



Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

JAN - 9 2020

Ms. Kathleen Moxley, Air Quality Program Manager
NASA Goddard Space Flight Center
Medical and Environmental Mgmt. Division
8800 Greenbelt Road, Mail Code 250
Greenbelt, MD 20771

Dear Ms. Moxley:

Re: Renewal Part 70/ Title V Operating Permit #24-033-0675

Enclosed, please find the renewal Part 70/Title V Operating Permit and Fact Sheet for the NASA Goddard Space Flight Center located in Prince George's County, MD. The permit will expire on December 31, 2024.

The Code of Maryland Regulations (COMAR) 26.11.03.11 states the following:

If the Department denies a Part 70 permit or issues it with terms and conditions that are objectionable to the applicant, the applicant may request that a contested case hearing be held regarding the permit. This request shall be made to the Department in writing not later than 15 days after the applicant receives notice that the permit has been denied or of the objectionable terms and conditions. The request shall include the basis for the request and refer to any objectionable terms and conditions.

Please note the following revised condition in the Permit under Section II, General Conditions, Number 5, Permit Renewal:

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

If you have any questions, please feel free to call Ms. Marcie Gurley, the permit manager for this facility, at (410) 537-3230 or at marcie.gurley@maryland.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "Suna Yi Sariscak".

Suna Yi Sariscak, Manager
Air Quality Permits Program
Air & Radiation Administration

SYS/jm

Enclosures

cc: EPA Region III (w/encl)

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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 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)	PM ₁₀ (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2017	16.17	0.426	0.574	20.22	2.10	1.34
2016	15.52	0.769	0.594	20.61	1.91	1.33
2015	17.73	2.394	0.624	18.86	1.23	1.24
2014	17.46	1.940	0.681	27.31	3.01	1.30
2013	17.95	1.197	0.732	31.76	4.60	2.58

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.

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A Part 70 permit renewal application was received by the Department on December 20, 2018. 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 December 21, 2018 granting NASA-GSFC an application shield.

CHANGES AND MODIFICATIONS TO THE PART 70 OPERATING PERMIT

No equipment was removed from the NASA-GSFC facility since the last Title V Operating Permit was issued.

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- 1535	EU28-1	One (1) diesel fired Kohler emergency generator rated at 755 horsepower (563 kW).	Sept 18, 2018

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

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 three (3) emergency generators (MDE Registration Nos. 033-0675-9-1366, 9-1422 and 9-1535) 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,

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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 sixteen (16) emergency generators owned by NASA-GSFC are subject to 40 CFR, Part 63, Subpart ZZZZ. Three (3) of the generators (MDE Registration Nos. 033-0675-9-1366, 9-1422 and 9-1535) 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

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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 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

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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 2015, 2016, and 2017, showed that NASA-GSFC is not a major source (threshold: 100,000 tpy CO_{2e}) for GHG's (see Table 2 shown below). The Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit.

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

Table 2: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2015 tpy CO_{2e}	2016 tpy CO_{2e}	2017 tpy CO_{2e}
Carbon dioxide CO ₂	1	29,413.521	30,158.773	29,075.935
Methane CH ₄	25	0.439	0.464	0.503
Nitrous Oxide N ₂ O	300	0.064	0.054	0.0
Total GHG CO_{2eq}		29,414.025	30,159.290	29,076.438

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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	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

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Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
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
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
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

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Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
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
EU30-2		Ion Implantation process equipped with scrubber.	
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		
EU92-4	8-0189		
Vapor Degreasers			
EU7-4	6-1459	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

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AN OVERVIEW OF THE PART 70 PERMIT

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

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

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

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

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

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

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate

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to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

**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 16-18, 2018, the Permittee performed stack testing on two (2) [5-0811 & 5-0812] 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 35 Klbs/hr. The results are as follows:

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Pollutants	Boiler #4 (5-0811)			Boiler #5 (5-0812)	
	Natural gas/Landfill gas	Natural gas	No. 2 fuel oil	Natural gas	No. 2 fuel oil
NO _x (lb/MMBtu)	0.029*	0.065*	0.089*	0.119*	0.123*
SO _x (lb/MMBtu)	0.0043	0.0011	0.0024	0.0015	0.0017
PM (gr/dscf)	0.0028	0.0011	0.0041	0.0021	0.0015
PM cond (gr/dscf)	0.0013	0.0250	0.0011	0.0016	0.0011
VOC (lb/MMBtu)	0.00001	0.00002	0.00001	0.00002	0.0001

* 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 combines unit monthly averaging period. When the Boiler #5 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 December 13, 2017 Full Compliance Inspection report, NASA-GSFC's fuel supplier certifies that all fuel oil delivered in 2015, 2016, and 2017 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).

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“(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.

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)]**

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

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).

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(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.

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.

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(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

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)]**

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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.

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:

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- (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.

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.

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Compliance Status

Per the December 13, 2017 full compliance inspection report:

- 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;

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- (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."

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 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]**

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

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

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

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 and EU29-1. 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).

§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

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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 and EU29-1 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 December 13, 2017 full compliance inspection report:

- NASA-GSFC's fuel supplier certifies that all fuel oil delivered in 2015, 2016, and 2017 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 2015 and 2016. 2017 engine data from January through October was reviewed on-site and found to be compliant (less than 500 hours and a capacity factor less than 15%). The boiler operators trained for the Building #24 boilers are the same operators who operate and maintain the engines, so their NO_x training requirements have been met.

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."

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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;
- (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;

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(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 and EU29-1 – 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]

Compliance Status

Per the December 13, 2017 full compliance inspection report:

- EU24C-6 engine was certified by the manufacture to be tier 2 and engine EU29-1 was certified as tier 4i.

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- NASA-GSFC's fuel supplier certifies that all fuel oil delivered in 2015, 2016, and 2017 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 §89.113]

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 §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 §80.510(b)]

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 §80.510(b).

[Reference: COMAR 26.11.03.06C]

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C. Control of Nitrogen Oxides

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

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

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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]**

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

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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)]

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 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.”

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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 December 13, 2017 full compliance inspection report:

- The most recent VE observations were performed on: EU4-2 (11/30/2017), EU4-3 (12/1/2017) and EU5A-3 (11/13/2017). 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

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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. 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)."

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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	6.67 (800)

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(EMI) Coating	
Elevated-Temperature Skydrol—Resistant Commercial Primer	6.17 (740)
Epoxy Polyamide Topcoat	5.50 (660)
Fire-Resistant (interior) Coating	6.67 (800)
Flexible Primer	5.34 (640)
Flight-Test Coatings Missile or Single Use Aircraft	3.50 (420)
Flight-Test Coatings All Other	7.0 (840)
Fuel Tank Adhesive	5.17 (620)
Fuel-Tank Coating	6.00 (720)
High-Temperature Coating	7.09 (850)
Insulation Covering	6.17 (740)
Intermediate Release Coating	6.25 (750)
Lacquer	6.9 (830)
Metallized Epoxy Coating	6.17 (740)
Mold Release	6.50 (780)
Nonstructural Adhesive	3.00 (360)
Optical Antireflective Coating	6.25 (750)
Part Marking Coating	7.09 (850)
Pretreatment Coating	6.50
Rain Erosion-Resistant Coating	7.09 (850)
Rocket Motor Bonding Adhesive	7.42 (890)
Rocket Motor Nozzle Coating	5.50 (660)
Rubber-Based Adhesive	7.09 (850)
Scale Inhibitor	7.34 (880)
Screen Print Ink	7.00 (840)
Sealants: Extrudable/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

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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.

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]**

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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]

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 December 13, 2017 full compliance inspection report:

- The most recent VE observations were performed on: EU5-2, EU5-4, and EU5-6 on May 15, 2017. 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

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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."

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. [Reference: COMAR 26.11.03.06(C)]

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

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]

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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]

Compliance Status

Per the December 13, 2017 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 2016, 68,606 gallons of unleaded gasoline and 15,987 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

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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**]

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.

EU30-2: 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 (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 December 13, 2017 full compliance inspection report:

- VE observations were performed on: EU30-1 through EU30-8 on May 18, 2017. 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.

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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 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)."

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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

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

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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]

Emission Units: EU7-4 – Vapor Degreaser

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. [6-1459]

Compliance Status

Per the December 13, 2017 full compliance inspection report: this equipment is not in operation.

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

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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.”

Compliance Demonstration

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)

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.”

Compliance Demonstration

The Permittee shall keep records of the halogenated HAP solvent content for each solvent used. [Reference: **COMAR 26.11.03.06C**]

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

Compliance Status

Per the December 13, 2017 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

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(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.

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(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.

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TITLE VI – OZONE DEPLETING SUBSTANCES

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:

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- (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. 5 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

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(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) Space heaters utilizing direct heat transfer and used solely for comfort heat;
- (4) 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;
- (5) No. 7 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.

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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.
- (6) Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
- (7) Confection cookers where the products are edible and intended for human consumption;
- (8) Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
- (9) 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;
- (10) 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;
- (11) 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;
- (12) Containers, reservoirs, or tanks used exclusively for:

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- (a) Storage of butane, propane, or liquefied petroleum, or natural gas;
- (b) No. 2 Storage of lubricating oils;
- (c) No. 1 Unheated storage of VOC with an initial boiling point of 300 °F (149 °C) or greater;
- (d) No. 18 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (13) Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;
- (14) 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;
- (15) 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;
- (16) Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (17) Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (18) Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;
- (19) Laboratory fume hoods and vents;

For the following, attach additional pages as necessary:

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(20) 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. 7 Abrasive Blasters_____

No. 1 Buffing machine with dust collector_____

No. 1 Paint Booth_____

No. 3 3D printers_____

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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."

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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:

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.



Larry Hogan
Governor



Ben Grumbles
Secretary

DEPARTMENT OF THE ENVIRONMENT
Air and Radiation Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

Construction Permit

Part 70
 Operating Permit

PERMIT NO. 24-033-0675

DATE ISSUED January 1, 2020

PERMIT FEE To be paid in accordance with
COMAR 26.11.02.19B

EXPIRATION DATE December 31, 2024

LEGAL OWNER & ADDRESS

NASA-Goddard Space Flight Center
8800 Greenbelt Road, Mail Code 250
Greenbelt, MD 20771
Attn: Ms. Kathleen Moxley, Air Quality Program Mgr.
Medical & Environmental Mgmt. Division

SITE

NASA-Goddard Space Flight Center
8800 Greenbelt Road, Mail Code 250
Greenbelt, MD 20771
AI#1842

SOURCE DESCRIPTION

One (1) Comprehensive Laboratory Facility.

This source is subject to the conditions described on the attached pages.

[Signature]
Program Manager

[Signature]
Director, Air and Radiation Administration

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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

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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
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

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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
EU30-2		Ion Implantation process equipped with scrubber.	
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		
EU92-4	8-0189		
Vapor Degreasers			
EU7-4	6-1459	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

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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

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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

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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;

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- 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.

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- 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,

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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:

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- a. A minor permit modification is a Part 70 permit revision that:
- (1) Does not result in a violation of any applicable requirement of the Clean Air Act;
 - (2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:
 - (a) Adding new requirements,
 - (b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or
 - (c) Changing from one approved test method for a pollutant and source category to another;
 - (3) Does not require or modify a:
 - (a) Case-by-case determination of a federally enforceable emissions standard,
 - (b) Source specific determination for temporary sources of ambient impacts, or
 - (c) Visibility or increment analysis;
 - (4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:
 - (a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification, and
 - (b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act;
 - (5) Is not a Title I modification; and

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- (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

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terms and conditions described in the application for the minor modification.

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

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

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

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

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

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- 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:

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- (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;

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- (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.

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- 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;

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

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

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

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

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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

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- 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

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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

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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.

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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:

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- 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

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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)

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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:

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

9. COMPLIANCE CERTIFICATION REPORT

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

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

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

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

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

The certification shall be in the following form:

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

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

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

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

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12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

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

These records and support information shall include:

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

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

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

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

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

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

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

- a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.155.
- e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

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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, emissions that are visible to a human observer are those that are equal to</p>

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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.”

40 CFR Part 60 Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input

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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;

(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

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	<p>(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.</p> <p>(2) The total 12-month rolling heat input consumed by the five (5) boilers shall not exceed 750,000 MMBtu.</p> <p>(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.</p> <p>(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><u>A. Control of Visible Emissions</u> See Monitoring Requirements.</p> <p><u>B. Control of Sulfur Oxides</u> §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.</p> <p><u>C. 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> <p><u>D. 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</p>

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	<p>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>Note: The Permittee does not need to operate on No. 2 fuel oil solely for the purpose of conducting this test.</p>
<p>1.3</p>	<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>Note: The Permittee does not need to operate on No. 2 fuel oil solely for the purpose of conducting this test.</p> <p>B. <u>Control of Sulfur Oxides</u> §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</p>

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	<p>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. (2) Records of the maintenance performed on the boiler that relate to preventing visible emissions (3) A log of visible emission observations performed. <p>[Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u> §60.48c - Reporting and recordkeeping requirements.</p>

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“(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.”

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.”

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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 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]

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

Table IV – 2

2.0	Emissions Unit Number(s): EU35-1, EU35-2, EU97-1, EU302-1 & EU302-
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	<p><u>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. A. <u>Fuel Burning Equipment.</u> (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) <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: (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. - 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;</p>

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	<p>(c) Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department;</p> <p>(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</p> <p>(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.</p> <p>(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><u>C. 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>
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>

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2.4	<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 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 for each boiler and make available to the Department upon request. [Reference: COMAR 26.11.03.06C]</p>
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>

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	D. <u>Operational Limits</u> See Record Keeping Requirements.

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 and EU29-1 – 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> <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>

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Table IV – 3

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 III 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;

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	<p>(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;</p> <p>(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</p> <p>(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 for more than 500 hours in a calendar year. [Reference: COMAR 26.11.09.08G(1)(b)]</p>
<p>3.3</p>	<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>

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3.4	<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: (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)] (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]</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>

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	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]

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 and EU29-1 – 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> <p>EU29-1: One (1) emergency generator rated at 1,000 kW (1,341 HP) and firing No. 2 fuel oil. [9-1422]</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 §89.113]</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 §80.510(b)]</p>

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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 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

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	<p>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)]</p>
3a.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> See Record Keeping Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u> See Monitoring Requirements.</p> <p>D. <u>Control of Particulate Matter</u> See Monitoring Requirements.</p> <p>E. <u>Control of Carbon Monoxide</u> See Monitoring Requirements.</p> <p>F. <u>Operational Limitations</u> See Record Keeping Requirements.</p>
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>

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	<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> <p>F. <u>Operational Limitations</u> See Record Keeping Requirements.</p>
<p>3a.4</p>	<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</p>

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	<p>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]</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 operation (i.e. maintenance, operational testing, power outage, etc). [Reference: COMAR 26.11.03.06C]</p>
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>

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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.”

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

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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] 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: (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 – <u>Particulate Matter from Confined Sources</u> “(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 26.11.19.13-1 – <u>Aerospace Coating Operations</u> 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).”</p>

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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	6.67 (800)

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(EMI) Coating	
Elevated-Temperature Skydrol—Resistant Commercial Primer	6.17 (740)
Epoxy Polyamide Topcoat	5.50 (660)
Fire-Resistant (interior) Coating	6.67 (800)
Flexible Primer	5.34 (640)
Flight-Test Coatings Missile or Single Use Aircraft	3.50 (420)
Flight-Test Coatings All Other	7.0 (840)
Fuel Tank Adhesive	5.17 (620)
Fuel-Tank Coating	6.00 (720)
High-Temperature Coating	7.09 (850)
Insulation Covering	6.17 (740)
Intermediate Release Coating	6.25 (750)
Lacquer	6.9 (830)
Metallized Epoxy Coating	6.17 (740)
Mold Release	6.50 (780)
Nonstructural Adhesive	3.00 (360)
Optical Antireflective Coating	6.25 (750)
Part Marking Coating	7.09 (850)
Pretreatment Coating	6.50
Rain Erosion-Resistant Coating	7.09 (850)
Rocket Motor Bonding Adhesive	7.42 (890)
Rocket Motor Nozzle Coating	5.50 (660)
Rubber-Based Adhesive	7.09 (850)
Scale Inhibitor	7.34 (880)
Screen Print Ink	7.00 (840)
Sealants ¹ 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

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	<p>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> <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</p>

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	<p>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> 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>

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	<p>The Permittee shall maintain records of the following information:</p> <p>(1) Quantity of materials used in the paint spray booth and the hours of operation of the booth.</p> <p>(2) Material usage for the surface coating operation on site.</p> <p>[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> The Permittee shall report material usage and VOC content of coatings in the annual Emission Certification Report. [Reference: COMAR 26.11.02.19C & D]</p>

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

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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.</p>

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	<p>“(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.”</p> <p>COMAR 26.11.06.02A - General Exceptions</p> <p>“(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> <p>(a) The visible emissions are not greater than 40 percent opacity; and</p> <p>(b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.”</p> <p>B. Control of Particulate Matter</p> <p>COMAR 26.11.06.03B – Particulate Matter from Confined Sources</p> <p>“(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. Operational Limit</p> <p>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. Control of Visible Emissions See Monitoring Requirements.</p> <p>B. Control of Particulate Matter See Monitoring Requirements</p> <p>C. Operational Limit See Record Keeping Requirements.</p>
5.3	<p><u>Monitoring Requirements:</u></p> <p>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</p>

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	<p>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> <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>

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	<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.

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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] 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> COMAR 26.11.13.04C. - Small Storage Tanks. (1) <u>Applicability.</u> “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) <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. COMAR 26.11.13.04D. <u>General Standards.</u> “A person may not cause or permit gasoline or VOC having a TVP of 1.5 psia (10.3 kilonewtons/square</p>

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	<p>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>
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> <p>(1) Take immediate action to repair all observed VOC leaks that can be repaired with 48 hours; and</p> <p>(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> <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>

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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.

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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. 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 (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]</p>
7.1	<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: (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 – <u>Particulate Matter from Confined Sources</u> “(2) Areas III and IV. (a) A person may not cause or permit to be</p>

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	<p>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. 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.”</p> <p>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]</p>
<p>7.2</p>	<p><u>Testing Requirements:</u></p> <p>A. Control of Visible Emissions See Monitoring Requirements.</p> <p>B. Control of Particulate Matter See Monitoring Requirements</p> <p>C. Control of VOC Emissions See Monitoring Requirements</p> <p>D. Operational Limit See Record Keeping Requirements.</p>
<p>7.3</p>	<p><u>Monitoring Requirements:</u></p> <p>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</p>

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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 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 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;

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	<p>(2) The weight and HAP and VOC content of each material used totaled on a monthly basis;</p> <p>(3) A copy of SDS/VOC data sheet for each material used; and</p> <p>(4) Preventative Maintenance log including records of monthly inspections of work practices.</p> <p>[Reference: COMAR 26.11.03.06C and MDE PTC 16-6-0903 N Issued August 26, 1997]</p> <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><u>A. 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><u>B. Control of Particulate Matter</u> See Monitoring Requirements</p> <p><u>C. 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><u>D. 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.

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8.0	<p><u>Emissions Unit Number(s): EU7-4 – Vapor Degreaser</u></p> <p>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. [6-1459]</p>

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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 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 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.”

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8.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Reporting Requirements.</p> <p>B. <u>Control of VOC Emissions</u> See Record Keeping Requirements</p> <p>C. <u>Control of Hazardous Air Pollutants (HAPs)</u> See Record Keeping Requirements.</p>
8.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Reporting Requirements</p> <p>B. <u>Control of VOC Emissions</u> See Record Keeping Requirements</p> <p>C. <u>Control of Hazardous Air Pollutants (HAPs)</u> See Record Keeping Requirements.</p>
8.4	<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> See Reporting Requirements.</p> <p>B. <u>Control of VOC Emissions</u> The Permittee shall maintain monthly records of the total VOC degreasing material used in each ultrasonic vapor degreaser. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Hazardous Air Pollutants (HAPs)</u> The Permittee shall keep records of the halogenated HAP solvent content for each solvent used. [Reference: COMAR 26.11.03.06C]</p>

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8.5	<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 VOC Emissions</u> See Record Keeping Requirements.</p> <p>C. <u>Operational Limit</u> See Record Keeping Requirements.</p>

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

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9.0	<p><u>Emissions Unit Number(s): Facility-Wide</u></p> <p>Facility-wide subject to COMAR 26.11.19</p>
9.1	<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> <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</p>

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- 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

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	<p>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>COMAR 26.11.19.16 - Control of VOC Equipment Leaks</p> <p>C. General Requirements. “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 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>
<p>9.2</p>	<p><u>Testing Requirements:</u></p> <p><u>Control of VOC Emissions</u> See Record Keeping Requirements.</p>

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9.3	<p><u>Monitoring Requirements:</u></p> <p><u>Control of VOC Emissions</u> See Record Keeping Requirements.</p>
9.4	<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> The Permittee shall maintain the following:</p> <ul style="list-style-type: none"> (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. <p>[Reference: COMAR 26.11.03.06C]</p>
9.5	<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.

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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. 5 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

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

(4) 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;

(5) No. 7 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:

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- (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
 - (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
- (6) Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
 - (7) Confection cookers where the products are edible and intended for human consumption;
 - (8) Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
 - (9) Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that

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emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

- (10) 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;
- (11) 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;
- (12) Containers, reservoirs, or tanks used exclusively for:
- (a) Storage of butane, propane, or liquefied petroleum, or natural gas;
- (b) No. 2 Storage of lubricating oils;
- (c) No. 1 Unheated storage of VOC with an initial boiling point of 300 °F (149 °C) or greater;
- (d) No. 18 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (13) Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;
- (14) 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;
- (15) 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;

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- (16) Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (17) Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (18) Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;
- (19) Laboratory fume hoods and vents;

For the following, attach additional pages as necessary:

- (20) 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. 7 Abrasive Blasters_____

No. 1 Buffing machine with dust collector_____

No. 1 Paint Booth_____

No. 3 3D printers_____

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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 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."

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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.