environmental Management Division, Code 250
Greenbelt, Maryland 20771

2022 Emissions Certification Report

Prepared By:



**301 Lindenwood Drive, Suite 102
Malvern, PA 19355
Phone: 610.647.9500**

Enclosure

THIS PAGE WAS INTENTIONALLY LEFT BLANK

Table of Contents

1.	Discussion of the Certification and Emissions Calculations	1
2.	Emissions Calculation Methodologies and Models	2
3.	Criteria Pollutant Emissions and Title V Reporting Requirements	3
3.1	Building 24 Boilers	3
3.1.1	Building 24 Boilers Descriptions.....	3
3.1.2	Building 24 Boilers Emissions.....	3
3.1.3	Building 24 Boilers Title V Reporting Requirements	3
3.2	Space Heating Boilers.....	4
3.2.1	Space Heating Boilers Descriptions.....	4
3.2.2	Space Heating Boilers Emissions.....	4
3.3	Emergency Generators.....	4
3.3.1	Emergency Generators Descriptions	4
3.3.2	Emergency Generators Emissions.....	5
3.3.3	Emergency Generators Title V Reporting Requirements.....	5
3.4	Surface Coating Operations	5
3.4.1	Surface Coating Operations Descriptions	5
3.4.2	Surface Coating Operations Emissions	6
3.4.3	Surface Coating Operations Title V Reporting Requirements.....	6
3.5	Electro-Chemical Plating Shop.....	6
3.5.1	Electro-Chemical Plating Shop Descriptions	6
3.5.2	Electro-Chemical Plating Shop Emissions	6
3.6	Fuel Storage and Dispensing Facility	7
3.6.1	Fuel Storage and Dispensing Facility Descriptions.....	7
3.6.2	Fuel Storage and Dispensing Facility VOC Emissions	7
3.7	Clean Room Semiconductor Development and Fabrication.....	7
3.7.1	Clean Room Semiconductor Development and Fabrication Descriptions.....	7
3.7.2	Clean Room Semiconductor Development and Fabrication Emissions	7
3.7.3	Clean Room Semiconductor Development and Fabrication Title V Reporting Requirements	7
3.8	Vapor Degreaser	8

3.8.1 Vapor Degreaser Description	8
3.8.2 Vapor Degreaser Emissions.....	8
3.9 Char-broilers	9
3.9.1 Char-broilers Descriptions	9
3.9.2 Char-broilers Emissions.....	9
4. Toxic Air Pollutant/Hazardous Air Pollutant Emissions	10
4.1 Introduction.....	10
4.2 Source Specific TAP/HAP Emissions	10
4.2.1 Surface Coating Operations	10
4.2.2 Electro-Chemical Plating Shop	10
4.2.3 Fuel Storage and Dispensing Facility.....	10
4.2.4 Clean Room Semiconductor Development and Fabrication.....	10
4.2.5 Vapor Degreaser	10
4.2.6 Char-broilers	11
5. Greenhouse Gas Emissions	12
5.1 Introduction.....	12
5.2 Source Specific Emissions	12
6. MDE Emissions Certification Forms	13
6.1 Form 1 General Facility Information	15
6.2 Form 2 Criteria Air Pollutants	18
6.3 Form 3 Criteria Air Pollutant: PM	37
6.4 Form 4 Toxic Air Pollutants	44
6.5 Form 5 Billable Toxic Air Pollutants.....	51
6.6 Form 6 Greenhouse Gas Air Pollutants	54

THIS PAGE WAS INTENTIONALLY LEFT BLANK

1. Discussion of the Certification and Emissions Calculations

This 2022 Emissions Certification Report for the National Aeronautics and Space Administration (NASA)'s Goddard Space Flight Center (GSFC), Greenbelt location (GB) is prepared in compliance with policies of the Maryland Department of the Environment (MDE) and satisfies the requirements of COMAR 26.11.01.05-1 and COMAR 26.11.02.19D requiring GSFC GB to certify the actual emissions of regulated air pollutants from permitted and registered air pollution sources. The required certification forms are included in Section 6 of this report.

MDE requires that emissions of criteria pollutants, toxic air pollutants (TAPs), and greenhouse gases (GHGs) be quantified. The Environmental Program Information Management System (EPIMS) was used to determine these emissions. EPIMS contains several modules including the Air module¹, which is used to calculate emissions and develop emissions inventories. The Hazardous Materials Management System (HMMS) chemical usage data were used in EPIMS to calculate volatile organic compound (VOC), particulate matter (PM), and hazardous air pollutant (HAP)/TAP emissions from GSFC GB's chemical processes. MDE also requires that a typical ozone (O₃) season day (TOSD) emission be quantified for VOC and nitrogen oxides (NO_x) sources. The ozone season is from May 1st through September 30th, corresponding to 153 actual operating days during the 2022 ozone season. In accordance with instructions from MDE, annual emissions estimates for each emission unit are rounded to the nearest ton and daily emissions are rounded to the nearest pound.

MDE has requested that Title V facilities report emissions of HAPs from all registered equipment including fuel-burning sources. GSFC GB is exempt from emissions reporting required by the Industrial Boiler Maximum Achievable Control Technology (MACT) Rule because this rule does not establish emissions limits for gas boilers (including boilers burning liquid fuel during periods of gas curtailment and periodic testing) (40 CFR 63.7500). In addition, GSFC GB is classified as an institutional facility and, therefore, its existing generators (i.e., those constructed before January 12, 2006) are exempt from the requirements of 40 CFR 63 Subpart ZZZZ (40 CFR 63.6585(f)(3)). Therefore, GSFC GB is not required to submit HAP emissions from its registered existing fuel-burning units. Generators EU24C-6, EU29-1, and EU28-1 are new generators subject to the requirements of 40 CFR 63 Subpart ZZZZ. However, their HAP emissions are de minimis since they only operated 9.0, 2.1, and 2.6 hours respectively, in calendar year 2022. Therefore, GSFC GB is not required to submit HAP emissions from its registered fuel-burning units.

GSFC GB is required to confirm compliance with the Maryland's Air Toxic Regulations. GSFC GB continues to comply with the Maryland's Air Toxic Regulations (COMAR 26.11.15 & 16).

¹ Air Program Information Management System (APIMS) Air Emissions Inventory Procedure: Instructional Guide for Producing a Complete and Accurate Air Force Air Emissions Inventory, Air Force Civil Engineering Center, January 2018.

2. Emissions Calculation Methodologies and Models

The emissions were calculated using the EPIMS software. EPIMS is a government off-the-shelf product developed and maintained by Peraton since its inception in 1996 and managed by the Air Force Civil Engineering Center (AFCEC). It is used by all US Air Force installations and some Veterans Administration, Department of Energy, Army, Marine, and NASA installations. It is a Java web enterprise application with an Oracle database and has a Federal Risk and Authorization Management Program (FedRAMP) security accreditation.

EPIMS contains several modules including the Air module, the Storage Tank Accounting and Reporting (STAR) module, a refrigerant compliance module, an internal combustion engine compliance module, a water module, a compliance assessment module, and a Service module.

The Air module is a complex air emissions modeling tool with 55 source categories and more than 15,000 emission factors. It performs stationary, mobile, and GHG actual and potential-to-emit emissions inventories. It has the capability to calculate monthly and hourly rolling totals. The tank attributes from STAR are used by the Air module's emission modeling tools to calculate tank emissions. The emission factors and emissions calculation methodologies are updated and maintained by AFCEC².

At GSFC GB, EPIMS is used to demonstrate compliance for the air quality program. It collects, manages, and calculates monthly operation data required to demonstrate compliance with the Center's Title V Operating Permit, and calculates emissions of regulated pollutants from all permitted sources. Specifically, it provides an annual air emissions inventory that is used in the Annual Emissions Certification Report.

All chemical usage data used in the calculation of VOC, PM, and HAP/TAP emissions from processes such as surface coating, electro-chemical plating, semiconductor development and fabrication are from HMMS. HMMS provides a reliable system of tracking storage and usage of hazardous materials through the duration of a product's life cycle. It calculates the usage and storage of all chemicals at the constituent level. HMMS is also a repository of the safety data sheets (SDSs) of these chemicals. The use of HMMS data introduces a high level of conservatism in the emissions calculation process because, for a given location, HMMS reports usage data from other operations in addition to those of the permitted sources of interest. It also assumes that all materials are completely consumed on issue.

The records substantiating the numbers used in the calculations including, but not limited to, production logs, purchase orders, fuel usage records, fuel invoices, operation hours, HMMS chemical usage data, SDSs, and other operation data are maintained onsite and are available to MDE upon request.

² Air Emissions Guide for Air Force Stationary Sources: Methods for Estimating Emissions of Air Pollutants for Stationary/Mobile/Transitory Sources at United States Air Force Installations, Air Force Civil Engineering Center, August 2018.

3. Criteria Pollutant Emissions and Title V Reporting Requirements

3.1 Building 24 Boilers

3.1.1 Building 24 Boilers Descriptions

EU24-1, EU24-2 and EU24-4: Three Nebraska natural gas/landfill gas/No.2 fuel oil fired boilers each rated at 49.5 MMBtu/hr and each equipped with low NO_x burners. Landfill gas and natural gas are the primary fuel sources; No.2 fuel oil is only burned during periods of curtailment. MDE Registration Nos. 033-00675-5-0808, 5-0809, and 5-0811.

EU24-3 and EU24-5: Two Nebraska natural gas/No.2 fuel oil fired boilers each rated at 49.5 MMBtu/hr and each equipped with low NO_x burners. Natural gas is the primary fuel source; No.2 fuel oil is only burned during periods of curtailment. MDE Registration Nos. 033-00675-5-0810 and 5-0812.

3.1.2 Building 24 Boilers Emissions

The criteria pollutant emissions from the building 24 boilers EU24-1, EU24-2, EU24-3, EU24-4, and EU24-5 (MDE Registration No. 5-0808, 5-0809, 5-0810, 5-0811, and 5-0812) were calculated using EPIMS and the operation and fuel usage data of these boilers obtained from the GSFC GB's central heating/refrigeration plant. All actual emissions of criteria pollutants from the GSFC GB's building 24 boilers are located on Forms 2 and 3 in Section 6 of this report.

3.1.3 Building 24 Boilers Title V Reporting Requirements

Per Section 1.5.D of the GSFC GB's Title V Operating Permit, the permittee shall report as part of the annual emissions 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.

3.1.3.1 Building 24 Boilers Rolling 12-Month Total Heat Input, Average Monthly NO_x Emission Rates, and SO_x Rolling Sum Emissions

Month	Rolling 12-Month Sum (MMBtu)	NO_x Emission Rate (lb/MMBtu)	SO_x Rolling Sum (tons)
January	483,298	0.07	0.28
February	485,519	0.06	0.28
March	488,320	0.05	0.29
April	494,301	0.05	0.29
May	494,662	0.05	0.29
June	496,650	0.06	0.29
July	499,140	0.05	0.29
August	501,199	0.05	0.29
September	502,730	0.06	0.29
October	514,767	0.06	0.32

Month	Rolling 12-Month Sum (MMBtu)	NO _x Emission Rate (lb/MMBtu)	SO _x Rolling Sum (tons)
November	512,261	0.08	0.45
December	516,023	0.07	0.40

3.2 Space Heating Boilers

3.2.1 Space Heating Boilers Descriptions

EU35-1: One Lochinvar, natural gas-fired space heating boiler rated at 1.5 MMBtu/hr. MDE Registration No. 033-00675-5-1531.

EU35-2: One Lochinvar, natural gas-fired space heating boiler rated at 1.5 MMBtu/hr. MDE Registration No. 033-00675-5-1532.

EU97-1: One Lochinvar, natural gas-fired boiler rated at 1.118 MMBtu/hr. MDE Registration No. 033-00675-5-0846.

EU302-1: One natural gas-fired boiler rated at 1.7 MMBtu/hr. MDE Registration No. 033-00675-5-0831.

EU302-3: One natural gas-fired boiler rated at 1.44 MMBtu/hr. MDE Registration No. 033-00675-5-1533.

3.2.2 Space Heating Boilers Emissions

The criteria pollutant emissions from the space heating boilers EU35-1, EU35-2, EU97-1, EU302-1, and EU302-3 (MDE Registration Nos. 5-1531, 5-1532, 5-0846, 5-0831, and 5-1533) were calculated using EPIMS and fuel usage data obtained from the Washington Gas invoices. All actual emissions of criteria pollutants from the GSFC GB's space heating natural gas-fired boilers are located on Forms 2 and 3 in Section 6 of this report.

3.3 Emergency Generators

3.3.1 Emergency Generators Descriptions

EU7-2: One emergency generator rated at 500 kW and firing No.2 fuel oil. MDE Registration No. 033-00675-9-1045.

EU7-3: One emergency generator rated at 500 kW firing No.2 fuel oil. MDE Registration No. 033-00675-9-1433.

EU10-3: One emergency generator rated at 500 kW and firing No.2 fuel oil. MDE Registration No. 033-00675-9-1047.

EU24C-1 through EU24C-4 and EU24C-8: Five Caterpillar emergency generators each rated at 1,000 kW and firing No.2 fuel oil. MDE Registration Nos. 033-0675-9-1054 through 9-1058.

EU24C-6: One MTU Detroit Diesel emergency generator rated at 1,000 kW firing No.2 fuel oil. MDE Registration No. 033-00675-9-1366.

EU28-1: One Kohler emergency generator rated at 563 kW firing No.2 fuel oil. MDE Registration No. 033-00675-9-1535.

EU29-1: One emergency generator rated at 1,000 kW firing No.2 fuel oil. MDE Registration No. 033-00675-9-1422.

EU31-1 through EU31-5: Five Caterpillar emergency generators each rated at 1,450 kW and firing No.2 fuel oil. MDE Registration Nos. 033-00675-9-1049 through 9-1053.

3.3.2 Emergency Generators Emissions

The criteria pollutant emissions from the emergency generators EU24C-1 to EU24C-4, EU24C-6, and EU24C-8 (MDE Registration Nos. 9-1054 to 9-1057, 9-1366, and 9-1058), EU31-1 to EU31-5 (MDE Registration Nos. 9-1049 to 1053), and EU7-2, EU10-3, EU29-1, EU7-3, and EU28-1 (MDE Registration Nos. 9-1045, 9-1047, 9-1422, 9-1433, and 9-1535) were calculated using EPIMS and run hour data obtained from the periodic maintenance/testing or emergency use data logs of these generators. All actual emissions of criteria air pollutants from GSFC GB’s emergency generators are located on Forms 2 and 3 in Section 6 of this report.

3.3.3 Emergency Generators Title V Reporting Requirements

Per Section 3.5.C of the GSFC GB’s Title V Operating Permit, 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.

3.3.3.1 Capacity Factors for all Generators

Month	9-1045	9-1047	9-1054	9-1055	9-1056	9-1057	9-1366	9-1058
January	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
February	0.00%	0.00%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%
March	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
April	0.00%	0.00%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%
May	0.00%	0.00%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%
June	0.07%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
July	0.00%	0.00%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%
August	0.00%	0.00%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%
September	0.07%	0.07%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%
October	0.00%	0.00%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%
November	0.00%	0.00%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%
December	0.08%	0.08%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%

Month	9-1049	9-1050	9-1051	9-1052	9-1053	9-1422	9-1433	9-1535
January	0.13%	0.13%	0.13%	0.13%	0.13%	0.00%	0.13%	0.00%
February	0.15%	0.15%	0.15%	0.15%	0.15%	0.00%	0.15%	0.00%
March	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.27%	0.07%
April	0.28%	0.28%	0.28%	0.28%	0.28%	0.12%	0.00%	0.00%
May	0.13%	0.13%	0.13%	0.13%	0.13%	0.00%	0.07%	0.07%
June	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	0.21%	0.07%
July	0.13%	0.13%	0.13%	0.13%	0.13%	0.00%	0.00%	0.00%
August	0.13%	0.13%	0.13%	0.13%	0.13%	0.00%	0.00%	0.07%
September	0.14%	0.14%	0.14%	0.14%	0.14%	0.07%	0.00%	0.00%
October	0.27%	0.27%	0.27%	0.27%	0.27%	0.00%	0.00%	0.00%
November	0.14%	0.14%	0.14%	0.14%	0.14%	0.00%	0.00%	0.00%
December	0.13%	0.13%	0.13%	0.13%	0.13%	0.00%	0.00%	0.08%

3.4 Surface Coating Operations

3.4.1 Surface Coating Operations Descriptions

EU4-2, EU4-3, and EU4-6: Surface coating operation – coats instruments and structural members for spacecraft. There are two paint booths and an electric curing oven. MDE Registration No. 033-00675-6-1101.

EU5A-3: One paint spray booth equipped with a filter used for painting of spacecraft hardware. MDE Registration No. 033-00675-6-1323.

3.4.2 Surface Coating Operations Emissions

The VOC emissions from the surface coating operations EU4-2, EU4-3, EU4-6 (MDE Registration No. 6-1101) and EU5A-3 (MDE Registration No. 6-1323) were calculated using EPIMS and chemical usage data from these processes stored in HMMS. All actual VOC emissions from the GSFC GB’s surface coating operations are located on Form 2 in Section 6 of this report.

3.4.3 Surface Coating Operations Title V Reporting Requirements

Per Section 4.5.C of the GSFC GB’s Title V Operating Permit, the permittee shall report material usage and VOC content of coatings in the annual emissions certification report.

3.4.3.1 Material Usage and VOC Content of the Surface Coating Operations

Material Name	Annual Material Use (gal)	VOC Content (lb/gal)
Registration No. 6-1101		
9924	0.51	5.83
9958	2.21	7.40
A276	0.02	4.20
Z306	0.05	5.65
MEK	0.20	6.73
MLP300	0.57	3.10
S13GLO/6N-1	0.04	0.12
Silicone	0.02	0.24
SS4044P	0.004	5.32
Toluene	0.09	8.18
Xylene	1.94	7.28
Z307	0.09	6.10
Z306/Z307	0.16	5.88
Z302/Z306/Z307	0.64	5.57
Registration No. 6-1323		
BR127	3.36	6.60

3.5 Electro-Chemical Plating Shop

3.5.1 Electro-Chemical Plating Shop Descriptions

EU5-2: Electro-chemical plating acid process line A equipped with a scrubber. Tanks A-1, A-2, A-4, A-6, A-8, A-9, and A-11. MDE Registration No. 033-00675-6-0852.

EU5-4: Electro-chemical plating acid process line N equipped with a scrubber. Tanks N-1, N-3A, N-3B, N-5A, N-5B, N-5C, N-7, and N-8. MDE Registration No. 033-00675-6-0854.

EU5-6: Electro-chemical plating acid process lines B and E equipped with a scrubber. Tanks B-1A, B-1B, B-3, B-4A, B-4B, B-6, B-7, B-8, B-10, E-1, E-2, E-3, E-5, E-7, and E-8. MDE Registration No. 033-0675-6-00862.

3.5.2 Electro-Chemical Plating Shop Emissions

The PM emissions from the electro-chemical plating shop process lines EU5-2, EU5-4, and EU5-6 (MDE Registration Nos. 6-0852, 6-0854, and 0862) were calculated using EPIMS and

chemical usage data from these processes stored in HMMS. The actual PM emissions from the GSFC GB's electro-chemical plating shop process lines are located on Form 3 in Section 6 of this report.

3.6 Fuel Storage and Dispensing Facility

3.6.1 Fuel Storage and Dispensing Facility Descriptions

EU27-2: One 5,000 gallon AST storing E85 which is a gasoline/ethanol mixture. The tank is equipped with a Stage I vapor recovery system. MDE Registration No. 033-00675-9-1168.

EU27-3: Two 5,000 gallon ASTs each storing gasoline and each equipped with a Stage I vapor recovery system. MDE Registration No. 033-00675-9-1331.

3.6.2 Fuel Storage and Dispensing Facility VOC Emissions

The VOC emissions from the fuel storage and dispensing facilities EU27-2 and EU27-3 (MDE Registration Nos. 9-1168 and 9-1331) were calculated using EPIMS, which uses the EPA Tanks 4.09D model to calculate tank emissions, along with the monthly fuel throughput data obtained from the GSFC GB's motor pool. The actual VOC emissions from the GSFC GB's fuel storage and dispensing facilities are located on Form 2 in Section 6 of this report.

3.7 Clean Room Semiconductor Development and Fabrication

3.7.1 Clean Room Semiconductor Development and Fabrication Descriptions

EU30-1: Chemical vapor deposition process followed by three gas reactor columns and scrubber.

EU30-2: Ion implantation process equipped with a scrubber.

EU30-3: Dry chemistry process equipped with a scrubber.

EU30-4: Oxidation process equipped with a scrubber.

EU30-5: Blasting process equipped with a scrubber.

EU30-6: Two thin film units equipped with a scrubber.

EU30-7: Four wet chemistry processes equipped with a scrubber.

EU30-8: Four photolithography processes equipped with a scrubber.

MDE Registration No. 033-00675-6-0903.

3.7.2 Clean Room Semiconductor Development and Fabrication Emissions

The VOC and PM emissions from the GSFC GB's semiconductor development and fabrication processes EU30-1 to EU30-8 (MDE Registration No. 6-0903) were calculated using EPIMS and chemical usage data from these processes stored in HMMS. The actual VOC and PM emissions from the GSFC GB's semiconductor development and fabrication processes are located on Forms 2 and 3 in Section 6 of this report.

3.7.3 Clean Room Semiconductor Development and Fabrication Title V Reporting Requirements

Per Section 7.5.C and D of the GSFC GB's Title V Operating Permit, 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. The VOC emissions are located on Form 2 in Section 6. The calculated HAP/TAP emissions are presented in Section 4 and are located on Form 4 in Section 6 of this report.

3.7.3.1 Material Usage of the Clean Room Semiconductor Development and Fabrication

Material Name	Annual Material Use	Unit of Measure
1165	11	gal
1811	1	gal
Acetic Acid	25	lb
Acetone	1628	l
Ammonium Fluoride	35	lb
Ammonium Hydroxide	24	pt
AZ400K	24	gal
AZ4330	1	gal
AZ5214	1	gal
Bismuth Nitrate	500	g
Buffered Oxide Etch	144	lb
Chromium Etch	2	gal
E6	5	gal
EKC265	4	gal
Ethylene Glycol	4	l
FSC M	1	gal
HCL	20	lb
HF 49%	10	lb
HF DIP	18	lb
HMDS	7500	ml
Hydrochloric Acid	30	lb
Hydrogen Peroxide	168	pt
IPA	276	l
KOH	40	pt
Level M10-44	1	l
Methanol	156	l
MF312	145	l
MF319	45	gal
Nanostrip	60	lb
Nitric Acid	14	lb
RR41	4	l
Silox Vapox III	1	gal
Sulfuric Acid	540	lb
TCE	4	l
TICL4	100	g
TMAH	25.5	lb
Toluene	12	l
Wafer Bond Remover	12	l

3.8 Vapor Degreaser

3.8.1 Vapor Degreaser Description

EU7-4: One ultrasonic vapor degreaser, equipped with two cooling coils and a power sliding cover and with a solvent capacity of 9.2 gallons. MDE Registration No. 033-00675-6-1459.

3.8.2 Vapor Degreaser Emissions

The GSFC GB's Vapor Degreaser EU 7-4 (MDE Registration No. 6-1459) did not operate during the calendar year 2022. Therefore, there are no criteria pollutant emissions to report.

3.9 Char-broilers

3.9.1 Char-broilers Descriptions

EU92-1 to EU92-4: Four char-broilers. MDE Registration Nos. 8-0186 to 8-0189.

3.9.2 Char-broilers Emissions

The VOC and PM emissions from the GSFC-GB's four char-broilers EU92-1 to EU92-4 (MDE Registration Nos. 8-0186 to 8-0189) were calculated using EPIMS and typical summertime operation data of the char-broilers. The actual VOC and PM emissions from the GSFC GB's char-broilers are located on Forms 2 and 3 in Section 6 of this report.

4. Toxic Air Pollutant/Hazardous Air Pollutant Emissions

4.1 Introduction

GSFC GB's chemical processes emitted equal to or more than the reporting threshold for five (5) TAPs in calendar year 2022. GSFC GB's chemical processes emitted one (1) billable TAP equal to or more than the reporting threshold in calendar year 2022. The TAP/HAP emissions were calculated using EPIMS and chemical usage data from these processes stored in HMMS. As explained in detail in Section 1 of this report, GSFC GB is not required to submit TAP/HAP emissions from its registered fuel-burning units. The actual TAP/HAP emissions from the GSFC GB's chemical processes are located on Forms 4 and 5 in Section 6 of this report. GSFC GB used the plant-wide reporting threshold limits developed by MDE³, to compare the TAP/HAP emissions with, and determine what TAPs were required to be reported.

4.2 Source Specific TAP/HAP Emissions

4.2.1 Surface Coating Operations

The calculated TAP/HAP emissions from the building 4, room 195 surface coating operation EU4-2, EU4-3, and EU4-6 (MDE Registration No. 6-1101) and the building 5A surface coating operation EU5A-3 (MDE Registration No. 6-1323) indicate that there were no reportable TAP/HAP from the building 5A surface coating operation and antimony triacetate and potassium zinc chromate hydroxide were reportable from the building 4, room 195 surface coating operation in calendar year 2022.

4.2.2 Electro-Chemical Plating Shop

The calculated TAP/HAP emissions from the electro-chemical plating shop process lines EU5-2, EU5-4, and EU5-6 (MDE Registration Nos. 6-0852, 6-0854, and 6-0862) indicate that there were no reportable TAP/HAP from the electro-chemical plating shop in calendar year 2022.

4.2.3 Fuel Storage and Dispensing Facility

The calculated TAP/HAP emissions from the 5,000-gallon aboveground E-85 storage tank EU27-2 (MDE Registration No. 9-1168) and the two 5,000-gallon aboveground gasoline storage tanks EU27-3 (MDE Registration No. 9-1331) indicate that there were no reportable TAP/HAP from the E-85 and gasoline storage and dispensing facility in calendar year 2022.

4.2.4 Clean Room Semiconductor Development and Fabrication

The calculated TAP/HAP emissions from the clean room semiconductor development and fabrication processes EU30-1 to EU 30-8 (MDE Registration No. 6-0903) indicate that hydrogen fluoride was reportable from the clean room semiconductor development and fabrication processes in calendar year 2022. Hydrogen fluoride is also a billable TAP as shown on Form 5.

4.2.5 Vapor Degreaser

3

http://www.mde.maryland.gov/programs/Air/AirQualityCompliance/Documents/www.mde.state.md.us/assets/document/air/Air_toxics_list.pdf

The Vapor Degreaser EU 7-4 (MDE Registration No. 6-1459) did not operate during calendar year 2022. Therefore, there were no TAP/HAP emissions to report in calendar year 2022.

4.2.6 Char-broilers

The calculated TAP/HAP emissions from the four char-broilers EU92-1 to EU92-4 (MDE Registration Nos. 8-0186 to 8-0189) indicate that benzene and formaldehyde were reportable from the four building 92 char-broilers in calendar year 2022.

5. Greenhouse Gas Emissions

5.1 Introduction

The GSFC GB's GHG emissions were calculated using EPIMS and fuel usage and run hour data from combustion equipment. As required by MDE, the GHG inventories included the direct emissions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) from all the registered pieces of fuel-burning equipment. GHG emissions from the char-broilers were not included in these inventories because the char-broilers' operations were considered de minimis.

5.2 Source Specific Emissions

The actual GSFC GB's GHG emissions from the GSFC fuel-burning equipment are located on Form 6 in Section 6 of this report. The fuel-burning equipment includes the building 24 boilers EU24-1 through EU24-5 (MDE Registration Nos. 5-0808 through 5-0812); space heating boilers EU35-1, EU35-2, EU97-1, EU302-1, and EU302-3 (MDE Registration Nos. 5-1531, 5-1532, 5-0846, 5-0831, and 5-1533); and emergency generators EU24C-1 through EU24C-4, EU24C-6, EU24C-8, EU31-1 through EU31-5, EU7-2, EU10-3, EU29-1, EU7-3, and EU28-1 (MDE Registration Nos. 9-1054 through 9-1057, 9-1366, 9-1058, 9-1049 through 9-1053, 9-1045, 9-1047, 9-1422, 9-1433, and 9-1535).

6. MDE Emissions Certification Forms

THIS PAGE WAS INTENTIONALLY LEFT BLANK

6.1 Form 1 General Facility Information

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

FORM 1:

GENERAL FACILITY INFORMATION
EMISSION CERTIFICATION REPORT

Calendar Year: 2022

A. FACILITY IDENTIFICATION Facility Name NASA Goddard Space Flight Center (GSFC) Address 8800 Greenbelt Road City Greenbelt County Prince George's Zip Code 20771				Do Not Write in This Space																
				Date Received Regional																
				Date Received State																
				AIRS Code																
B. Briefly describe the major function of the facility GSFC's major function is the research, development, and fabrication of instruments, propulsion systems, and spacecraft. Major support services include a Central Boiler Plant, Electro-Chemical/Acid Polishing Facility, Cooling Towers, Clean Rooms, numerous laboratories, and maintenance shops.				FINDS Code																
				SIC Code																
				Facility Number:																
				TEMPO ID:																
C. SEASONAL PRODUCTION (%) (%, if applicable) <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><u>Winter</u> (<i>Dec.- Feb.</i>)</td> <td style="text-align: center;"><u>Spring</u> (<i>Mar.- May.</i>)</td> <td style="text-align: center;"><u>Summer</u> (<i>Jun.- Aug.</i>)</td> <td style="text-align: center;"><u>Fall</u> (<i>Sep.- Nov.</i>)</td> </tr> <tr> <td style="text-align: center;"><u>Percent</u></td> <td style="text-align: center;"><u>Percent</u></td> <td style="text-align: center;"><u>Percent</u></td> <td style="text-align: center;"><u>Percent</u></td> </tr> </table>				<u>Winter</u> (<i>Dec.- Feb.</i>)	<u>Spring</u> (<i>Mar.- May.</i>)	<u>Summer</u> (<i>Jun.- Aug.</i>)	<u>Fall</u> (<i>Sep.- Nov.</i>)	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	Reviewed by:								
				<u>Winter</u> (<i>Dec.- Feb.</i>)	<u>Spring</u> (<i>Mar.- May.</i>)	<u>Summer</u> (<i>Jun.- Aug.</i>)	<u>Fall</u> (<i>Sep.- Nov.</i>)													
<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>																	
				Name	Date															
D. Explain any increases or decreases in emissions from the previous calendar year for each registration at this facility. There have been no major increases or decreases in operations during the 2022 calendar year, therefore, GSFC's emissions have not significantly increased or decreased.																				
E. CONTROL DEVICE INFORMATION (NOx and VOC sources only) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Control Device</th> <th style="text-align: center;">Capture Efficiency</th> <th style="text-align: center;">Removal Efficiency</th> </tr> </thead> <tbody> <tr> <td>Stage 1 Vapor Recovery (E-85 and Gasoline AST)</td> <td style="text-align: center;">90%</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Low NOx burners (5 boilers)</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Scrubber – Building 30</td> <td style="text-align: center;">100%</td> <td style="text-align: center;">90%</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Control Device	Capture Efficiency	Removal Efficiency	Stage 1 Vapor Recovery (E-85 and Gasoline AST)	90%	100%	Low NOx burners (5 boilers)	N/A	N/A	Scrubber – Building 30	100%	90%			
Control Device	Capture Efficiency	Removal Efficiency																		
Stage 1 Vapor Recovery (E-85 and Gasoline AST)	90%	100%																		
Low NOx burners (5 boilers)	N/A	N/A																		
Scrubber – Building 30	100%	90%																		

I am familiar with the facility and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consist of 66 pages (including attachments), and certify that the information is correct to the best of my knowledge.

Kimberly Finch, P.E.	Chief, Medical and Environmental Management Division	3/29/23
Name (Print/Type)	Title	Date

	(301) 286-7442
Signature	Telephone

THIS PAGE WAS INTENTIONALLY LEFT BLANK

6.2 Form 2 Criteria Air Pollutants

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: CO

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0	1	0	0	0	0		0	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	3	52	7	2	15	105		3	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	3	63	6	2	12	85		1	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0	2	0	0	0	0		0	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	2	47	6	2	12	84		3	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	3	50	9	3	19	135		4	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0	20	0	0	0	1		0	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	2	40	7	2	15	105		2	12:00 AM	11:59 PM	C1

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: CO

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions Methods
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0	10	0	0	0	0		0	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s f	3	50	8	2	18	128		4	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s f	4	60	8	2	17	118		3	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s f	0	23	0	0	0	1		0	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s f	2	39	5	1	11	76		1	12:00 AM	11:59 PM	C1
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s f	0	66	0	0	0	0		0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s f	0	66	0	0	0	0		0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s f	0	66	0	0	0	0		0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s f	0	66	0	0	0	0		0	12:00 AM	11:59 PM	C3

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3 - User calculated based on AP-42
- C4-User calculated by best guess/engineering judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operations ceased
- C8-Computer calculated based on standard

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: CO

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	Lbs/dy	Hrs/dy	Start	End	Methods
1000KW DIESEL GENERATOR - BLDG 24C-8 9-1058	20300101	DIESEL FUEL	s	0	66	0	0	0	0		0	12:00 AM	11:59 PM	C3
			f											
1000KW DIESEL GENERATOR - BLDG 24C-6 9-1366	20300101	DIESEL FUEL	s	0	9	0	0	0	0		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1049	20300101	DIESEL FUEL	s	0	128	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1050	20300101	DIESEL FUEL	s	0	128	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1051	20300101	DIESEL FUEL	s	0	128	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1052	20300101	DIESEL FUEL	s	0	128	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1053	20300101	DIESEL FUEL	s	0	128	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
500KW DIESEL GENERATOR - BLDG 7 9-1045	20300101	DIESEL FUEL	s	0	8	0	0	0	0		0	12:00 AM	11:59 PM	C3
			f											
500KW DIESEL GENERATOR - BLDG 7 9-1433	20300101	DIESEL FUEL	s	0	22	0	0	0	0		0	12:00 AM	11:59 PM	C3
			f											

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TQSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: CO

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	Lbs/dy	Hrs/dy	Start	End	Methods
500KW DIESEL GENERATOR - BLDG 10 9-1047	20300101	DIESEL FUEL	s f	0	6	0	0	0	0		0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 29 9-1422	20300101	DIESEL FUEL	s f	0	2	0	0	0	0		0	12:00 AM	11:59 PM	C3
563KW DIESEL GENERATOR - BLDG 28 9-1535	20300101	DIESEL FUEL	s f	0	9	0	0	0	0		0	12:00 AM	11:59 PM	C3
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302 5-0831	10300603	NATURAL GAS	s f	0	1	24	7	52	365		24	12:00 AM	11:59 PM	C3
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302 5-1533	10300603	NATURAL GAS	s f	0	0	24	7	52	365		24	12:00 AM	11:59 PM	C3
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97 5-0846	10300603	NATURAL GAS	s f	0	0	24	7	52	365		24	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1531	10300603	NATURAL GAS	s f	0	1	24	7	52	365		24	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1532	10300603	NATURAL GAS	s f	0	1	24	7	52	365		24	12:00 AM	11:59 PM	C3
TOTAL				22	1490									

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: NOX

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods	
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0	3	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	1	18	7	2	15	105	18	3	12:00 AM	11:59 PM	C1	
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	2	50	6	2	12	85	49	1	12:00 AM	11:59 PM	C1	
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0	5	0	0	0	0	0	0	12:00 AM	11:59 PM	C1	
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	1	17	6	2	12	84	16	3	12:00 AM	11:59 PM	C1	
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	3	39	9	3	19	135	31	4	12:00 AM	11:59 PM	C1	
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0	69	0	0	0	1	2	0	12:00 AM	11:59 PM	C1	
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	3	57	7	2	15	105	39	2	12:00 AM	11:59 PM	C1	

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: NOX

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0	25	0	0	0	0	0	0	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s f	1	18	8	2	18	128	16	4	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s f	3	48	8	2	17	118	41	3	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s f	0	80	0	0	0	1	0	0	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s f	2	57	5	1	11	76	43	1	12:00 AM	11:59 PM	C1
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s f	0	290	0	0	0	0	1	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s f	0	290	0	0	0	0	1	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s f	0	290	0	0	0	0	1	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s f	0	290	0	0	0	0	1	0	12:00 AM	11:59 PM	C3

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3 - User calculated based on AP-42
- C4-User calculated by best guess/engineering judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operations ceased
- C8-Computer calculated based on standard

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: NOX

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions		
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	Lbs/dy	Hrs/dy	Start	End	Methods	
1000KW DIESEL GENERATOR - BLDG 24C-8 9-1058	20300101	DIESEL FUEL	s f	0	290	0	0	0	0	0	1	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-6 9-1366	20300101	DIESEL FUEL	s f	0	114	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1049	20300101	DIESEL FUEL	s f	0	560	0	0	0	1	1	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1050	20300101	DIESEL FUEL	s f	0	560	0	0	0	1	1	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1051	20300101	DIESEL FUEL	s f	0	560	0	0	0	1	1	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1052	20300101	DIESEL FUEL	s f	0	560	0	0	0	1	1	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1053	20300101	DIESEL FUEL	s f	0	560	0	0	0	1	1	0	0	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 7 9-1045	20300101	DIESEL FUEL	s f	0	34	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 7 9-1433	20300101	DIESEL FUEL	s f	0	97	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3 - User calculated based on AP-42
- C4-User calculated by best guess/engineering judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operations ceased
- C8-Computer calculated based on standard

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: NOX

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions		
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	Lbs/dy	Hrs/dy	Start	End	Methods	
500KW DIESEL GENERATOR - BLDG 10 9-1047	20300101	DIESEL FUEL	s f	0	26	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 29 9-1422	20300101	DIESEL FUEL	s f	0	27	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
563KW DIESEL GENERATOR - BLDG 28 9-1535	20300101	DIESEL FUEL	s f	0	38	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302 5-0831	10300603	NATURAL GAS	s f	0	1	24	7	52	365	1	24	24	12:00 AM	11:59 PM	C3
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302 5-1533	10300603	NATURAL GAS	s f	0	1	24	7	52	365	0	24	24	12:00 AM	11:59 PM	C3
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97 5-0846	10300603	NATURAL GAS	s f	0	0	24	7	52	365	0	24	24	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1531	10300603	NATURAL GAS	s f	0	1	24	7	52	365	1	24	24	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1532	10300603	NATURAL GAS	s f	0	1	24	7	52	365	1	24	24	12:00 AM	11:59 PM	C3
TOTAL				19	5073					268					

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: SOX

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0	11	0	0	0	0		0	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	0	1	7	2	15	105		3	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	0	0	6	2	12	85		1	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0	18	0	0	0	0		0	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	0	1	6	2	12	84		3	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	0	0	9	3	19	135		4	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0	171	0	0	0	1		0	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	0	0	7	2	15	105		2	12:00 AM	11:59 PM	C1

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: SOX

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0	86	0	0	0	0		0	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s f	0	1	8	2	18	128		4	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s f	0	0	8	2	17	118		3	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s f	0	197	0	0	0	1		0	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s f	0	0	5	1	11	76		1	12:00 AM	11:59 PM	C1
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s f	0	29	0	0	0	0		0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s f	0	29	0	0	0	0		0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s f	0	29	0	0	0	0		0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s f	0	29	0	0	0	0		0	12:00 AM	11:59 PM	C3

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3 - User calculated based on AP-42
- C4-User calculated by best guess/engineering judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operations ceased
- C8-Computer calculated based on standard

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: SOX

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	Lbs/dy	Hrs/dy	Start	End	Methods
1000KW DIESEL GENERATOR - BLDG 24C-8 9-1058	20300101	DIESEL FUEL	s	0	29	0	0	0	0		0	12:00 AM	11:59 PM	C3
			f											
1000KW DIESEL GENERATOR - BLDG 24C-6 9-1366	20300101	DIESEL FUEL	s	0	0	0	0	0	0		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1049	20300101	DIESEL FUEL	s	0	57	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1050	20300101	DIESEL FUEL	s	0	57	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1051	20300101	DIESEL FUEL	s	0	57	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1052	20300101	DIESEL FUEL	s	0	57	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
1450KW DIESEL GENERATOR - BLDG 31 9-1053	20300101	DIESEL FUEL	s	0	57	0	0	0	1		0	12:00 AM	11:59 PM	C3
			f											
500KW DIESEL GENERATOR - BLDG 7 9-1045	20300101	DIESEL FUEL	s	0	3	0	0	0	0		0	12:00 AM	11:59 PM	C3
			f											
500KW DIESEL GENERATOR - BLDG 7 9-1433	20300101	DIESEL FUEL	s	0	10	0	0	0	0		0	12:00 AM	11:59 PM	C3
			f											

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: SOX

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	Lbs/dy	Hrs/dy	Start	End	Methods
500KW DIESEL GENERATOR - BLDG 10 9-1047	20300101	DIESEL FUEL	s f	0	3	0	0	0	0		0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 29 9-1422	20300101	DIESEL FUEL	s f	0	0	0	0	0	0		0	12:00 AM	11:59 PM	C3
563KW DIESEL GENERATOR - BLDG 28 9-1535	20300101	DIESEL FUEL	s f	0	4	0	0	0	0		0	12:00 AM	11:59 PM	C3
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302 5-0831	10300603	NATURAL GAS	s f	0	0	24	7	52	365		24	12:00 AM	11:59 PM	C3
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302 5-1533	10300603	NATURAL GAS	s f	0	0	24	7	52	365		24	12:00 AM	11:59 PM	C3
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97 5-0846	10300603	NATURAL GAS	s f	0	0	24	7	52	365		24	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1531	10300603	NATURAL GAS	s f	0	0	24	7	52	365		24	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1532	10300603	NATURAL GAS	s f	0	0	24	7	52	365		24	12:00 AM	11:59 PM	C3
TOTAL				1	937									

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: VOC

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions		
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods	
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0	0	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	0	3	7	2	15	105	3	3	3	12:00 AM	11:59 PM	C1
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	0	4	6	2	12	85	4	1	1	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0	0	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	0	3	6	2	12	84	3	3	3	12:00 AM	11:59 PM	C1
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	0	3	9	3	19	135	3	4	4	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0	1	0	0	0	1	0	0	0	12:00 AM	11:59 PM	C1
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	0	3	7	2	15	105	2	2	2	12:00 AM	11:59 PM	C1

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: VOC

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0	1	0	0	0	0	0	0	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s f	0	3	8	2	18	128	3	4	12:00 AM	11:59 PM	C1
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s f	0	4	8	2	17	118	3	3	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s f	0	1	0	0	0	1	0	0	12:00 AM	11:59 PM	C1
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s f	0	3	5	1	11	76	2	1	12:00 AM	11:59 PM	C1
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s f	0	8	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s f	0	8	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s f	0	8	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s f	0	8	0	0	0	0	0	0	12:00 AM	11:59 PM	C3

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: VOC

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions		
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods	
1000KW DIESEL GENERATOR - BLDG 24C-8 9-1058	20300101	DIESEL FUEL	s f	0	8	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 24C-6 9-1366	20300101	DIESEL FUEL	s f	0	2	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1049	20300101	DIESEL FUEL	s f	0	15	0	0	0	1	0	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1050	20300101	DIESEL FUEL	s f	0	15	0	0	0	1	0	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1051	20300101	DIESEL FUEL	s f	0	15	0	0	0	1	0	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1052	20300101	DIESEL FUEL	s f	0	15	0	0	0	1	0	0	0	12:00 AM	11:59 PM	C3
1450KW DIESEL GENERATOR - BLDG 31 9-1053	20300101	DIESEL FUEL	s f	0	15	0	0	0	1	0	0	0	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 7 9-1045	20300101	DIESEL FUEL	s f	0	1	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
500KW DIESEL GENERATOR - BLDG 7 9-1433	20300101	DIESEL FUEL	s f	0	3	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1-U.S. EPA Reference Method
- A2-Other Particulate Sampling Train
- A3-Liquid Absorption Technique
- A4-Solid Absorption Technique
- A5-Freezing Out Technique
- A9-Other, Specify

- C1-User calculated based on source test or other measurement
- C2-User calculated based on material balance using engineering knowledge of the process
- C3 - User calculated based on AP-42
- C4-User calculated by best guess/engineering judgement

- C5-User calculated based on a State or local agency emission factor
- C6-New construction, not operational
- C7-Source closed, operations ceased
- C8-Computer calculated based on standard

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: VOC

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Emissions	
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
500KW DIESEL GENERATOR - BLDG 10 9-1047	20300101	DIESEL FUEL	s f	0	1	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
1000KW DIESEL GENERATOR - BLDG 29 9-1422	20300101	DIESEL FUEL	s f	0	0	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
563KW DIESEL GENERATOR - BLDG 28 9-1535	20300101	DIESEL FUEL	s f	0	1	0	0	0	0	0	0	12:00 AM	11:59 PM	C3
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302 5-0831	10300603	NATURAL GAS	s f	0	0	24	7	52	365	0	24	12:00 AM	11:59 PM	C3
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302 5-1533	10300603	NATURAL GAS	s f	0	0	24	7	52	365	0	24	12:00 AM	11:59 PM	C3
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97 5-0846	10300603	NATURAL GAS	s f	0	0	24	7	52	365	0	24	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1531	10300603	NATURAL GAS	s f	0	0	24	7	52	365	0	24	12:00 AM	11:59 PM	C3
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1532	10300603	NATURAL GAS	s f	0	0	24	7	52	365	0	24	12:00 AM	11:59 PM	C3
GASOLINE DISPENSING AT BLDG 27 9-1331	40200101	GASOLINE	s f	0	5	24	7	52	365	7	24	8:00 AM	3:59 PM	C2

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

Form 2:

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: VOC

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)					TOSD	Operating Schedule		Emissions
				Tons/yr	Lbs/day	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	Methods
E85 DISPENSING AT BLDG 27 9-1168	40600603	E85	s f	0	2	24	7	52	365	3	24	8:00 AM	3:59 PM	C3
SURFACE COATING IN BLDG 4, RM 195 6-1101	40200101		s f	0	0	4	5	37	260	0	4	8:00 AM	3:59 PM	C2
SEMI-CONDUCTOR OPERATION IN B30 6-0903	31306599		s f	0	1	4	5	37	260	0	4	8:00 AM	3:59 PM	C2
SURFACE COATING IN BLDG 5A 6-1323	40200101		s f	0	0	4	5	37	260	0	4	8:00 AM	3:59 PM	C2
CHARBROILER AT BLDG 92 8-0186	30201311	MEAT	s f	0	0	10	5	9	60	0	10	8:00 AM	5:59 PM	C2
CHARBROILER AT BLDG 92 8-0187	30201311	MEAT	s f	0	0	10	5	9	60	0	10	8:00 AM	5:59 PM	C2
CHARBROILER AT BLDG 92 8-0188	30201311	MEAT	s f	0	0	10	5	9	60	0	10	8:00 AM	5:59 PM	C2
CHARBROILER AT BLDG 92 8-0189	30201311	MEAT	s f	0	0	10	5	9	60	0	10	8:00 AM	5:59 PM	C2
TOTAL				2	159					35				

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD: Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April - September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- | | | |
|-------------------------------------|---|---|
| A1-U.S. EPA Reference Method | C1-User calculated based on source test or other measurement | C5-User calculated based on a State or local agency emission factor |
| A2-Other Particulate Sampling Train | C2-User calculated based on material balance using engineering knowledge of the process | C6-New construction, not operational |
| A3-Liquid Absorption Technique | C3 - User calculated based on AP-42 | C7-Source closed, operations ceased |
| A4-Solid Absorption Technique | C4-User calculated by best guess/engineering judgement | C8-Computer calculated based on standard |
| A5-Freezing Out Technique | | |
| A9-Other, Specify | | |

THIS PAGE WAS INTENTIONALLY LEFT BLANK

6.3 Form 3 Criteria Air Pollutant: PM

FORM 3: PM

EMISSIONS CERTIFICATION REPORT

Particulate Matter

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: PM

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM10 - Filterable		PM2.5 - Filterable		PM Condensable		Operation	Emissions
				Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Methods
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	10300602	DIESEL FUEL	s f	0	1	0	0	0	0	0	0	0	C3
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	10300602	LANDFILL GAS	s f	0	1	0	1	0	1	0	4	101	C3
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	10300602	NATURAL GAS	s f	0	1	0	1	0	1	0	4	88	C3
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	10300602	DIESEL FUEL	s f	0	1	0	0	0	0	0	1	0	C3
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	10300602	LANDFILL GAS	s f	0	1	0	1	0	1	0	3	81	C3
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	10300602	NATURAL GAS	s f	0	1	0	1	0	1	0	3	139	C3
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	10300602	DIESEL FUEL	s f	0	8	0	4	0	1	0	5	1	C3
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	10300602	NATURAL GAS	s f	0	1	0	1	0	1	0	3	105	C3
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	10300602	DIESEL FUEL	s f	0	4	0	2	0	1	0	3	0	C3

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1 - U.S. EPA Reference Method
- A2 - Other Particulate Sampling Train
- A3 - Liquid Absorption Technique
- A4 - Solid Absorption Technique
- A5 - Freezing Out Technique
- A9 - Other, Specify

- C1-User Calculated based on source test or other measurement
- C2-User Calculated based on material balance using engineering knowledge of the process
- C3-User Calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5 - User calculated based on State or local agency emission factor
- C6 - New construction, not operational
- C7 - Source closed, operation ceased
- C8 - Computer calculated based on standard

FORM 3: PM

EMISSIONS CERTIFICATION REPORT

Particulate Matter

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: PM

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM10 - Filterable		PM2.5 - Filterable		PM Condensable		Operation	Emissions
				Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Methods
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	10300602	LANDFILL GAS	s	0	1	0	1	0	1	0	4	124	C3
			f										
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	10300602	NATURAL GAS	s	0	1	0	1	0	1	0	4	123	C3
			f										
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	10300602	DIESEL FUEL	s	0	9	0	5	0	1	0	6	1	C3
			f										
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	10300602	NATURAL GAS	s	0	1	0	1	0	1	0	3	76	C3
			f										
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	20300101	DIESEL FUEL	s	0	5	0	4	0	4	0	1	0	C3
			f										
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	20300101	DIESEL FUEL	s	0	5	0	4	0	4	0	1	0	C3
			f										
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	20300101	DIESEL FUEL	s	0	5	0	4	0	4	0	1	0	C3
			f										
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	20300101	DIESEL FUEL	s	0	5	0	4	0	4	0	1	0	C3
			f										
1000KW DIESEL GENERATOR - BLDG 24C-8 9-1058	20300101	DIESEL FUEL	s	0	5	0	4	0	4	0	1	0	C3
			f										

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1 - U.S. EPA Reference Method
- A2 - Other Particulate Sampling Train
- A3 - Liquid Absorption Technique
- A4 - Solid Absorption Technique
- A5 - Freezing Out Technique
- A9 - Other, Specify

- C1-User Calculated based on source test or other measurement
- C2-User Calculated based on material balance using engineering knowledge of the process
- C3-User Calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5 - User calculated based on State or local agency emission factor
- C6 - New construction, not operational
- C7 - Source closed, operation ceased
- C8 - Computer calculated based on standard

FORM 3: PM

EMISSIONS CERTIFICATION REPORT

Particulate Matter

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: PM

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM10 - Filterable		PM2.5 - Filterable		PM Condensable		Operation	Emissions
				Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Methods
1000KW DIESEL GENERATOR - BLDG 24C-6 9-1366	20300101	DIESEL FUEL	s	0	5	0	4	0	4	0	1	0	C3
			f										
1450KW DIESEL GENERATOR - BLDG 31 9-1049	20300101	DIESEL FUEL	s	0	10	0	8	0	8	0	1	1	C3
			f										
1450KW DIESEL GENERATOR - BLDG 31 9-1050	20300101	DIESEL FUEL	s	0	10	0	8	0	8	0	1	1	C3
			f										
1450KW DIESEL GENERATOR - BLDG 31 9-1051	20300101	DIESEL FUEL	s	0	10	0	8	0	8	0	1	1	C3
			f										
1450KW DIESEL GENERATOR - BLDG 31 9-1052	20300101	DIESEL FUEL	s	0	10	0	8	0	8	0	1	1	C3
			f										
1450KW DIESEL GENERATOR - BLDG 31 9-1053	20300101	DIESEL FUEL	s	0	10	0	8	0	8	0	1	1	C3
			f										
500KW DIESEL GENERATOR - BLDG 7 9-1045	20300101	DIESEL FUEL	s	0	1	0	0	0	0	0	0	0	C3
			f										
500KW DIESEL GENERATOR - BLDG 7 9-1433	20300101	DIESEL FUEL	s	0	2	0	1	0	1	0	0	0	C3
			f										
1000KW DIESEL GENERATOR - BLDG 29 9-1422	20300101	DIESEL FUEL	s	0	1	0	1	0	1	0	0	0	C3
			f										
563KW DIESEL GENERATOR - BLDG 28 9-1535	20300101	DIESEL FUEL	s	0	1	0	1	0	1	0	0	0	C3
			f										

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1 - U.S. EPA Reference Method
- A2 - Other Particulate Sampling Train
- A3 - Liquid Absorption Technique
- A4 - Solid Absorption Technique
- A5 - Freezing Out Technique
- A9 - Other, Specify

- C1-User Calculated based on source test or other measurement
- C2-User Calculated based on material balance using engineering knowledge of the process
- C3-User Calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5 - User calculated based on State or local agency emission factor
- C6 - New construction, not operational
- C7 - Source closed, operation ceased
- C8 - Computer calculated based on standard

FORM 3: PM

EMISSIONS CERTIFICATION REPORT

Particulate Matter

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: PM

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM10 - Filterable		PM2.5 - Filterable		PM Condensable		Operation	Emissions
				Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Methods
500KW DIESEL GENERATOR - BLDG 10 9-1047	20300101	DIESEL FUEL	s	0	0	0	0	0	0	0	0	0	C3
			f										
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302 5-0831	10300603	NATURAL GAS	s	0	0	0	0	0	0	0	0	365	C3
			f										
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302 5-1533	10300603	NATURAL GAS	s	0	0	0	0	0	0	0	0	365	C3
			f										
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97 5-0846	10300603	NATURAL GAS	s	0	0	0	0	0	0	0	0	365	C3
			f										
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1531	10300603	NATURAL GAS	s	0	0	0	0	0	0	0	0	365	C3
			f										
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35 5-1532	10300603	NATURAL GAS	s	0	0	0	0	0	0	0	0	365	C3
			f										
CHARBROILER AT BLDG 92 8-0186	30201311	CHARCOAL	s	0	0	0	1	0	0	0	0	60	C3
			f										
CHARBROILER AT BLDG 92 8-0187	30201311	CHARCOAL	s	0	0	0	1	0	0	0	0	60	C3
			f										
CHARBROILER AT BLDG 92 8-0188	30201311	CHARCOAL	s	0	0	0	1	0	0	0	0	60	C3
			f										
CHARBROILER AT BLDG 92 8-0189	30201311	CHARCOAL	s	0	0	0	1	0	0	0	0	60	C3
			f										

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1 - U.S. EPA Reference Method
- A2 - Other Particulate Sampling Train
- A3 - Liquid Absorption Technique
- A4 - Solid Absorption Technique
- A5 - Freezing Out Technique
- A9 - Other, Specify

- C1-User Calculated based on source test or other measurement
- C2-User Calculated based on material balance using engineering knowledge of the process
- C3-User Calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5 - User calculated based on State or local agency emission factor
- C6 - New construction, not operational
- C7 - Source closed, operation ceased
- C8 - Computer calculated based on standard

FORM 3: PM

EMISSIONS CERTIFICATION REPORT

Particulate Matter

Calendar Year: 2022

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: PM

Equipment Description/ Registration No.	SCC Number	Fuel		PM - Filterable		PM10 - Filterable		PM2.5 - Filterable		PM Condensable		Operation	Estimation
				Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Method
PROCESS LINE A, BLDG 5 6-0852	39999989	N/A	s f	0	1	0	0	0	0	0	0	260	C3
PROCESS LINE N, BLDG 5 6-0854	39999989	N/A	s f	0	1	0	0	0	0	0	0	260	C3
PROCESS LINE B AND E, BLDG 5 6-0862	39999989	N/A	s f	0	1	0	0	0	0	0	0	260	C3
SEMI-CONDUCTOR OPERATION IN B30 6-0903	31306599	N/A	s f	2	15	0	0	0	0	0	0	260	C3
TOTAL				3	136	1	93	1	79	1	53		

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

- A1 - U.S. EPA Reference Method
- A2 - Other Particulate Sampling Train
- A3 - Liquid Absorption Technique
- A4 - Solid Absorption Technique
- A5 - Freezing Out Technique
- A9 - Other, Specify

- C1-User Calculated based on source test or other measurement
- C2-User Calculated based on material balance using engineering knowledge of the process
- C3-User Calculated based on AP-42
- C4-User calculated by best guess/engineering Judgement

- C5 - User calculated based on State or local agency emission factor
- C6 - New construction, not operational
- C7 - Source closed, operation ceased
- C8 - Computer calculated based on standard

THIS PAGE WAS INTENTIONALLY LEFT BLANK

6.4 Form 4 Toxic Air Pollutants

FORM 4:

TOXIC AIR POLLUTANTS

Calendar Year: 2022

EMISSIONS CERTIFICATION REPORT

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: Antimony Tricetate *

Equipment Description/ Registration No. ¹	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
SURFACE COATING IN BLDG 4, RM 195 6-1101	0.002	0.013	0.003		
TOTALS	0.002	0.013	0.003		

*Please attach all calculations.

*See Attachment 1 for the minimum reporting values.

**Control Device
 S = Scrubber
 B = Baghouse
 ESP = Electrostatic Precipitator
 A = Afterburner
 C = Condenser
 AD = Adsorbtion
 O = Other

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4:

TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2022

Facility Name: GSFC Facility ID: 24-033-00675 Pollutant: Benzene *

Equipment Description/ Registration No. ¹	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
CHARBROILERS AT BLDG 92 8-0186 to 8-0189	0.07	0.20	0.05		
TOTALS	0.07	0.20	0.05		

*Please attach all calculations.
 *See Attachment 1 for the minimum reporting values.
 **Control Device
 S = Scrubber
 B = Baghouse
 ESP = Electrostatic Precipitator
 A = Afterburner
 C = Condenser
 AD = Adsorbtion
 O = Other

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4:

TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2022

Facility Name: GSFC **Facility ID:** 24-033-00675 **Pollutant:** Formaldehyde *

Equipment Description/ Registration No. ¹	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
CHARBROILERS AT BLDG 92 8-0186 to 8-0189	0.06	0.17	0.04		
TOTALS	0.06	0.17	0.04		

*Please attach all calculations.
 *See Attachment 1 for the minimum reporting values.
 **Control Device
 S = Scrubber
 B = Baghouse
 ESP = Electrostatic Precipitator
 A = Afterburner
 C = Condenser
 AD = Adsorbtion
 O = Other

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

THIS PAGE WAS INTENTIONALLY LEFT BLANK

FORM 4:

TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2022

Facility Name: GSFC **Facility ID:** 24-033-00675 **Pollutant:** Hydrogen Fluoride *

Equipment Description/ Registration No. ¹	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
SEMI-CONDUCTOR OPERATION IN B30 6-0903	0.009	0.071	0.018		
TOTALS	0.009	0.071	0.018		

*Please attach all calculations.

*See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4:

TOXIC AIR POLLUTANTS

Calendar Year: 2022

EMISSIONS CERTIFICATION REPORT

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: Potassium Zinc Chromate Hydroxide *

Equipment Description/ Registration No. ¹	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
SURFACE COATING IN BLDG 4, RM 195 6-1101	0.001	0.009	0.002		
TOTALS	0.001	0.009	0.002		

*Please attach all calculations.

*See Attachment 1 for the minimum reporting values.

**Control Device
 S = Scrubber
 B = Baghouse
 ESP = Electrostatic Precipitator
 A = Afterburner
 C = Condenser
 AD = Adsorbtion
 O = Other

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

THIS PAGE WAS INTENTIONALLY LEFT BLANK

6.5 Form 5 Billable Toxic Air Pollutants

**BILLABLE TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: GSFC Facility ID: 24-033-00675

Chemical Name	CAS Number		Actual Emissions			Estimation Method
			Tons/year	Lbs/day	Lbs/hr	
carbon disulfide	75-15-0	S				
		F				
carbonyl sulfide	463-58-1	S				
		F				
chlorine	7782-50-5	S				
		F				
cyanide compounds	57-12-5	S				
		F				
hydrochloric acid	7647-01-0	S				
		F				
hydrogen fluoride	7664-39-3	S	0.009	0.071	0.018	C2
		F				
methyl chloroform	71-55-6	S				
		F				
methylene chloride	75-09-2	S				
		F				
perchloroethylene	127-18-4	S				
		F				
phosphine	7803-51-2	S				
		F				
titanium tetrachloride	7550-45-0	S				
		F				
TOTALS			0.009	0.071	0.018	C2

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above.

Emission Estimation Method

A1 - U.S EPA Reference Method
 A2 - Other Particulate Sampling Train
 A3 - Liquid Absorption Technique
 A4 - Solid Absorption Technique
 A5 - Freezing Out Technique
 A9 - Other, Specify

C1 - User calculated based on source test or other measurement
 C2 - User calculated based on material balance using engineering knowledge of the process
 C3 - User calculated based on AP-42
 C4 - User calculated by engineering judgment
 C5 - User calculated based on a State or local agency factor
 C6 - New construction, not operational
 C7 - Source closed, operation ceased
 C8 - Computer calculated based on standards

This form is to include only the chemicals identified.

THIS PAGE WAS INTENTIONALLY LEFT BLANK

6.6 Form 6 Greenhouse Gas Air Pollutants

**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: CH4 *

Equipment Description/ Registration Number ¹	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hr
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	0	2	0
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	0	1	0
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	0	1	0
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	0	2	0
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	0	1	0
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	0	1	0
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	0	1	0
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	0	1	0
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	0	0	0
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	0	0	0
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	0	4	0
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	0	2	0
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	0	4	0
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	0	1	0
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	0	1	0
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	0	1	0
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	0	1	0

This form must be used to report Greenhouse gas emissions:

- * carbon dioxide (CO2)
- * methane (CH4)
- * nitrous oxide (N2O)
- * hydrofluorocarbons (HFCs)
- * perfluorocarbons (PFCs)
- * sulfur hexafluoride (SF6)

* Use a separate form for each pollutant.

* Please attach all calculations.

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: CH4 *

Equipment Description/ Registration Number ¹	Actual Emissions		
	Tons/yr	lbs/dy	lbs/hr
1000KW DIESEL GENERATOR - BLDG 24C-8			
9-1058	0	1	0
1000KW DIESEL GENERATOR - BLDG 24C-6			
9-1366	0	1	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1049	0	1	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1050	0	1	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1051	0	1	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1052	0	1	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1053	0	1	0
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302			
5-0831	0	0	0
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302			
5-1533	0	0	0
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97			
5-0846	0	0	0
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35			
5-1531	0	0	0
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35			
5-1532	0	0	0
500KW DIESEL GENERATOR - BLDG 7			
9-1045	0	0	0
500KW DIESEL GENERATOR - BLDG 7			
9-1433	0	0	0
500KW DIESEL GENERATOR - BLDG 10			
9-1047	0	0	0
1000KW DIESEL GENERATOR - BLDG 29			
9-1422	0	0	0
563KW DIESEL GENERATOR - BLDG 28			
9-1535	0	0	0
TOTAL	1	32	2

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: CO2 *

Equipment Description/ Registration Number ¹	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hr
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	3826	90469	3770
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	4780	70780	2949
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	2960	56448	2352
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	5093	86101	3588
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	2152	56297	2346
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	3913	74813	3117
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	2843	67588	2816
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	4605	71679	2987
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	3	5625	234
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	5	9765	407
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	45	90229	3760
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	23	45542	1898
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	52	104067	4336
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	7	13880	1542
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	7	13880	1542
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	7	13880	1542
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	7	13880	1542

This form must be used to report Greenhouse gas emissions:

- * carbon dioxide (CO2)
- * methane (CH4)
- * nitrous oxide (N2O)
- * hydrofluorocarbons (HFCs)
- * perfluorocarbons (PFCs)
- * sulfur hexafluoride (SF6)

* Use a separate form for each pollutant.

* Please attach all calculations.

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: CO2 *

Equipment Description/ Registration Number ¹	Actual Emissions		
	Tons/yr	lbs/dy	lbs/hr
1000KW DIESEL GENERATOR - BLDG 24C-8			
9-1058	7	13880	1542
1000KW DIESEL GENERATOR - BLDG 24C-6			
9-1366	7	13880	1542
1450KW DIESEL GENERATOR - BLDG 31			
9-1049	13	26834	2236
1450KW DIESEL GENERATOR - BLDG 31			
9-1050	13	26834	2236
1450KW DIESEL GENERATOR - BLDG 31			
9-1051	13	26834	2236
1450KW DIESEL GENERATOR - BLDG 31			
9-1052	13	26834	2236
1450KW DIESEL GENERATOR - BLDG 31			
9-1053	13	26834	2236
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302			
5-0831	145	794	33
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302			
5-1533	123	673	28
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97			
5-0846	91	497	21
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35			
5-1531	177	968	40
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35			
5-1532	177	968	40
500KW DIESEL GENERATOR - BLDG 7			
9-1045	1	1619	771
500KW DIESEL GENERATOR - BLDG 7			
9-1433	2	4627	771
500KW DIESEL GENERATOR - BLDG 10			
9-1047	1	1234	771
1000KW DIESEL GENERATOR - BLDG 29			
9-1422	2	3239	1542
563KW DIESEL GENERATOR - BLDG 28			
9-1535	1	1823	868
TOTAL	31127	1063291	59878

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 6: Greenhouse Gases

Calendar Year: 2022

**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: NO2 *

Equipment Description/ Registration Number ¹	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hr
BOILER 1 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0808	0	0	0
BOILER 2 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0809	0	0	0
BOILER 3 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0810	0	0	0
BOILER 4 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0811	0	0	0
BOILER 5 - 49.5 MMBTU/HR - NATURAL GAS - BLDG 24 5-0812	0	0	0
BOILER 1 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0808	0	0	0
BOILER 2 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0809	0	0	0
BOILER 4 - 49.5 MMBTU/HR - LANDFILL GAS - BLDG 24 5-0811	0	0	0
BOILER 1 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0808	0	0	0
BOILER 2 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0809	0	0	0
BOILER 3 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0810	0	1	0
BOILER 4 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0811	0	0	0
BOILER 5 - 49.5 MMBTU/HR - #2 FUEL OIL - BLDG 24 5-0812	0	1	0
1000KW DIESEL GENERATOR - BLDG 24C-1 9-1054	0	0	0
1000KW DIESEL GENERATOR - BLDG 24C-2 9-1055	0	0	0
1000KW DIESEL GENERATOR - BLDG 24C-3 9-1056	0	0	0
1000KW DIESEL GENERATOR - BLDG 24C-4 9-1057	0	0	0

This form must be used to report Greenhouse gas emissions:

- * carbon dioxide (CO2)
- * methane (CH4)
- * nitrous oxide (N2O)
- * hydrofluorocarbons (HFCs)
- * perfluorocarbons (PFCs)
- * sulfur hexafluoride (SF6)

* Use a separate form for each pollutant.

* Please attach all calculations.

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 6: Greenhouse Gases

Calendar Year: 2022

**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: GSFC

Facility ID: 24-033-00675

Pollutant: NO2 *

Equipment Description/ Registration Number ¹	Actual Emissions		
	Tons/yr	lbs/dy	lbs/hr
1000KW DIESEL GENERATOR - BLDG 24C-8			
9-1058	0	0	0
1000KW DIESEL GENERATOR - BLDG 24C-6			
9-1366	0	0	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1049	0	0	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1050	0	0	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1051	0	0	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1052	0	0	0
1450KW DIESEL GENERATOR - BLDG 31			
9-1053	0	0	0
BOILER - 1.7 MMBTU/HR - NATURAL GAS - BLDG 302			
5-0831	0	0	0
BOILER - 1.44 MMBTU/HR - NATURAL GAS - BLDG 302			
5-1533	0	0	0
BOILER - 1.118 MMBTU/HR - NATURAL GAS - BLDG 97			
5-0846	0	0	0
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35			
5-1531	0	0	0
BOILER - 1.5 MMBTU/HR - NATURAL GAS - BLDG 35			
5-1532	0	0	0
500KW DIESEL GENERATOR - BLDG 7			
9-1045	0	0	0
500KW DIESEL GENERATOR - BLDG 7			
9-1433	0	0	0
500KW DIESEL GENERATOR - BLDG 10			
9-1047	0	0	0
1000KW DIESEL GENERATOR - BLDG 29			
9-1422	0	0	0
563KW DIESEL GENERATOR - BLDG 28			
9-1535	0	0	0
TOTAL	0	5	0

¹ Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

**PART 70 PERMIT RENEWAL
APPLICATION**

GODDARD SPACE FLIGHT CENTER GREENBELT, MARYLAND

APPENDIX D

EU30-9 Permit to Construct Application Package



MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
1800 WASHINGTON BLVD
BALTIMORE, MARYLAND 21230

Air Quality
GENERAL PERMIT TO CONSTRUCT
Application Package For

EMERGENCY GENERATORS

**EMERGENCY ELECTRIC GENERATOR SETS EQUIPPED WITH DIESEL-FIRED
ENGINES RATED AT 500 BRAKE HORSEPOWER (373 kilowatts) AND UP TO AND
INCLUDING 2,681 BRAKE HORSEPOWER (2,000 kilowatts)**

CONTENTS

FAQ

PERMIT TO CONSTRUCT

REQUEST FOR COVERAGE APPLICATION FORM

Frequently Asked Questions

For

EMERGENCY GENERATORS

Note: Definitions of terms used in this section can be found on Permit to Construct pages 2, 3, and 4 of this General Permit to Construct package (pages with blue border).

Why do I need this permit?

All new, modified, or replacement installations which are potential sources of air pollution (including fuel burning equipment) are regulated and require an Air Quality Permit to Construct from the Maryland Department of the Environment except those installations which are exempt under Maryland's Air Quality Regulations, Code of Maryland Regulations COMAR 26.11.02. The Department has decided to regulate certain small stationary sources through the issuance of an air quality general permit to construct (also referred to as a General Permit to Construct).

Which laws or regulations give MDE the legal authority to issue this permit?

STATE: Environment Article, Title 2, Subtitle 4; COMAR 26.11.02.

What types of emergency generators are eligible for this type of general permit?

The general permit applies to an emergency electric generator set equipped with a stationary internal combustion engine, rated at 500 brake horsepower (373 kilowatts) and up to and including 2,681 brake horsepower (2000 kilowatts) that is **ONLY** used for emergency operation and maintenance and testing.

AND

The engine satisfies **ONE** of the two following conditions:

- (1) The engine was constructed after July 11, 2005 with a manufacture date after April 1, 2006, the engine is an emergency diesel-fired, compression ignition, internal combustion engine with a displacement less than 30 liters per cylinder, and the engine is certified to the emergency engine emission standards of 40 CFR §60.4205(a) or (b), as applicable, for the same model year and maximum engine power.

OR

- (2) The engine is an existing emergency stationary reciprocating internal combustion engine constructed before June 12, 2006.

The emergency generator set may operate for 100 hours per year for testing and maintenance purposes. Additionally, the emergency generator set may operate in certain non-emergency situations for 50 hours per year, as described in 40 CFR §60.4211(f)(3) and §63.6640(f)(3). Examples of non-emergency situations include storm avoidance, maintenance and testing on electrical systems or primary power systems, and maintenance and testing on elevators and other building components. These 50 hours of non-emergency operation count towards the 100 hours per year of maintenance and testing operation.

Note: This general permit is not applicable for electric generator sets located at a major source of hazardous air pollutants (HAP), stationary combustion turbines, spark ignition internal combustion engines, or electric generator sets that participate in any demand response programs, or used for peak or load shaving, or used for primary non-emergency use.

How do I determine the displacement of my engine if not provided by the manufacturer?

See engine manufacturer information (if provided) for the total engine displacement and number of cylinders. To determine the displacement of the engine in liters/cylinder, divide the total engine displacement by the number of cylinders.

If this information is not provided, the displacement of an engine can be determined using the bore and stroke of the engine's cylinder(s). The bore is the diameter of the cylinder through which a piston travels, and the stroke is the distance the piston travels from the bottom of the cylinder to the top of the cylinder (or vice versa).

The following equations can be used to calculate the displacement of an engine:

$$\text{Total Displacement} = \frac{\pi}{4} \times \text{bore}^2 \times \text{stroke} \times \text{number of cylinders}$$

$$\text{Displacement/Cylinder} = \text{Total Displacement} / \text{number of cylinders}$$

Engine displacement is commonly reported in cubic centimeters, cubic inches, or liters. (1 L = 1000 cm³, 1 in³ ≈ 16.39 cm³, 1 L ≈ 61.02 in³)

Example: A 16-cylinder Cummins model QSK50-G4 NR2 engine has a bore and stroke of 6.25 inches. Its total engine displacement and displacement/cylinder are calculated as follows:

$$\text{Total Displacement} = 0.7854 \times 6.25 \text{ in.}^2 \times 6.25 \text{ in.} \times 16 = 3068 \text{ in.}^3$$

$$\begin{aligned}\text{Displacement/Cylinder} &= 3068 \text{ in.}^3 / 16 = 191.75 \text{ in.}^3/\text{Cylinder} * 1\text{L} / 61.02 \text{ in.}^3 \\ &= \underline{3.14 \text{ L/Cylinder}}\end{aligned}$$

What is the process to get this permit?

- (1) Obtain an application packet at: <http://www.mde.maryland.gov/airpermits>. Click on the first link for General Permit to Construct Application Forms, click the link for the packet, and either download the packet or print from the website. The packet includes the permit document and a "Request for Coverage" form.
- (2) Complete a "Request for Coverage" application form which is the last two pages of the packet.
- (3) Mail the completed form and payment to:

**MDE/ARA
P.O. Box 2037
Baltimore MD 21203-2037**

- (4) The Department mails a confirmation letter acknowledging the receipt of the request and fee payment.

How much will this permit cost?

The processing fee is \$400 per emergency electric generator set.
Make checks payable to: Department of the Environment/Clean Air Fund

When does this permit become effective and how long does it last?

Coverage under the general permit becomes effective on the date the Department receives the completed Request for Coverage form and fee. Retain the permit document (document with blue border) for your official records. This is a one-time permit required prior to construction and/or installation of the regulated emission source. If construction or installation does not take place within 18 months of permit issuance, then approval terminates.

How long does it take to receive this confirmation letter once I submit a complete application?

30 days from the date of receipt by the Department of a complete application and fee payment.

If I replace the emergency generator with a new one, do I need a new permit?

Yes. You must obtain a new permit for the replacement emergency generator.

If I decide to relocate to another facility, can I take this permit with me?

No. If you change locations, you must obtain a new permit for the new location.

Who do I contact with additional questions?

Christopher Mentzer, Administrator II
Technical Support Division
Air Quality Permits Program
christopher.mentzer@maryland.gov
(410) 537-4417

MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION

AIR QUALITY GENERAL PERMIT TO CONSTRUCT

EMERGENCY GENERATORS

INDEX

Part I – Applicability

Part II – Definitions

Part III – Specific Requirements for All Emergency Generator Sets

Part IV – Specific Requirements for Stationary Compression Ignition Internal Combustion Engines Subject to 40 CFR 60, Subpart IIII

Part V – Specific Requirements for Stationary Reciprocating Internal Combustion Engines Subject to 40 CFR 63, Subpart ZZZZ

Part VI – Specific Requirements for Generator Sets Located at Major Sources of NO_x

Part VII – General Requirements

Part VIII – Request for Coverage Requirements

Part I – Applicability

(A) This permit applies only to a person who owns, constructs (installs), or operates an emergency generator set that:

- (1) Has a stationary internal combustion engine rated at 500 brake horsepower (373 kilowatts) or up to and including 2,681 brake horsepower (2,000 kilowatts).

AND

- (2) Is only used for emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR §60.4211(f)(3) and §63.6640(f)(3).

AND

- (3) Meets **ONE** of the following requirements:

- (a) The engine was constructed after July 11, 2005 with a manufacture date after April 1, 2006, the engine is an emergency diesel-fired, compression ignition, internal combustion engine with a displacement of less than 30 liters per cylinder, and the engine is certified to the emergency engine

emission standards of 40 CFR §60.4205(a) or (b), as applicable, for the same model year and maximum engine power.

OR

- (b) The engine is an existing emergency stationary reciprocating internal combustion engine constructed before June 12, 2006.

(B) This permit does not apply to:

- (1) Stationary internal combustion engines rated at over 2,681 brake horsepower;
- (2) Spark ignition internal combustion engines;
- (3) Stationary combustion turbines;
- (4) Emergency generator sets located at major sources of hazardous air pollutants (HAP); or
- (5) Generator sets that participate in demand response programs, or that are used for peak or load shaving.

Part II – Definitions

(A) “Capacity Factor” – means:

The ratio between the actual heat input to fuel burning equipment from the fuels burned during a year and the potential heat input if it had been operating for 8,760 hours during the year at the maximum steady state design heat input capacity.

or

The ratio of the unit's actual annual electric output, in megawatt hours, to the unit's name plate capacity multiplied by 8,760 hours. **[Reference: COMAR 26.11.09.01B(1-2)]**

Note: The selected method of determining the capacity factor of a unit shall apply continuously and is determined on a monthly rolling basis for each consecutive 12-month period.

- (B) “Combustion Turbine” – means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle**

combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system. (Reference: 40 CFR §60.4219)

- (C) “Commercial” – means establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor’s offices, and sports and performing arts facilities. (Reference: 40 CFR §63.6675)
- (D) “Compression ignition stationary internal combustion engine” – means relating to a type of stationary reciprocating internal combustion engine that is not a spark ignition engine. (Reference: 40 CFR §60.4219)
- (E) “Demand response program” – means a program that provides incentives to electricity consumers at a facility that curtails electricity usage. Demand response programs also include emergency demand response programs. (Reference: COMAR 26.11.36.01)
- (F) “Displacement” – means the combined swept volume of the pistons inside the cylinders of an engine. For the purposes of this permit, displacement is expressed in liters/cylinder.
- (G) “Emergency stationary internal combustion engine” – means a stationary internal combustion engine (ICE) that is only operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. A stationary ICE that participates in an emergency demand response program is not considered an emergency stationary ICE. (Reference 40 CFR §60.4219)
- (H) “Institutional” – means establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations. (Reference: 40 CFR §63.6675)
- (I) “Major source of HAP” – means a stationary source or group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control of the same person, or persons under common control, belonging to a single major industrial grouping which emits or has the potential to emit: (1) 10 tons or more per year of any hazardous air pollutant listed pursuant to §112(b) of the Clean Air Act, or (2) 25 tons or more per year of any combination of hazardous air pollutants. (Reference: COMAR 26.11.02.01)
- (J) “Major source of NO_x” – means a stationary source or group of stationary sources that are located on one or more contiguous or adjacent properties, and are under

common control of the same person, or persons under common control, belonging to a single major industrial grouping which emits or has the potential to emit: (1) 25 tons per year or more of oxides of nitrogen (NO_x) for sources located in Baltimore City or Anne Arundel, Baltimore, Carroll, Cecil, Harford, Howard, Calvert, Charles, Frederick, Montgomery, or Prince George's counties, or (2) 100 tons per year or more of NO_x for sources located in Allegany, Caroline, Dorchester, Garrett, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, or Worcester counties. (Reference: COMAR 26.11.02.01)

- (K) "Peak shaving" – also referred to as load shaving, means a technique used to reduce electrical power consumption during periods of maximum demand on the power utility. This often involves using one's own generator(s) to produce power in order to avoid paying higher rates set by the utility company.
- (L) "Reciprocating internal combustion engine" – means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work. (Reference: 40 CFR §60.4219)
- (M) "Residential" – means establishments such as homes or apartment buildings. (Reference: 40 CFR §63.6675)
- (N) "Spark ignition internal combustion engine" – means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines. (Reference: 40 CFR §60.4219)
- (O) "Stationary internal combustion engine (ICE)" – means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a non-road engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines. (Reference: 40 CFR §60.4219)

Part III – Specific Requirements for All Emergency Generator Sets

(A) Control of Nuisance and Air Pollution

The emergency generator set is subject to COMAR 26.11.06.08 and 26.11.06.09 which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

(B) Control of Visible Emissions from Fuel Burning Equipment

The emergency generator set is subject to COMAR 26.11.09.05E as follows:

- (1) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.
- (2) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.
- (3) COMAR 26.11.09.05E(4), Exceptions.
 - (a) COMAR 26.11.09.05E(2) 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) COMAR 26.11.09.05E(2) 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) COMAR 26.11.09.05E(2) and (3) do not apply while maintenance, repair, or testing is being performed by qualified mechanics.

(C) Control of Sulfur Oxides from Engines

The emergency generator set is subject to COMAR 26.11.09.07A(1 and 2), which limit the sulfur content of distillate fuel oils to not more than 0.3 percent by weight.

(D) General Operating Requirements

The following operating conditions apply to the emergency generator set unless the Permittee applies for and obtains an approval from the Department to operate at other conditions:

- (1) Any operation other than emergency operation, maintenance checks and readiness testing, and operation in non-emergency situations as described in Part III(D)(4), is prohibited.

- (2) There is no time limit on the use of an emergency generator set in emergency situations.
- (3) The Permittee may operate the emergency generator set for a maximum of 100 hours per calendar year 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 Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, State, or local standards require maintenance and testing of the emergency generator set beyond 100 hours per calendar year.
- (4) The Permittee may operate the emergency generator set 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. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or 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.

Part IV – Specific Requirements for Stationary Compression Ignition Internal Combustion Engines Subject to 40 CFR 60, Subpart IIII

The following additional federal New Source Performance Standards (NSPS), 40 CFR 60, Subpart IIII requirements apply to emergency generator sets equipped with diesel-fired, stationary compression ignition engines, constructed after July 11, 2005 with a manufacture date after April 1, 2006, and with a displacement of less than 30 liters per cylinder.

(A) Applicable Federally Enforceable State Regulation

COMAR 26.11.06.12 which states that a person may not construct modify, or operate, or cause to be constructed, modified, or operated, a New Source Performance Standard (NSPS) source in a manner which results or will result in violation of the provisions of 40 CFR, Part 60.

(B) Applicable Federal Regulations

- (1) The Permittee shall comply with the requirements for 40 CFR 60, Subpart IIII by purchasing an emergency generator set with an engine certified to the emission standards in 40 CFR §60.4205(a) or (b), as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications and shall be equipped with a non-resettable hour meter.

(Reference: 40 CFR §60.4205(a) and (b), §60.4209(a), and §60.4211(b)(1) and (c))

- (2) The Permittee must operate and maintain the emergency generator set that achieves the emissions standards as required by 40 CFR §60.4205(a) or (b) according to the manufacturers emission-related written instructions over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer. The Permittee must also meet the requirements of 40 CFR Parts 89, 94, and/or 1068 as applicable. (Reference: 40 CFR §60.4206 and 40 CFR §60.4211(a))
- (3) The Permittee must use diesel fuel in each emergency generator set that meets the requirements of 40 CFR §80.510(b) for nonroad diesel fuel, i.e., diesel fuel that has a per-gallon sulfur content that does not exceed 15 ppm, and that either has a minimum per-gallon cetane index of 40 or a maximum per-gallon aromatic content of 35 volume percent. (Reference: 40 CFR §60.4207(b))

Note: For engines subject to 40 CFR 60, subpart IIII, compliance with this fuel sulfur content requirement also demonstrates compliance with the fuel sulfur content requirements of COMAR 26.11.09.07.

- (4) The Permittee meets the requirements of 40 CFR, Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR, Part 60, Subpart IIII for the emergency generator set. No further requirements apply to the emergency generator set under 40 CFR, Part 63, Subpart ZZZZ. (Reference: 40 CFR §63.6590(c)(1))

(C) Record Keeping

- (1) The Permittee shall maintain records of the engine model year, maximum engine power, displacement, installation date, and documentation from the manufacturer that the engine is certified to meet emission standards in 40 CFR §60.4205(a) or (b), as applicable, for the same model year and maximum engine power. (Reference: COMAR 26.11.02.02H)
- (2) The Permittee shall maintain records of the hours of operation of the emergency generator set that are recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency, and how many hours are spent for non-emergency operation. (Reference: COMAR 26.11.02.02H)
- (3) All records must be kept for at least five years and must be readily accessible in hard copy or electronic format, and readily available for expeditious review. (Reference: COMAR 26.11.02.02H)

Part V – Specific Requirements for Stationary Reciprocating Internal Combustion Engines Subject to 40 CFR 63, Subpart ZZZZ

The following additional federal National Emissions Standards for Hazardous Air Pollutants, 40 CFR 63, Subpart ZZZZ apply to emergency generator sets equipped with diesel-fired, compression ignition, stationary reciprocating internal combustion engines constructed before June 12, 2006. The requirements of 40 CFR 63, Subpart ZZZZ do not apply to existing residential, commercial, or institutional emergency engines as specified in 40 CFR §63.6585(f).

(A) Applicable Federal Regulations

- (1) The Permittee shall comply with the following requirements for the engine associated with the emergency generator set:
 - (a) Change the oil and filter every 500 hours of operation or annually, whichever comes first;
 - (b) Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
(Reference: 40 CFR §63.6603(a) and Table 2d, Item 4 to 40 CFR 63, Subpart ZZZZ)
- (2) If an emergency generator set is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of 40 CFR 63, Subpart ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. The Permittee must report to the Department any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable. (Reference: Footnote 2 to Table 2d of 40 CFR 63, Subpart ZZZZ)
- (3) The Permittee must be in compliance with the emission limitations and operating limitations in 40 CFR 63, Subpart ZZZZ that apply to the engine at all times. (Reference: 40 CFR §63.6605(a) and §63.6640(a))

- (4) At all times the Permittee must operate and maintain the emergency generator set, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by 40 CFR 63, Subpart ZZZZ have been achieved.

Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (Reference: 40 CFR §63.6605(b))

- (5) The Permittee must operate and maintain the emergency generator set according to the manufacturer's emission-related written instructions or the Permittee must develop their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. (Reference: 40 CFR §63.6625(e), §63.6640(a), and Table 6, Item 9 to 40 CFR 63, Subpart ZZZZ)
- (6) The emergency generator set shall be equipped with a non-resettable hour meter. (Reference: 40 CFR §63.6625(f))
- (7) The Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply. (Reference: 40 CFR §63.6625(h))
- (8) The Permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2d, Item 4 of 40 CFR 63, Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2d. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content.

The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the Permittee is not required to change the oil. If any of the limits are exceeded, the Permittee must change the oil within 2 days of receiving the results of

the analysis; if the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later.

The Permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for each engine. The analysis program must be part of the maintenance plan for the engine. (Reference: 40 CFR §63.6625(i))

(B) Record Keeping

- (1) The Permittee shall maintain records of the maintenance conducted on the emergency generator set to demonstrate that the emergency generator set was operated and maintained according to the maintenance plan. (Reference: 40 CFR §63.6655(e))
- (2) The Permittee shall maintain records of the hours of operation of the emergency generator set that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency, and how many hours are spent for non-emergency operation. (Reference: 40 CFR §63.6655(f))
- (3) All records must be kept for at least five years and must be readily accessible in hard copy or electronic format, and readily available for expeditious review according to 40 CFR §63.10(b)(1). (Reference: 40 CFR §63.6660(a), (b), and (c))

Part VI – Specific Requirements for Generator Sets Located at Major Sources of NOx

(A) Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less

- (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. **[Reference: COMAR 26.11.09.08G]**

(B) Operator Training

- (1) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
- (2) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department. **[Reference: 26.11.09.08B(5)]**

Part VII – General Requirements

(A) Incorporation of Request for Coverage Into Permit

This permit includes the completed two-page Request for Coverage application form, which serves as the application for this permit. If there is any conflict between the specific requirements in Parts III, IV, V, and VI for the emergency generator sets and the Request for Coverage application form, the specific requirements take precedence.

(B) Effective Date/Failure to Pay Fee

This permit is effective on the date that the Request for Coverage is completed and the permit fee is paid to the Department. If the fee is paid by check or money order that is mailed to the Department, the fee is considered to be paid on the date of mailing. If the fee is paid to the Department by any manner other than by mailing a check or money order, the effective date of the permit is the date that the Department receives payment. If a check or money order does not clear for any reason, the Permittee will be given 30 days to make proper payment including any interest and other charges that are due. If payment is not made within this time, the permit shall be considered to have been void from the outset. In order to establish the effective date of a permit, the Permittee should save the canceled check or money order receipt, a copy of the Request for Coverage, and related documents. These documents shall be provided to the Department on request.

(C) Applicant

The applicant for this permit shall be the legal entity or individual that, owns or operates the proposed source for which a permit to construct is required. After the permit is effective, the applicant may be referred to as the "Permittee".

(D) Location of Source

This permit authorizes the Permittee to construct and operate the installation or other source described in the Request for Coverage at the facility or other location described in the application. The permit is not valid for any other source at the described location nor is it valid for the described source at any other location.

(E) Duration

This permit expires if, as determined in writing by the Department:

- (1) Substantial construction is not commenced within 18 months after the effective date of this permit;
- (2) Construction is substantially discontinued for a period of 18 months after it has commenced; or
- (3) Construction of the source for which the permit was issued is not completed within a reasonable period after the effective date of the permit.

(F) Permit to be Available

The Permittee shall maintain this permit at the location for which the permit was issued, unless it is clearly impractical to do so, and shall make the permit immediately available to authorized representatives of the Department upon request.

(G) Other Permits May Be Needed

This permit does not constitute a permit for any activity other than expressly authorized by this permit.

(H) Permit Not Transferable

This permit is not transferable. The Permittee should provide a copy of this permit to any subsequent owner or operator. The subsequent owner or operator should contact the Department to determine if a new permit is required. The provisions of COMAR 26.11 apply to the subsequent owners or operators whether or not the source is covered by a permit.

(I) Compliance With All Laws and Regulations

This permit does not authorize violation of any law or regulation. The Permittee shall at all times comply with all applicable laws and regulations, including:

- (1) The Maryland Ambient Air Quality Control statute. Annotated Code of Maryland, Environment Article, 2-101 et seq.;

- (2) Maryland air pollution control regulations. Code of Maryland Regulations (COMAR) 26.11, as amended by the Maryland Register;
- (3) The Federal Clean Air Act. 42 United States Code (U.S.C.) 7401 et seq.; and
- (4) Federal air pollution control regulations. 40 Code of Federal Regulations (CFR) Parts 50-99, as amended by the Federal Register.

(J) Odors and Other Nuisances

This permit does not authorize construction or operation in a manner that unreasonably interferes with the proper enjoyment of the property of other persons, such as by causing unreasonable odors, or by otherwise creating air pollution.

(K) Workers' Compensation Act

Submission of the application for this permit constitutes certification that the applicant is in compliance with the Maryland Workers' Compensation Act, as required by The Annotated Code of Maryland, Environment Article, 1-202, and Labor and Employment Article, Title 9. This permit shall be considered to have been void from the outset if this certification is invalid.

(L) Modifications

A "modification" normally means a physical change in, or change in the operation of, an installation which causes a change in the quantity, nature, or characteristics of emissions from the installation. However, this term excludes routine maintenance and routine repair, and increases in the hours of operation or in the production rate, unless these increases are prohibited under any permit or approval issued by the Department.

A modification to the facility for which this General Permit to Construct applies is prohibited. Before making such a modification, the Permittee must apply for and obtain an individual permit to construct if the source would no longer be eligible for a General Permit to Construct.

(M) Inspections/Right of Entry

Upon presentation of credentials, representatives of the Maryland Department of the Environment ("MDE" or the "Department") and the local county health and/or environmental protection agency shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee's property and permitted to:

- (1) Inspect any construction authorized by this permit;

- (2) Sample, as necessary, to determine compliance with requirements of this permit, any materials stored or processed on-site, any waste materials, and any discharge into the environment;
- (3) Inspect any monitoring equipment required by this permit;
- (4) Review and copy and records, including all documents required to be maintained by this permit, relevant to a determination of compliance with requirements of this permit; and
- (5) Obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit.

(N) Duty to Provide Information

The Permittee shall furnish to the Department, within 15 working days of the date of any request or other period of time that may be specified, all documents and other information which the Department requests to determine compliance with this permit and applicable air pollution control laws and regulations.

(O) Penalties for Violations

Maryland law provides for substantial penalties for violations of this permit and applicable air pollution control laws and regulations. These penalties include civil penalties of up to \$25,000 per day per violation, administrative penalties of up to \$2,500 per day per violation (not to exceed \$50,000 per action), injunctive relief, and criminal penalties for knowing violations (including up to one year in jail and a \$25,000 fine per violation per day). Additional criminal penalties apply to any person who knowingly provides false information to the Department or who knowingly tampers with any monitoring device required by State air pollution control law. Federal law may also provide for penalties for violations.

(P) Violations That Occurred Prior To Obtaining This Permit

This permit does not protect the Permittee for any violation of laws or regulations that may have occurred prior to the effective date of the permit, including constructing, modifying, or operating a source without a required permit.

(Q) Revocation or Suspension of a Permit

- (1) The Department may issue an order proposing to revoke or suspend this permit if it determines that:
 - (a) Any condition of the permit has been violated; or
 - (b) The permit was improperly obtained or has been improperly used.
- (2) The order shall become final unless the Permittee requests a hearing within 10 days after being served. If a hearing is requested, it shall be held pursuant to the Maryland Administrative Procedure Act, Annotated Code of Maryland, State Government Article, 10-201 et seq. and Environment

Article, 2-605. A person to whom a proposed or final order or revocation or suspension has been issued may not obtain another general permit for the same source or similar source at the same location until it has been determined in writing by the Department that the revocation or suspension is no longer in effect or pending.

(R) Property Rights Not Created By Permit

This permit does not create any property rights.

(S) Severability

If any provision of this permit is determined to be invalid for any reason, the other provisions remain in effect to the extent reasonable, and the invalid provision shall be considered deleted from the permit.

(T) Federal Enforceability

The terms and conditions of this Air Quality General Permit to Construct are federally enforceable only to the extent that they reflect regulations or other requirements that have been approved by the U.S. Environmental Protection Agency for inclusion in the Maryland State Implementation Plan (SIP) for the control of air pollution.

Part VIII – Request for Coverage Requirements

(A) Request for Coverage

A person who desires to be covered by this Air Quality General Permit to Construct shall provide all required information on the Request for Coverage form and submit the form to the Department together with the required fee of \$400 per piece of equipment. The fee must be paid by check or money order payable to: Maryland Department of the Environment/Clean Air Fund.

(B) Required Signatures

The Request for Coverage form shall be signed by the applicant or an authorized representative of the applicant who shall make the following certification:

“I certify under penalty of law that the information submitted in the Request for Coverage is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

(C) Where to Submit

A person shall submit the original of the Request for Coverage form and the required fee to the following address:

Maryland Department of the Environment

Air and Radiation Administration
P.O. Box 2037
Baltimore, Maryland 21203-2037

The Request for Coverage form and the permit fee may be delivered in person to the Department at the following address:

Maryland Department of the Environment
Air and Radiation Administration
1800 Washington Blvd
Baltimore, Maryland 21230

The Air Quality General Permit to Construct is effective on the date that the Request for Coverage form is completed, signed, and the permit fee paid to the Department. See Part VII (B) of this permit. The Department will mail a letter to the applicant acknowledging the receipt of the Request for Coverage and fee and that the source is now covered by the specifically requested Air Quality General Permit to Construct.

Questions regarding the Air Quality General Permit to Construct program may be directed to the Department's Air and Radiation Administration by calling (410) 537-3230.



George (Tad) S. Aburn, Jr., Director
Air and Radiation Administration

MARYLAND DEPARTMENT OF THE ENVIRONMENT
 Air and Radiation Administration • Air Quality Permits Program
 1800 Washington Boulevard • Baltimore, Maryland 21230
 (410) 537-3230 • 1-800-633-6101 • www.mde.maryland.gov

Mail application and payment to:	Make checks payable to the following:
MDE/ARA P.O. Box 2037 Baltimore, MD 21203-2037	Department of the Environment/Clean Air Fund \$400 per generator set

**Request for Coverage: Air Quality General Permit to Construct
 EMERGENCY GENERATORS**

To be eligible for this Air Quality General Permit to Construct, your electric generator set must meet and you must check off ALL of the following requirements:

<input checked="" type="checkbox"/>	This generator set is equipped with an emergency stationary internal combustion engine rated at 500 brake horsepower (373 kilowatts) or up to and including 2,681 brake horsepower (2000 kilowatts)
<input checked="" type="checkbox"/>	This generator set is equipped with an engine that was constructed after July 11, 2005 with a manufacture date after April 1, 2006, the engine is an emergency diesel-fired, compression ignition, internal combustion engine with a displacement of less than 30 liters per cylinder, and the engine is certified to the emergency engine emission standards of 40 CFR §60.4205(a) or (b), as applicable, for the same model year and maximum engine power. OR This generator set is equipped with an engine that is an existing emergency stationary reciprocating internal combustion engine constructed before June 12, 2006.
<input checked="" type="checkbox"/>	This generator set is NOT equipped with a spark ignition internal combustion engine or a combustion turbine
<input checked="" type="checkbox"/>	This generator set DOES NOT participate in any demand response programs, and will not be used for peak or load shaving
<input checked="" type="checkbox"/>	This generator set is NOT located at a major source of federal hazardous air pollutants (HAP)

NOTE: If you are unable to check off ALL of the boxes above, your generator set does not qualify for an Air Quality General Permit to Construct. Contact the Air Quality Permits Program for further instructions.

1) Business/Institution/Facility Information where the emergency electric generator set will be located		<input checked="" type="checkbox"/> Check this box if this is a federal facility.	
Business/Institution/Facility Name: NASA Goddard Space Flight Center		Phone:	
Street Address: 8800 Greenbelt Road, Building 26			
City: Greenbelt	State: MD	Zip Code: 20771	County: Prince George's
Contact Person's Name: Michael Bonsteel		Email Address: michael.c.bonsteel@nasa.gov	

2) Owner Information			
<input type="checkbox"/> Check this box if the owner is different from above. If checked, complete the following:			
Owner Name:		Phone:	
Mailing Address:			
City:	State:	Zip Code:	County:

3) Installer Information Check this box if the installer is different from above. If checked, complete the following:

Installer Name: Joel P. Canzanella

Phone: 240-501-3917

Installer Company Name: ARES Energy LLC, 374 Winmeyer Ave, Odenton, MD 21113

4) Emergency Electric Generator Set Information

No. of Identical Generator Sets Installed:

1 CAT D1000GC genset

Installation Date: April 2024

Engine Displacement

(L/Cylinder): 2.68 (32.1 total)

Engine Make:

Caterpillar

Engine Model No:

C32

Engine Output (horsepower):

1,341

Engine Fuel Type:

No. 2 diesel

Is the electric generator set an existing unit that was constructed before June 12, 2006?

 Yes No**If no, please complete the following additional information below.**

Engine Manufacture Date:

TBD

Engine Model Year:

2023

U.S. EPA Certified Tier Rating for the Engine: Tier 2

5) Major Source of NOx Check this box if the generator set is located at a Major Source of NOx, as defined in COMAR 26.11.02.01. If checked, complete the following:

Capacity Factor of Generator Set (COMAR 26.11.09.01B): 0.0571 (maximum 500 hours per year)

Does the facility have an operator training course sponsored by the Department?

 Yes No**6) Required Attachments****Check off and attach to the application form.** Engine Manufacturer Literature/Engine Specification Sheet A copy of the engine Certificate of Conformity or other evidence showing that the engine is certified to meet U.S. EPA Tier standards for emergency engines, if the electric generator set is NOT an existing unit constructed before June 12, 2006.**7) Workers' Compensation Coverage Information****Before a Permit to Construct may be issued by the Department, the applicant must provide the Department with proof of workers' compensation coverage as required under Section 1-202 of the Workers' Compensation Act.**

Workers' Insurance Policy or Binder Number: US Dept. of Labor

 Check if self-employed or otherwise exempt from this requirement

"I CERTIFY UNDER PENALTY OF LAW THAT THE INFORMATION SUBMITTED IN THIS REQUEST FOR COVERAGE IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

Julie Shane

Digitally signed by Julie Shane

Date: 2023.09.26 14:42:52 -04'00'

Responsible Party Signature

Date

Printed Name and Title

**LEAVE BLANK
MDE USE ONLY**

Permit/Registration Number: _____

AI: _____