



AIR AND RADIATION ADMINISTRATION DRAFT PART 70 OPERATING PERMIT

DOCKET # 24-025-0082

COMPANY: US Army Garrison Aberdeen Proving
Ground Edgewood Area

LOCATION: 2100 Bush River Road
Edgewood, Maryland 21010

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

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

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

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

Public Participation Process

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

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

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

Citizen Petition to EPA to Object to Permit Issuance

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

Applicant Objection to Permit Issuance and Recourse

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

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

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

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of the application for a renewal Part 70 Operating Permit submitted by the US Army Garrison Aberdeen Proving Ground, Edgewood Area. The facility includes oil-fired boilers of various sizes, natural gas boilers of various sizes, and diesel-fired emergency generators of various sizes.

The applicant is represented by:

Mr. Hazoor Kahn, Engineer
Environmental Compliance Branch
U.S. Army Garrison, Aberdeen Proving Ground
4303 Rodman Road
Aberdeen Proving Ground, MD 21005-5001

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

<https://tinyurl.com/DraftTitleV>

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

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

A Request for public hearing shall include the following:

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

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

**U. S. ARMY GARRISON ABERDEEN PROVING GROUND
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BACKGROUND

The Aberdeen Proving Ground (APG) is a military installation for the testing of military equipment, laboratory research, and training. APG is divided into two distinct areas: the northern Aberdeen Area and the southern Edgewood Area. This Part 70 permit application is for the Aberdeen Area of APG. The regulated activities which produce air emissions at the Aberdeen Area include space heating, process and NSPS boilers, emergency generators, stationary engines, paint spray booths, and underground storage tanks. The applicable primary SIC code is 9711.

The following table summarizes the actual emissions from APG-Aberdeen Area based on its Annual Emission Certification Reports:

Actual Emissions

Year	NO _x (TPY)	SO _x (TPY)	PM ₁₀ (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2019	35.63	1.43	2.00	19.45	1.63	0.372
2020	41.82	1.75	0.78	18.64	2.48	0.106
2021	33.65	1.50	0.59	18.90	2.66	0.347
2022	27.66	1.26	0.49	14.30	2.25	0.347
2023	42.66	2.51	1.08	21.99	4.80	2.25
2024	29.81	1.25	0.50	17.14	2.12	1.26

The major source threshold for triggering Title V permitting requirements in Harford County is 25 tons per year for VOC, 25 tons for NO_x, and 100 tons per year for any other criteria pollutants and 10 tons for a single HAP or 25 tons per year for total HAPs. Since the actual NO_x from the facility are greater than the major source threshold, APG-Aberdeen Area is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

On January 2, 2024 the Department received APG-Aberdeen Area's Part 70 renewal permit application. An administrative completeness review was conducted, and the application was deemed to be administratively complete. A completeness determination letter was sent to APG-Aberdeen Area on January 2, 2024, granting APG-Aberdeen Area an application shield.

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CHANGES AND MODIFICATIONS TO THE PART 70 OPERATING PERMIT

The following changes and/or modifications have been incorporated into the renewal Title V – Part 70 Operating Permit for APG-Aberdeen Area:

Equipment Removed/Replaced

Emission Unit No.	MDE – ARA Registration No.	Comments
0390-A01	12-4-0619	One (1) No. 2 fuel oil fired boiler rated at 2.960 million Btu per hour heat input
0400-A01	12-4-0546N	One (1) No. 2 fuel oil fired boiler rated at 1.827 million Btu per hour heat input
745A-A01	12-4-0619	One (1) Bryan No. 2 fuel oil fired boiler rated at 1.68 million Btu per hour heat input
Bldg. 413	N/A	630-hp diesel fired emergency generator
36-02353-A01	12-6-0207	One (1) automotive and equipment refinishing booth
07-0525-A01	12-9-0216	One (1) Intermediate Firing and Environmental Laboratory (formerly fire test lab) used for indoor fire and flammability testing of materials.
Bldg. 4603	25-0081-4-0692	Atmospheric Burner at HESATF. Move to insignificant activity list.

Equipment added

Emission Unit No.	MDE – ARA Registration No.	Comments
0383A-A01 & 0383A-A02	5-0376	Two (2) Cleaver Brooks natural gas fired boilers, each rated at 3.347 MMBtu/hr.
0400-A02 & 0400-A03	5-0384	Two (2) Cleaver Brooks natural gas fired boilers, each rated at 1.673 MMBtu/hr.
3511-A01 & 3511-A02	9-0539 & 9-0540	Two (2) MTU 16V4000G84Fdiesel-fired emergency generators, each rated at 2970 horsepower.

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Equipment Reclassified:

Emission Unit No.	MDE – ARA Registration No.	Comments
Atmospheric Burner at HESATF	25-0081-4-0692	Moved to insignificant activities. This is a bench scale process.
26-0896-A01	12-4-0619	The unit is incorrectly classified as a 1.5 MMBtu 40 CFR Part 63 Subpart JJJJJJ Boiler. The unit is actually a radiant tube space heater. Since the unit is a radiant tube space heater and not a boiler, it is not subject to Subpart JJJJJJ by definition.

MACT and NSPS

APG-Aberdeen Area is a minor source of HAPs and is subject to the following area source MACT standards (40 CFR Part 63):

1. Subpart JJJJJJ—National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers Area Sources.
2. Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants: Reciprocating Internal Combustion Engines.

APG-Aberdeen Area is subject to the following New Source Performance Standards (NSPS) (40 CFR Part 60),

1. Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
2. Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

APG-Aberdeen Area is also subject to the NO_x Reasonably Available Control Technology (RACT) requirements.

Compliance Assurance Monitoring (CAM) Requirement.

APG-Aberdeen Area conducted a Compliance Assurance Monitoring (CAM) analysis for the facility and determined that the facility is not subject to the (CAM) Rule 40 CFR Subpart 64.

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

GREENHOUSE GAS (GHG) EMISSIONS

APG-Aberdeen Area emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from various processes (i.e., internal combustion engines and boilers) contained within the facility premises applicable to APG-Aberdeen Area. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. While there may be no applicable requirements as a result of PSD, emission certifications reports for the years 2021, 2022, and 2023, showed that APG-Aberdeen Area is not a major source (threshold: 100,000 tpy CO_{2e}) for GHG's (see Table 3 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 APG-Aberdeen Area based on its Annual Emission Certification Reports:

Greenhouse Gases Emissions Summary

GHG	Conversion factor	2021 tpy CO_{2e}	2022 tpy CO_{2e}	2023 tpy CO_{2e}
Carbon dioxide CO ₂	1	21,597	18,227	30,792
Methane CH ₄	25	0.23	0.23	0.33
Nitrous Oxide N ₂ O	298	0.22	0.22	0.37
Total GHG CO_{2eq}		21,668	18,298	30,911

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EMISSION UNIT IDENTIFICATION

APG-Aberdeen Area has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Emission Unit Identification

Emissions Unit Number	MDE-ARA Registration Number	Emissions Unit Name and Description	Date of Installation
Space Heating Boilers			
Miscellaneous – Consolidated oil-fired	4-0619	Consolidated Oil-fired boilers rated between 1-10 million Btu per hour heat input.	Various
0642-A01	4-0689	One (1) Burnham PV910 No. 2 fuel oil fired boiler rated at 1.848-MMBtu/hr.	2009
0445-A01	4-0707	One (1) Burnham No. 2 fuel oil fired boiler rated at 1.116 million Btu per hour heat input	2013
0394-A01	4-0708	One (1) Smith No. 2 fuel oil fired boiler rated at 2.718 million Btu per hour heat input	2010
0339-A01	4-0710	One (1) Peerless No. 2 fuel oil fired boiler rated at 1.672 MMBtu per hour heat input	2009
0507-A05	4-0717	One (1) Cleaver Brooks No. 2 fuel oil fired boiler rated at 6.70 million Btu per hour heat input	2016
0507-A04	4-0104	One (1) Cleaver Brooks No. 2 fuel oil fired boiler rated at 8.164 million Btu per hour heat input	1997
0643-A01	4-0721	One (1) Cleaver Brooks No. 2 fuel oil fired boiler rated at 1.143 million Btu per hour heat input	2016
0688-A01	4-0720	One (1) Burnham No. 2 fuel oil fired boiler rated at 1.713 million Btu per hour heat input	2016
0670-A01	4-0719	One (1) Bryan No. 2 fuel oil fired boiler rated at 2.088 million Btu per hour heat input	2016

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Emissions Unit Number	MDE-ARA Registration Number	Emissions Unit Name and Description	Date of Installation
26-0449-A01	4-0722	One (1) HB Smith Cast Iron Fuel oil fired boiler, rated at 2.088-MMBtu/hr. located Bldg. A0449	2016
906C-A01	4-0724	One (1) Weil McLain fuel oil fired boiler, rated at 1.23-MMBtu/hr.	2018
Miscellaneous – Consolidated natural gas	5-0152	Consolidated natural gas-fired boilers rated between 1-10 million Btu per hour heat input.	Various
26-6007-C2CNT West-A01 thru A04	5-0298	Four (4) Bryan natural gas/No. 2 fuel oil fired boilers each rated at 3.5 million Btu per hour heat input	2009
26-6006-GMS Tower-A01 thru A03	5-0299	Three (3) Bryan natural gas/No. 2 fuel oil fired boilers each rated at 3.5 million Btu per hour heat input and equipped with low NO _x burners	2009
26-6002-HQ Building-A01 thru A05	5-0300	Five (5) Bryan natural gas/No. 2 fuel oil fired boilers each rated at 3.5 million Btu per hour heat input	2009
26-6003-GMS Lab-A01 thru A03	5-0301	Three (3) Bryan natural gas/No. 2 fuel oil fired boilers each rated at 3.5 million Btu per hour heat input	2009
5100-A01 & A02	5-0309 & 5-0310	Two (2) natural gas fired boilers each rated at 3.00 million Btu per hour heat input	2010
26-0525-A02	5-0315	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 8.17 million Btu per hour heat input	2010
26-3660-A01	5-0318	One (1) natural gas/No. 2 fuel oil fired boiler rated at 1.83-MMBtu/hr.	2019
2202-A01 & A02	5-0322	Two (2) Harsco Kelly natural gas fired boilers each rated at 2.00 million Btu per hour heat input	2010
26-0525-A03	5-0334	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 8.37 million Btu per hour heat input	1985

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Emissions Unit Number	MDE-ARA Registration Number	Emissions Unit Name and Description	Date of Installation
26-0525-A01	5-0335	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 8.37 million Btu per hour heat input	1985
26-04119-A03	5-0336	One (1) Cleaver Brooks natural gas fired boiler rated at 8.165 MMBtu/hr.	2014
26-0459-A02	5-0337	One(1) Cleaver Brooks, Model CB200-50-30-HW natural gas-fired boiler rated at 2.095 million Btu per hour heat input located at building 0459	2011
26-367-A01	5-0352	Camus DR-1000 Propane fired boiler (Bldg. 367-ARL/AMSSA Compound). General Permit issued May 6, 2014	2014
26-2485-A01	5-0367	One (1) Harsco Patterson-Kelly natural gas fired boiler rated at 2.0-MMBtu/hr.	2016
3660-A01	5-0371	One (1) RBI Futera Fusion natural gas fired boiler rated at 2.50 million Btu per hour heat input	2016
0383A-A01 & -A02	5-0376	Two (2) Cleaver Brooks natural gas fired boilers, each rated at 3.347-MMBtu/hr.	2017
5046-A01 thru A03	5-0377	Three (3) Camus natural gas fired boilers, each rated at 1.50-MMBtu/hr.	2018
2522-A01	5-0378	GP- small fuel burning - Bldg. 2522	2019
26-0400-A02 & -A03	5-0384	Two (2) Cleaver Brooks natural gas fired boilers, each rated at 1.69-MMBtu/hr.	2020
NSPS Boilers			
26-0345-A01 & A02	5-0079 & 5-0080	Two (2) Cleaver Brooks natural gas/No. 2 fuel oil fired boilers, each rated at 64 million Btu per hour heat input	1994
26-0345-A03	5-0081	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 23.4 million Btu per hour heat input	1996
26-4600-A06 & A08	5-0085 & 5-0087	Two (2) Cleaver Brooks natural gas/No. 2 fuel oil fired boilers each rated at 21 million Btu per hour heat input.	1995

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Emissions Unit Number	MDE-ARA Registration Number	Emissions Unit Name and Description	Date of Installation
26-5014-A01 & A02	5-0164 & 5-0165	Two (2) H.B. Smith natural gas/No. 2 fuel oil fired boilers each rated at 13.5 million Btu per hour heat input.	1991
26-4600-A09	5-0370	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boilers each rated at 20.13 million Btu per hour heat input.	2016
Process Boilers			
26-4219-A02	4-0522N	One (1) Cleaver Brooks oil-fired boiler rated at 8.4 million BTU per hour	1994
26-4219-A03	5-0308	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 8.165 million Btu per hour heat input	2009
26-04312-A01 & A02	5-0364	Two (2) Cleaver Brooks natural gas/No. 2 fuel oil fired boilers each rated at 4.18 million Btu per hour heat input	2015
26-3062-A02	5-0378	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 12.5 million Btu per hour heat input	2009
26-4404-A04	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 6.70-MMBtu/hr.	1999
4404-A06		One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.17-MMBtu/hr.	2012
Spray Booth			
07-0525-A04 & A06	6-0162 & 6-0159	Two (2) custom made cross draft paint spray booths	1960
Generators			
03-0328-A01	9-0229	One (1) emergency generator rated at 1072 bhp	1997
03-0394-A01 & A02	9-0227 & 9-0228	Two (2) emergency generators each rated at 1341 bhp	1997
03-4600-A04 & A05	9-0276 & 9-0277	Two (2) emergency generators each rated at 1877 bhp at ARL Materials Research Lab	1996
03-0394-A03 thru A07	9-0386 thru 9-0390	Five (5) Cummins emergency generator sets each rated at 750 bhp (500-kW) located in Bldg. 394-ARL Compound.	2008

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Emissions Unit Number	MDE-ARA Registration Number	Emissions Unit Name and Description	Date of Installation
26-6003-GMS Lab-A04	9-0393	One (1) 2500 kW (3778 bhp) Cummins diesel emergency generator set (Tier I certified) to be located at C4ISR-Research and Development – GMS Lab Building.	2009
26-6007-C2CNT West-A05	9-0394	One (1) 1500 kW (2200 bhp) Cummins diesel emergency generator set (Tier II certified) to be located at C4ISR-Research and Development – C2CNT West Building	2008
26-6006-GMS Tower-A04	9-0395	One (1) 1500 kW (2200 bhp) Cummins diesel emergency generator set (Tier II certified) to be located at C4ISR-Research and Development – GMS Tower Building	2008
26-6002-HQ Building-A06	9-0396	One (1) 2000 kW (2922 bhp) Cummins diesel emergency generator set (Tier II certified) to be located at C4ISR-Research and Development – HQ Building 2 and serves both HQ Building 1 & HQ Building 2.	2008
0120-A01	9-0408	One (1) Cummins emergency generator rated at 2922 bhp	2012
0316-A01	9-0409	One (1) Cummins emergency generator rated at 2000-kW located at Bldg. 316	2012
3090-JSEC-01	9-0410	One (1) emergency generator rated at 2000-kW	2010
26-6010-C2CNT-East	9-0411	Two (2) emergency generator sets each rated at 2000-kW	2010
6009-C2CNT East SEC	9-0412	One (1) emergency generator rated at 2000-kW	2010
0328-A02	09-0414	One (1) emergency generator rated at 761 bhp	2006
0328-A03	9-0418	One (1) Detroit emergency generator rated at 804 bhp	2006

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Emissions Unit Number	MDE-ARA Registration Number	Emissions Unit Name and Description	Date of Installation
0311-A1	9-0419	One (1) emergency generator rated at 447 kW (600 brake horsepower)	1986
0120-A02	9-0433	One (1) Cummins emergency generator rated at 2922 bhp	2012
0120-A03	9-0434	One (1) Cummins emergency generator rated at 2922 bhp	2012
3147-A01	9-0491	One (1) Katolight diesel fired emergency generator rated at 500-kW (670-bhp)	2015
2202-A01	9-0499	One (1) emergency generator rated at 755 bhp	2015
3660-A01	9-0500	One (1) Kohler diesel fired emergency generator rated at 643-bhp	1995
0120-A04	9-0503	One (1) Cummins emergency generator rated at 2922 bhp	2017
0120-A05	9-0504	One (1) Cummins emergency generator rated at 2922 bhp	2016
5016-A01	9-0510	One (1) Cummins emergency generator rated at 2346 bhp	2017
5046-A01	9-0509	One (1) Cummins emergency generator rated at 617 bhp	2017
3511-A01 & A02	9-0539 & 9-540	Two (2) MTU 16V4000G84F diesel fired emergency generator sets, each rated at 2970-hp. PTC issued 2/27/2024	2024
0436-A01	9-0548	One (1) MTU 8V1600DS400 diesel fired emergency generator set rated at 460-kW, Bldg. 463.(Tier III). GP issued 4/30/2025	2025
Non-Emergency Generators			
BSS-01	9-0435	One (1) Detroit non-emergency generator rated at 600 bhp	2001
LWE-01 through LWE-05	9-0436	Five (5) Detroit non-emergency generators each rated at 550 bhp	2006
UTF-01	9-0437	One (1) Cummins non-emergency generator rated at 500 bhp	1993

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Emissions Unit Number	MDE-ARA Registration Number	Emissions Unit Name and Description	Date of Installation
Miscellaneous			
26-4029-A03 & A05	12-9-0152	Two (2) 20,000-gallon underground storage tanks equipped with Stage I vapor recovery systems	1993
07-00P17-A01	12-9-0212	One (1) Fire Safety Test Enclosure facility	September 1997

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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

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solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

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

Emission Unit: Space heater boilers: Boilers less than 10 million Btu per hour heat input and used as space heaters.

SPACE HEATER BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
0030-A01 & 0030-A02	4-0619	Two (2) No. 2 fuel oil fired boilers each rated at 2.1 million Btu per hour heat input	2012
0045-A01		One (1) No. 2 fuel oil fired boiler rated at 1.160 million Btu per hour heat input	2013
0269C-A01		One (1) No. 2 fuel oil fired boiler rated at 2.718 million Btu per hour heat input	2016
0280B-A01		One (1) No. 2 fuel oil fired boiler rated at 1.458 million Btu per hour heat input	2016
0322-A01		One (1) No. 2 fuel oil fired boiler rated at 2.07 million Btu per hour heat input	2013
0384-A01		One (1) No. 2 fuel oil fired boiler rated at 2.718 million Btu per hour heat input	2016
0402-A03		One (1) No. 2 fuel oil fired boiler rated at 3.200 million Btu per hour heat input	1985
0439-A01		One (1) No. 2 fuel oil fired boiler rated at 1.054 million Btu per hour heat input	
0456-A01		One (1) No. 2 fuel oil fired boiler rated 1.400 million Btu per hour heat input	2004
26-0699A-A01		One (1) No. 2 fuel oil fired boiler rated at 4.2 million Btu per hour heat input	2016
26-0700-A1		One (1) No. 2 fuel oil fired boiler rated at 3.347 million Btu per hour heat input	1987
26-0702-A01		One (1) No. 2 fuel oil fired boiler rated at 1.25 million Btu per hour heat input.	2002

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Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
0733A-A01		One (1) No. 2 fuel oil fired boiler rated at 1.160 million Btu per hour heat input.	2013
0740B-A01		One (1) No. 2 fuel oil fired boiler rated at 1.160 million Btu per hour heat input.	2006
0740C-A01		One (1) No. 2 fuel oil fired boiler rated at 1.987 million Btu per hour heat input.	2010
26-0860-A01	4-0619	One(1) No. 2 fuel oil fired boiler rated at 1.289 million Btu per hour heat input	2003
26-1064-A01		One(1) No. 2 fuel oil fired boiler rated at 3.36 million Btu per hour heat input	2009
26-1064-A02		One(1) No. 2 fuel oil fired boiler rated at 3.36 million Btu per hour heat input	2009
26-1100F-A01		One (1) No. 2 fuel oil fired boiler rated at 1.987 million Btu per hour heat input	1996
1134-A01		One (1) No. 2 fuel oil fired boiler rated at 1.340 million Btu per hour heat input.	2013
26-2184-A01		One (1) No. 2 fuel oil fired boiler rated at 1.116 million Btu per hour heat input	1983
26-2207-A03		One (1) No. 2 fuel oil fired boiler rated at 2.37 million Btu per hour heat input	1999
0383A-A01 & A02	5-0376	Two (2) Cleaver Brooks natural gas fired boilers each rated at 3.347 million Btu per hour hear input	2017
26-2312-A02	4-0619	One (1) No. 2 fuel oil fired boiler rated at 2.10 million Btu per hour heat input	2009
26-2377-A01		One (1) No. 2 fuel oil fired boiler rated at 2.37 million Btu per hour heat input	1987
26-2377-A02		One (1) No. 2 fuel oil fired boiler rated at 1.26 million Btu per hour heat input	2009
3070-A01		One (1) No. 2 fuel oil fired boiler rated at 8.165 million Btu per hour heat input	2004
26-3011-A01		One (1) No. 2 fuel oil fired boiler rated at 1.110 million Btu per hour heat input	2005
26-4725		One (1) No. 2 fuel oil-fired boiler rated at 1.821 million Btu per hour heat input	

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SPACE HEATER BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-4728-A02		One (1) natural gas/No. 2 fuel oil fired boiler rated at 2.7 million Btu per hour heat input	2016
26-2485-A01	5-0367	One (1) natural gas-fired boiler rated at 2.00 million Btu per hour heat input	2017
26-5046-A01 thru A03	5-0377	Three (3) natural gas-fired boilers rated at 1.50 million Btu per hour heat input	2018
0445-A01	4-0707	One (1) No. 2 fuel oil fired boiler rated at 1.116 million Btu per hour heat input	2013
0394-A01	4-0708	One (1) No. 2 fuel oil fired boiler rated at 2.718 million Btu per hour heat input	2010
0339-A01	4-0710	One (1) No. 2 fuel oil fired boiler rated at 2.06 million Btu per hour heat input	2009
0507-A05	4-0717	One (1) No. 2 fuel oil fired boiler rated at 6.70 million Btu per hour heat input	2016
0507-A04	4-0104	One (1) No. 2 fuel oil fired boiler rated at 8.164 million Btu per hour heat input	1997
0642-A01	4-0689	One (1) No. 2 fuel oil fired boiler rated at 1.900 million Btu per hour heat input	2009
0643-A01	4-0721	One (1) No. 2 fuel oil fired boiler rated at 1.143 million Btu per hour heat input	2016
0644-A01	4-0619	One (1) No. 2 fuel oil fired boiler rated at 1.160 million Btu per hour heat input	2006
0688-A01	4-0720	One (1) No. 2 fuel oil fired boiler rated at 1.73 million Btu per hour heat input	2016
0670-A01	4-0719	One (1) No. 2 fuel oil fired boiler rated at 2.088 million Btu per hour heat input	2016
5116-A01	4-0619	One (1) No. 2 fuel oil fired boiler rated at 1.680 million Btu per hour heat input	2011
26-0120-A01 & A02	5-0152	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 2.51 million Btu per hour heat input	2008
26-0402-A01 & A02	5-0152	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 3.27 million Btu per hour heat input	1996

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SPACE HEATER BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-0436-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 2.5 million Btu per hour heat input	2016
26-0436 A02	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 2.200 million Btu per hour heat input	1995
26-0449-A01	4-0722	One (1) No. 2 fuel oil fired boiler rated at 2.088 million Btu per hour heat input	2016
26-0455-A01 & A02	5-0152	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 8.37 million Btu per hour heat input	1990
26-0459-A02	5-0337	One (1) natural gas fired boiler rated at 2.10 million Btu per hour heat input	2011
26-0525-A01 & A03	5-0335 & 5-0334	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 8.37 million Btu per hour heat input	1985
26-0525-A02	5-0315	One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.17 million Btu per hour heat input	2010
26-2312-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 5.100 million Btu per hour heat input and equipped with low NO _x burners.	1996
26-2352-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 6.28 million Btu per hour heat input	1998
906C-A01	4-0724	One (1) Weil-McLain fuel oil fired boiler rated at 1.23 million Btu per hour heat input	2018
26-3062-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 6.12 million Btu per hour heat input	2011
26-4304-A02	5-0152	One (1) natural gas-fired boiler rated at 3.0 million Btu per hour heat input	2015

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SPACE HEATER BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-4727-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 4.0 million Btu per hour heat input	2016
26-5014-A03	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 7.500 million Btu per hour heat input	1991
26-6007-C2CNT West-A01 through A04	5-0298	Four (4) natural gas/No. 2 fuel oil fired boilers each rated at 3.500 million Btu per hour heat input	2009
26-6006-GMS Tower-A01 thru A03	5-0299	Three (3) natural gas/No. 2 fuel oil fired boilers each rated at 3.500 million Btu per hour heat input and equipped with low NO _x burners	2009
26-6002-HQ Building-A01 thru A05	5-0300	Five (5) natural gas/No. 2 fuel oil fired boilers each rated at 3.500 million Btu per hour heat input	2009
26-6003-GMS Lab-A01 thru A03	5-0301	Three (3) natural gas/No. 2 fuel oil fired boilers each rated at 3.500 million Btu per hour heat input	2009
2202-A01 & 2202-A02	5-0322	Two (2) natural gas fired boilers each rated at 2.000 million Btu per hour heat input	2010
3144-A01	5-0152	One (1) natural gas fired boiler rated at 4.81 million Btu per hour heat input	2012
26-3660-A01	5-0371	One (1) natural gas fired boiler rated at 2.50 million Btu per hour heat input	2016
26-04119-A02	5-0152	One (1) Cleaver Brooks dual-fired boiler rated at 8.165 million Btu per hour heat input	1994
26-04119-A03	5-0336	One (1) natural gas fired boiler rated at 8.17 million Btu per hour heat input	2014
5100-A01 & 5100-A02	5-0309 & 5-0310	Two (2) natural gas fired boilers each rated at 3.000 million Btu per hour heat input	2010

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SPACE HEATER BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-367-A01	5-0352	Camus DR-1000 Propane fired boiler (Bldg. 367-ARL/AMSSA Compound) General Permit issued May 6, 2014	2014
26-0400-A02 & A03	5-0384	Two (2) natural gas fired boilers each rated at 1.69 million Btu per hour heat input	2020

Compliance Status

Full Compliance inspection on August 22, 2022: No visible emissions were detected at the time of the inspection. APG certifies semi-annually that their fuel content is less than 0.3 wt%. APG-AA submits a certification from the oil supplier with each semi-annual report. Operations manuals and preventative maintenance plans, Operator training records & maintenance records, and combustion testing are maintained at building 345.

Applicable Standards and limits

A. Control of Visible Emissions

COMAR 26.11.09.05A – 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

No periodic monitoring for opacity is required for these very small boilers. The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. The Permittee shall maintain operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance

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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, Plant Wide Conditions, "Report of Excess Emissions and Deviations".

Rationale for Periodic Monitoring: Boilers that burn natural gas or No. 2 fuel oil with a rated heat input capacity of less than 10 MM Btu/hr typically never have visible emissions if properly operated and maintained. Boilers in this size range are set up to operate in an automatic mode without oversight of an operator. The completion of annual preventative maintenance as recommended by the boiler manufacturer, focusing on combustion performance, is sufficient to maintain compliance with the no visible emissions requirement. Even though there is not a specific schedule to perform observations of the stack emissions, the Permittee is required under the general reporting requirement for excess emissions and deviations to report incidents when visible emissions are visible.

Condition B applies to No. 2 oil-fired boilers only

B. Control of Sulfur Oxide Emissions

COMAR 26.11.09.07A(2) - 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: 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 oil complies with the limitation on the sulfur content of the fuel oil. The Permittee shall maintain records of fuel supplier's certification and shall make records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**. The Permittee shall report fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]**.

Rationale for Periodic Monitoring: The strategy for the compliance demonstration is based on the compliance demonstration for NSPS Subpart Dc boilers that burn fuel oil.

C. Control of Nitrogen Oxide Emissions

COMAR 26.11.09.08B(5) - Operator Training.

(a) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

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(b) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.”

COMAR 26.11.09.08F - Requirements for Space Heaters.

“(1) A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall:

- (a) Submit to the Department a list of each affected installation on the premises and the types of fuel used in each installation;
- (b) Develop an operating and maintenance plan to minimize NO_x emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience;
- (c) Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department;
- (d) Require installation operators to attend in-State operator training programs once every 3 years on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- (e) Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request.

(2) A person who owns or operates an installation that no longer qualifies as a space heater shall inform the Department not later than 60 days after the date when the fuel-burning equipment did not qualify, and shall meet the applicable fuel-burning equipment RACT requirement in this regulation.”

Compliance Demonstration

The Permittee shall develop and maintain an operating and maintenance plan to minimize NO_x. [Reference: **COMAR 26.11.09.08F(1)(b)**]. The Permittee shall maintain: Records of maintenance performed that relates to combustion performance in keeping with the requirements of an operations and maintenance plan. [Reference: **COMAR 26.11.09.08F(1)(c)**]. Record of training program attendance for each operator. [Reference: **COMAR 26.11.09.08F(1)(e)**]. An operations manual and preventive maintenance plan. [Reference: **COMAR 26.11.09.08F(1)(b)**]. Records of fuel use that demonstrate that the 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)**]

D. Operational Limits

[Reference: **MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued October 2009)**

(1) The boilers equipped with low NO_x burners not to exceed 30ppm shall only burn natural gas or No.2 fuel oil.

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(2) The boilers shall not burn any No.2 fuel oil with sulfur content greater than 0.3% by weight.

(3) For the purpose of maintaining synthetic minor status for the C4ISR-Research and Development Facility, the combined NO_x emissions from the all fuel burning equipment (boilers and generators) at the facility must be less than 25 tons in any rolling 12-month period.

(4) The total fuel oil and natural gas usage for the fifteen (15) boilers shall not exceed the following limits unless the Permittee can demonstrate, to the satisfaction of the Department, that the NO_x emissions for the C4ISR-Research and Development Facility are less than 25 tons in any rolling 12-month period at a higher usage rate:

MDE PTC No.	Location	Proposed Limit		Quantity and Size
		Natural gas (ft ³ /yr)	No. 2 fuel oil (gallons)	
025-0081-5-0298	C2CNT West Building	82,355,000	160,000	Four (4) 3.5 MMBtu/hr boilers
025-0081-5-0299	GMS Tower Building	61,765,000	120,000	Three (3) 3.5 MMBtu/hr boilers
025-0081-5-0300	HQ Building 1	102,942,000	200,000	Five (5) 3.5 MMBtu/hr boilers
025-0081-5-0301	GMS Lab Building	61,765,000	120,000	Three (3) 3.5 MMBtu/hr boilers

Compliance Demonstration

The Permittee shall calculate the NO_x emissions for the previous calendar month and a total for the previous 12 consecutive months for the C4ISR-R&D facility. The calculations shall be updated monthly within 30 days of each following month. **(Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued July 16, 2009, Part E, Condition 2)**

The Permittee shall maintain on site and make available to the Department upon request, records of the monthly and rolling 12-month total natural gas in million cubic feet and the No. 2 fuel oil usage in gallons. **(Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued July 16, 2009, Part E, Condition 1)**

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The Permittee shall keep records of the NO_x emissions for each calendar month and update them monthly with 30 days of each following month. **(Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued July 16, 2009, Part E, Condition 2)**

The Permittee shall report fuel consumption to the Department upon request. The Permittee shall submit the records to the Department as part of the semi-annual report. **(Reference: COMAR 26.11.03.06C)**

Emission Unit: Process Boilers.

PROCESS BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-03062-A02	5-0167	One (1) natural gas/No. 2 fuel oil fired boiler rated at 12.2 million Btu per hour heat input	2009
26-4219-A02	4-0522N	One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.37 million Btu per hour heat input	1994
26-04219-A03	12-5-0308	One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.165 million Btu per hour heat input	2009
26-04312-A01 & A02	025-0081-5-0364	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 4.18 million Btu per hour heat input	2015
26-04404-A04	12-5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 6.695 million Btu per hour heat input	1999
4404-A06	12-5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.165million Btu per hour heat input	2012

Compliance Status:

Full Compliance inspection on August 22, 2022: No visible emissions were detected at the time of the inspection. The APG Aberdeen Area certifies in their ACOMP that periodic observations are performed, and annual Method 9 survey is performed. The APG Aberdeen Area did not report any incidents when visible emissions were observed.

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The fuel oil records are maintained by the APG Aberdeen Area's DPW-Environmental. Certification from their fuel supplier states that the fuel oil received meets the sulfur limits specifications for distillate fuel and does not exceed 0.3% sulfur by weight. The APG Aberdeen Area supplies fuel sulfur content information to MDE in its semi-annual NSPS report.

The APG Aberdeen Area does perform boiler operator training as required by their Title V operating permit. The most recent boiler operator training was performed in May 2023.

The APG Aberdeen Area does perform annual combustion analysis on the boilers as required by their Title V operating permit.

Applicable Standards and limits

A. Control of Visible Emissions

COMAR 26.11.09.05A – 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: (1) Properly operate and maintain the boilers in a manner to prevent visible emissions; and (2) Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation 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 emissions are visible: (1) Inspect combustion control system and boiler operations, (2) Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; (3) Document in writing the results of the inspections, adjustments and/or repairs to the boiler; and (4) After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform

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Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. The Permittee shall: (1) Maintain an operation manual and prevention maintenance plan on site; (2) Maintain a record of the maintenance performed that relates to combustion performance; (3) Maintain a log of visible emissions observations performed and make it available to the Department's representative upon request; (4) Maintain a record of the hours that No. 2 fuel oil is burned. **[Reference: COMAR 26.11.03.06C]**. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations".

B. Control of Sulfur Oxide Emissions

COMAR 26.11.09.07A(2) - 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: 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 oil complies with the limitation on the sulfur content of the fuel oil. The Permittee shall maintain records of fuel supplier's certification and shall make records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**. The Permittee shall report fuel supplier certification to the Department upon request **[Reference: COMAR 26.11.09.07C]**.

C. Control of Nitrogen Oxide Emissions

COMAR 26.11.09.08B(5) - Operator Training.

(a) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

(b) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."

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;

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- (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 once a year. [Reference: **COMAR 26.11.09.08E(2)**] The Permittee shall optimize combustion based on the annual combustion analysis. [Reference: **COMAR 26.11.09.08E(2)**]
 The Permittee shall maintain: (1) Records of the results of the annual combustion analysis on site. [Reference: **COMAR 26.11.09.08E(5)**]. (2) Record of training program attendance for each operator at the site. [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 training program attendance for each operator to the Department upon request. [Reference: **COMAR 26.11.09.08E(5)**].

Emission Unit: - NSPS Boilers

NSPS Process BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-0345-A01 & A02	12-5-0079 & 12-5-0080	Two (2) Cleaver Brooks natural gas/No. 2 fuel oil fired boilers each rated at 63.80 million Btu per hour heat input	1994
26-0345-A03	12-5-0081	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 23.4 million Btu per hour heat input	1996
26-4600-A06	12-5-0085	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 21.0 million Btu per hour heat input	1995
26-4600-A09	025-0081-5-0370	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 20.13 million Btu per hour heat input	2016

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NSPS Process BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-4600-A08	12-5-0087	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 21.0 million Btu per hour heat input	1995
26-5014-A01 & A02	12-5-0164 & 12-5-0165	Two (2) H.B. Smith natural gas/No. 2 fuel oil fired boilers each rated at 13.50 million Btu per hour heat input	1991

Compliance Status:

Full Compliance inspection on August 22, 2022: No visible emissions were detected at the time of the inspection. APG certifies semi-annually that their fuel content is less than 0.3 wt%. APG-AA submits a certification from the oil supplier with each semi-annual report. Operations manuals and preventative maintenance plans, Operator training & maintenance records, and combustion testing are maintained at building 345.

Applicable Standards and limits

A. Control of Visible Emissions

COMAR 26.11.09.05A – 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.”

The Federal New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 million Btu/hour but greater than 10 million Btu/hour for which construction began after June 9, 1989, **40 CFR 60, Subpart Dc**, which contains the following:

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§60.43c – “(c) On and after the date on which the initial performance test is completed or required to be completed under Sec. 60.8 of this part, 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 million Btu/hr) 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.

(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” requirement of COMAR 26.11.09.05A(2) 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 no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation 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 emissions are visible: 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. The Permittee shall: maintain an operation manual and prevention maintenance plan on site; maintain a record of the maintenance performed that relates to combustion performance; maintain a log of visible emissions observations performed and make it available to the Department’s representative upon request; maintain a record of the hours that No. 2 fuel oil is burned.

[Reference: COMAR 26.11.03.06C]. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations”.

Rationale for Periodic Monitoring: Boilers that burn Natural Gas fuel with No. 2 Fuel Oil as backup (or No. 2 fuel oil as primary) with a rated heat input capacity of more than 10 MM Btu/hr and less than 250 MM Btu/hr rarely have visible emissions if properly operated and maintained. The Permittee is required to maintain on site an operations manual, a preventative maintenance plan, and records of maintenance performed that relate to combustion performance.

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If visible emissions occur, it will happen when burning No. 2 fuel oil. No. 2 fuel oil is burned only as a backup fuel. The Permittee is required to perform a visual observation of the exhaust gases from the boiler stack for a 6-minute period, once each 168 hours that fuel oil is burned. In mild winters, the hours of interrupted gas service may be less than 168 hours. At a minimum, one observation for visible emissions is required each year. The Permittee is required to maintain a record of the results of the observations and number of hours that No. 2 fuel oil is burned.

B. Control of Sulfur Oxide Emissions

COMAR 26.11.09.07A(2) - 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

*The Federal New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 million Btu/hour but greater than 10 million Btu/hour for which construction began after June 9, 1989, **40 CFR 60, Subpart Dc**, which contains the following:*

§60.42c – Standard for sulfur dioxide

"(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8 of this part, 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/million Btu) heat input; or 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 percent 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), or (3) 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."

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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 the NSPS sulfur in fuel standard.

Compliance Demonstration:

The Permittee shall obtain a certification from the fuel supplier stating that the oil complies with the limitation on the sulfur content of the fuel oil. **[Reference: 40 CFR 60.44c(h)]**. The Permittee shall maintain records of fuel supplier's certification and shall make records available to the Department upon request **[Reference: 40 CFR 60.48c(e)]**. The Permittee shall report fuel supplier certifications to the Department every six months. The report shall be postmarked by the 30th day following the end of the reporting period. **[Reference: 40 CFR 48c(j)]**.

Rationale for Periodic Monitoring: The strategy for the compliance demonstration is based on the compliance demonstration for NSPS Subpart Dc boilers that burn fuel oil. The methodology for the compliance demonstration is based on the NSPS monitoring, record keeping, and reporting requirements for sulfur in fuel oil. See discussion of streamlining below.

Streamlining NSPS requirements with COMAR

These boilers are subject to following Federal New Source Performance Standards (NSPS) for Small Industrial-commercial-institutional Steam Generating Units with a heat input capacity less than 100 million Btu/hour but greater than 10 million Btu/hour for which construction began after June 9, 1989, 40 CFR 60, Subpart Dc:

- 40 CFR 60.43c which limits visible emissions to 20 percent opacity
- 40 CFR 60.42c which limits sulfur content in the fuel oil to 0.5 wt %

Compliance with the "No Visible Emissions" requirement of COMAR 26.11.09.05A(2) will be used as a demonstration of compliance with this NSPS 20 percent opacity standard.

The demonstration of compliance with COMAR 26.11.09.07A, which requires 0.3 % sulfur content by weight, as well as the NSPS limitation of 0.5 % will be based on the NSPS monitoring, record keeping, and reporting requirements for sulfur content in fuel oil.

C. Control of Nitrogen Oxide Emissions

COMAR 26.11.09.08B(5) - Operator Training.

(1) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

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(2) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.”

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 once a year. The Permittee shall optimize combustion based on the annual combustion analysis.

[Reference: COMAR 26.11.09.08E(2)]. The Permittee shall maintain records of the results of the annual combustion analysis and record of training program attendance for each operator on site. **[Reference: COMAR 26.11.09.08E(5)].**

The Permittee shall submit: The results of combustion analysis to the department and the EPA upon request; **[Reference: COMAR 26.11.09.08E(3)]** and a record of training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08E(5)].**

Emission Unit: - Boilers Cont'd

All Oil-fired boilers: Space heaters, Process boilers & NSPS boilers.

Compliance Status:

The APG Aberdeen Area submits annual MACT reports for 40 CFR 63 Subpart JJJJJJ to MDE. The reports state that APG has met the work practice standards of the MACT. The reports track the APG's compliance with the 5-year and biannual boiler tune-up requirements of the MACT. Initial compliance demonstrations and the results of energy assessment and/or tune-up have been entered electronically into the EPA's WebFire database using the compliance

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and emission data reporting interface (CEDRI) on EPA's central data exchange (CDX).

Applicable Standards and limits

Control of HAPs:

40 CFR Part 63, Subpart JJJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

§63.11193 - Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in §63.2, except as specified in §63.11195.

§63.11194 - What is the affected source of this subpart?

“(a) This subpart applies to each new, reconstructed, or existing affected source as defined in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection of all existing industrial, commercial, and institutional boilers within a subcategory, as listed in §63.11200 and defined in §63.11237, located at an area source.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler within a subcategory, as listed in §63.11200 and as defined in §63.11237, located at an area source.

(b) An affected source is **an existing source** if you commenced construction or reconstruction of the affected source **on or before June 4, 2010**.

(c) An affected source is **a new source** if you commenced construction of the affected source **after June 4, 2010**, and the boiler meets the applicability criteria at the time you commence construction.”

§63.11196 - What are my compliance dates?

(a) If you own or operate an existing affected boiler, you must achieve compliance with the applicable provisions in this subpart as specified in paragraphs (a)(1) through (3) of this section.

(1) If the existing affected boiler is subject to a work practice or management practice standard of a tune-up, you must achieve compliance with the work practice or management practice standard no later than March 21, 2014.

(2) If the existing affected boiler is subject to emission limits, you must achieve compliance with the emission limits no later than March 21, 2014.

(3) If the existing affected boiler is subject to the energy assessment requirement, you must achieve compliance with the energy assessment requirement no later than March 21, 2014.

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(c) If you start up a new affected source after May 20, 2011, you must achieve compliance with the provisions of this subpart upon startup of your affected source.

§63.11201 - What standards must I meet?

(a) You must comply with each emission limit specified in Table 1 to this subpart that applies to your boiler.

(b) You must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies to your boiler. An energy assessment completed on or after January 1, 2008 that meets or is amended to meet the energy assessment requirements in Table 2 to this subpart satisfies the energy assessment requirement. A facility that operates under an energy management program established through energy management systems compatible with ISO 50001, that includes the affected units, also satisfies the energy assessment requirement.

(c) You must comply with each operating limit specified in Table 3 to this subpart that applies to your boiler.

(d) These standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time you must comply only with Table 2 to this subpart.

Table 1 to Subpart JJJJJJ of Part 63—Emission Limits

As stated in §63.11201, you must comply with the following applicable emission limits:

If your boiler is in this subcategory	For the following pollutants	You must achieve less than or equal to the following emission limits, except during periods of startup and shutdown
5. New oil-fired boilers with heat input capacity of 10 MMBtu/hr or greater that do not meet the definition of seasonal boiler or limited-use boiler.	PM (Filterable)	3.0E-02 lb per MMBtu of heat input.

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Table 2 to Subpart JJJJJJ of Part 63—Work Practice Standards, Emission Reduction Measures, and Management Practices

As stated in §63.11201, you must comply with the following applicable work practice standards, emission reduction measures, and management practices:

If your boiler is in this subcategory	You must meet the following
4. Existing oil-fired boilers with heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio	Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223.
5. New oil-fired boilers with heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio	Conduct a tune-up of the boiler biennially as specified in §63.11223.
12. Existing oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr	Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every 5 years as specified in §63.11223.
13. New oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr	Conduct a tune-up of the boiler every 5 years as specified in §63.11223.
16. Existing coal-fired, biomass-fired, or oil-fired boilers (units with heat input capacity of 10 MMBtu/hr and greater) , not including limited-use boilers	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used to meet the energy assessment requirements. A facility that operates under

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	an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items (1) to (4) appropriate for the on-site technical hours listed in §63.11237:
	(1) A visual inspection of the boiler system,
	(2) An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints,
	(3) An inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator,
	(4) A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage,
	(5) A list of major energy conservation measures that are within the facility's control,
	(6) A list of the energy savings potential of the energy conservation measures identified, and
	(7) A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

Compliance Demonstration:

CONTINUOUS COMPLIANCE REQUIREMENTS

§63.11220 - When must I conduct subsequent performance tests or fuel analyses?

“(a) If your boiler has a heat input capacity of **10 million British thermal units per hour or greater, you must conduct all applicable performance**

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(stack) tests according to §63.11212 on a triennial basis, except as specified in paragraphs (b) through (d) of this section. Triennial performance tests must be completed no more than 37 months after the previous performance test.

(b) When demonstrating initial compliance with the PM emission limit, if your boiler's performance test results show that your PM emissions are equal to or less than half of the PM emission limit, you do not need to conduct further performance tests for PM but must continue to comply with all applicable operating limits and monitoring requirements. If your initial performance test results show that your PM emissions are greater than half of the PM emission limit, you must conduct subsequent performance tests as specified in paragraph (a) of this section."

"(d) **For existing affected boilers** that have not operated since the previous compliance demonstration and more than 3 years have passed since the previous compliance demonstration, you must complete your subsequent compliance demonstration no later than 180 days after the re-start of the affected boiler."

§63.11222 - How do I demonstrate continuous compliance with the emission limits?

"(a) You must demonstrate continuous compliance with each emission limit and operating limit in Tables 1 and 3 to this subpart that applies to you according to the methods specified in Table 7 to this subpart and to paragraphs (a)(1) through (4) of this section.

(2) If you have an applicable mercury or **PM emission limit**, you must keep records of the type and amount of all fuels burned in each boiler during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in lower emissions of mercury than the applicable emission limit (if you demonstrate compliance through fuel analysis), or result in lower fuel input of mercury than the maximum values calculated during the last performance stack test (if you demonstrate compliance through performance stack testing).

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 and 3 to this subpart that apply to you. These instances are deviations from the emission limits in this subpart. These deviations must be reported according to the requirements in §63.11225."

§63.11223 - How do I demonstrate continuous compliance with the work practice and management practice standards?

"(a) For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to paragraph (b) of this section and keep records as required in §63.11225(c) to demonstrate continuous compliance. You must conduct the

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tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.”

“(b) Except as specified in paragraphs (c) through (f) of this section, you must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in paragraphs (b)(1) through (7) of this section. Each **biennial** tune-up must be conducted no more than 25 months after the previous tune-up. For a new or reconstructed boiler, the first biennial tune-up must be no later than 25 months after the initial startup of the new or reconstructed boiler.

(1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection.

(2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.

(3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection.

(4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.

(5) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

(6) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (b)(6)(i) through (iii) of this section.

(i) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler.

(ii) A description of any corrective actions taken as a part of the tune-up of the boiler.

(iii) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

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(7) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.”

“(e) Oil-fired boilers with a heat input capacity of equal to or less than 5 million Btu per hour must conduct a tune-up every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed oil-fired boiler with a heat input capacity of equal to or less than 5 million Btu per hour, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months.”

The Permittee must operate and maintain, at all times, any affected source, including air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. **[Reference: 40 CFR §63.11205(a)]**

§63.11225 - What are my notification, reporting, and recordkeeping requirements?

“(a) You must submit the notifications specified in paragraphs (a)(1) through (5) of this section to the administrator.

(1) You must submit all of the notifications in §§63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply to you by the dates specified in those sections except as specified in paragraphs (a)(2) and (4) of this section.

(2) An Initial Notification must be submitted no later than January 20, 2014 or within 120 days after the source becomes subject to the standard.

(3) If you are required to conduct a performance stack test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin.

(4) You must submit the Notification of Compliance Status no later than 120 days after the applicable compliance date specified in §63.11196 unless you must conduct a performance stack test. If you must conduct a performance stack test, you must submit the Notification of Compliance Status within 60 days of completing the performance stack test. You must submit the Notification of Compliance Status in accordance with paragraphs (a)(4)(i) and (vi) of this section. The Notification of Compliance Status must include the information and certification(s) of compliance in paragraphs (a)(4)(i) through (v) of this section, as applicable, and signed by a responsible official.

(i) You must submit the information required in §63.9(h)(2), except the information listed in §63.9(h)(2)(i)(B), (D), (E), and (F). If you conduct any performance tests or CMS performance evaluations, you must submit that data

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as specified in paragraph (e) of this section. If you conduct any opacity or visible emission observations, or other monitoring procedures or methods, you must submit that data to the Administrator at the appropriate address listed in §63.13.

(ii) "This facility complies with the requirements in §63.11214 to conduct an initial tune-up of the boiler."

(iii) "This facility has had an energy assessment performed according to §63.11214(c)."

(iv) For units that install bag leak detection systems: "This facility complies with the requirements in §63.11224(f)."

(v) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."

(vi) The notification must be submitted electronically using 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 Notification of Compliance Status must be submitted to the Administrator at the appropriate address listed in §63.13.

(5) If you are using data from a previously conducted emission test to serve as documentation of conformance with the emission standards and operating limits of this subpart, you must include in the Notification of Compliance Status the date of the test and a summary of the results, not a complete test report, relative to this subpart.

(b) You must prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the information specified in paragraphs (b)(1) through (4) of this section. You must submit the report by March 15 if you had any instance described by paragraph (b)(3) of this section. For boilers that are subject only to a requirement to conduct a biennial or 5-year tune-up according to §63.11223(a) and not subject to emission limits or operating limits, you may prepare only a biennial or 5-year compliance report as specified in paragraphs (b)(1) and (2) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart. Your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) "This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler."

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(ii) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."

(iii) "This facility complies with the requirement in §§63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

(3) If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken.

(4) The total fuel use by each affected boiler subject to an emission limit, for each calendar month within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by you or EPA through a petition process to be a non-waste under §241.3(c), whether the fuel(s) were processed from discarded non-hazardous secondary materials within the meaning of §241.3, and the total fuel usage amount with units of measure."

"(c) You must maintain the records specified in paragraphs (c)(1) through (7) of this section.

(1) As required in §63.10(b)(2)(xiv), you must keep a copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.

(2) You must keep records to document conformance with the work practices, emission reduction measures, and management practices required by §63.11214 and §63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section.

(i) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.

(ii) *Not Applicable.*

(iii) For each boiler required to conduct an energy assessment, you must keep a copy of the energy assessment report.

(iv) For each boiler subject to an emission limit in Table 1 to this subpart, you must also keep records of monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used.

(v) For each boiler that meets the definition of seasonal boiler, you must keep records of days of operation per year.

(vi) For each boiler that meets the definition of limited-use boiler, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and records of fuel use for the days the boiler is operating.

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- (3) For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation that were done to demonstrate compliance with the mercury emission limits. Supporting documentation should include results of any fuel analyses. You can use the results from one fuel analysis for multiple boilers provided they are all burning the same fuel type.
- (4) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.
- (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.
- (6) You must keep the records of all inspection and monitoring data required by §§63.11221 and 63.11222, and the information identified in paragraphs (c)(6)(i) through (vi) of this section for each required inspection or monitoring.
- (i) The date, place, and time of the monitoring event.
- (ii) Person conducting the monitoring.
- (iii) Technique or method used.
- (iv) Operating conditions during the activity.
- (v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation.
- (vi) Maintenance or corrective action taken (if applicable).
- (7) *Not Applicable.*
- (d) Your records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years.”

Emission Unit: Emergency & Non-Emergency Generators.

EMERGENCY & NON-EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
0120-A01 thru 0120-A03	12-9-0408 & 12-9-0433 & 12-9-0434	Three (3) emergency generator sets each rated at 2922 bhp	2012

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EMERGENCY & NON-EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
0120-A04	025-0081-9-0503	One (1) emergency generator set rated at 2922 bhp	2017
0120-A05	025-0081-9-0504	One (1) emergency generator set rated at 2922 bhp	2016
0311-A01	9-0419	One (1) emergency generator set rated at 600 bhp	1986
03-0328-A01	12-9-0229	One (1) emergency generator set rated at 1072 bhp	1997
0328-A02	025-0081-9-0414	One (1) emergency generator set rated at 670.5 bhp	2006
0328-A03	025-0081-9-0418	One (1) emergency generator set rated at 804.6 bhp	2006
03-0394-A01 & A02	12-9-0227 & 12-9-0228	Two (2) emergency generator sets each rated at 1341 bhp	1997
03-4600-A04 & A05	12-9-0276 & 12-9-0277	Two (2) emergency generator sets each rated at 1877 bhp	1996
03-0394-A03 thru A07	25-0081-9-0386 thru -9-0390	Five (5) emergency generator sets each rated at 750 bhp (500 kW) located in Bldg 394 – ARL Compound	2008
6009-JSEC	9-0412	One (1) emergency generator set rated at 2200 bhp	2010
26-6010-C2CNT East-	025-0081-9-0411	Two (2) emergency generator sets each rated at 2919 bhp	2010
26-6003-GMS Lab-A04	025-0081-9-0393	One (1) 2500 kW (3778 bhp) diesel emergency generator set (Tier I certified) to be located at C4ISR-Research and Development – GMS Lab Building.	2009
26-6007-C2CNT West-A05	25-0081-9-0394	One (1) 1500 kW (2200 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Research and Development – C2CNT West Building	2008

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EMERGENCY & NON-EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-6006-GMS Tower-A04	25-0081-9-0395	One (1) 1500 kW (2200 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Research and Development – GMS Tower Building	2008
26-6002-HQBuilding-A06	25-0081-9-0396	One (1) 2000 kW (2900 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Research and Development – HQ Building 2 and serves both HQ Building 1 & HQ Building 2.	2008
2202-A01	025-0081-9-0499	One (1) emergency generator set rated at 755 bhp	2015
3147-A01	025-0081-9-0491	One (1) emergency generator set rated at 670 bhp	2015
0316-01	025-0081-9-0409	One (1) emergency generator set rated at 2922 bhp	2012
0463-A01	9-0548	One (1) MTU 8V1600DS400 diesel fired emergency generator set rated at 460-kW, Bldg. 463. (Tier III). GP issued 4/30/2025	2025
3511-A01 & A02	9-0539 & 9-0540	Two (2) MTU 16V4000G84F diesel fired emergency generator sets, each rated at 2970-hp. PTC issued 2/27/2024	2024
3660-A01	025-0081-9-0500	One (1) emergency generator set rated at 643 bhp	1995
5016-A01	025-0081-9-0510	One (1) Cummins emergency generator rated at 2356 bhp	2017
5046-A01	025-0081-9-0509	Emergency Generator rated at 617 bhp	2017
BSS-01	9-0435	One (1) Detroit non-emergency generator set rated at 600 bhp	2001
LWE-01 thru LWE-05	9-0436	Five (5) Detroit non-emergency generator sets each rated at 550 bhp	2006
UTF-01	9-0437	One (1) Cummins non-emergency generator set rated at 500 bhp	1993

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EMERGENCY & NON-EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
3090-JSEC-01	025-0081-9-0410	One (1) emergency generator set rated at 2923 bhp	2010

Compliance Status:

Full Compliance Inspection on August 22, 2022: None of the generators visited were operating at the time of inspection. Generators are only operated to ensure that they are operational. APG certifies semi-annually that their fuel content is less than 0.3 wt%. The generators are being switched to ultra low sulfur diesel per NSPS. All generators have run clocks and most of them have data sheets which show the run time which shows the hours the generators operate each month. Generators are used for emergency backup.

Applicable Standards and limits

A. Control of Visible Emissions

COMAR 26.11.09.05E - Stationary Internal Combustion Engine Powered Equipment.

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

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

(4) Exceptions.

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

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

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

(ii) All other engines: 15 minutes.

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

Compliance Demonstration:

The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions. The Permittee shall retain records of preventive maintenance on site for at least five years and make these records available to

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the Department upon request. [Reference: COMAR 26.11.03.06C] The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, "Report of Excess Emissions and Deviations"

B. Control of Sulfur Oxides

COMAR 26.11.09.07A(2) - 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

Compliance Demonstration:

The Permittee shall report annual fuel supplier certification to the Department upon request. [Reference: COMAR 26.11.03.06C]. The Permittee shall retain annual fuel supplier certifications stating that the fuel oil is in compliance with this regulation must be maintained for at least 5 years. The Permittee shall report annual fuel supplier certification 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;
 - (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.

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Compliance Demonstration:

The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year. [Reference: **COMAR 26.11.09.08G(1)(b)**]. The Permittee shall maintain records of the results of the combustion analyses and any stack tests on site for at least five (5) years and make them available to the Department and EPA upon request. [Reference: **COMAR 26.11.09.08G(1)(c) & COMAR 26.11.03.06C**] The Permittee shall submit records of combustion analysis and combustion analysis performed to the Department as part of the April 1 certification report. [Reference: **COMAR 26.11.03.06C**]. The Permittee shall submit a list of trained operators to the Department upon request. [Reference: **COMAR 26.11.09.08G(e) and COMAR 26.11.03.06C**]. **COMAR 26.11.09.08K(3)** – “A person subject to this regulation shall maintain annual fuel use records on site for not less than 3 years and make these records available to the Department upon request.”

Emission Unit: Emergency Generators Cont'd (NSPS & NESHAP)

EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
0120-A01 thru 0120-A03	12-9-0408 & 12-9-0433 & 12-9-0434	Three (3) emergency generator sets each rated at 2922 bhp	2012
0120-A04	025-0081-9-0503	One (1) emergency generator set rated at 2922 bhp	2017
0120-A05	025-0081-9-0504	One (1) emergency generator set rated at 2922 bhp	2016
0328-A02	025-0081-9-0414	One (1) emergency generator set rated at 670.5 bhp	2006
0328-A03	025-0081-9-0418	One (1) emergency generator set rated at 804.6 bhp	2006
03-0394-A03 thru A07	25-0081-9-0386 thru -9-0390	Five (5) emergency generator sets each rated at 750 bhp (500 kW) located in Bldg 394 – ARL Compound	2008
6009-JSEC	9-0412	One (1) emergency generator set rated at 2200 bhp	2010
26-6010-C2CNT East-	025-0081-9-0411	Two (2) emergency generator sets each rated at 2919 bhp	2010

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EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-6003-GMS Lab-A04	025-0081-9-0393	One (1) 2500 kW (3778 bhp) diesel emergency generator set (Tier I certified) to be located at C4ISR-Phase I Research and Development – GMS Lab Building.	2009
26-6007-C2CNT West-A05	25-0081-9-0394	One (1) 1500 kW (2200 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Phase I Research and Development – C2CNT West Building	2008
26-6006-GMS Tower-A04	25-0081-9-0395	One (1) 1500 kW (2200 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Phase I Research and Development – GMS Tower Building	2008
26-6002-HQBuilding-A06	25-0081-9-0396	One (1) 2000 kW (2900 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Phase I Research and Development – HQ Building 2 and serves both HQ Building 1 & HQ Building 2.	2008
2202-A01	025-0081-9-0499	One (1) emergency generator set rated at 755 bhp	2015
3147-A01	025-0081-9-0491	One (1) emergency generator set rated at 670 bhp	2015
0316-A01	025-0081-9-0409	One (1) emergency generator set rated at 2922 bhp	2012
5016-A01	025-0081-9-0510	One (1) Cummins Emergency Generator rated at 2356 bhp	2017
5046-A01	025-0081-9-0509	Emergency Generator rated at 617 bhp	2017
3090-JSEC-01	025-0081-9-0410	One (1) emergency generator set rated at 2923 bhp	2010
3511-A01 & A02	9-0539 & 9-0540	Two (2) MTU 16V4000G84F diesel fired emergency generator sets, each rated at 2970-hp. PTC issued 2/27/2024	2024
0463-A01	9-0548	One (1) MTU 8V1600DS400 diesel fired emergency generator set rated at 460-kW, Bldg. 463.(Tier III). GP issued 4/30/2025	2025

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Applicable Standards and limits

A. New Source Performance Standards (**NSPS**) under 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.

Note: Beginning October 1, 2010, installations subject to 40 CFR Part 60, Subpart IIII must comply with the diesel fuel standards of §60.4207 which limit the maximum sulfur content of the fuel to 15 ppm.

(1) This permit is valid only for the installation of an emergency diesel generator with piston displacement less than 10 liters per cylinder.

(2) The provisions of 40 CFR Part 60, Subpart IIII apply if the emergency diesel generator uses a diesel engine manufactured after April 1, 2006 [**Ref: §60.4200**].

(3) An emergency diesel generator or diesel engine subject to the requirements of 40 CFR 60, Subpart IIII (“NSPS emergency diesel generator” or “NSPS emergency diesel engine”) shall be equipped with a non-resettable hour meter [**Ref: §60.4209(a)**].

(4) The Permittee shall only purchase emergency generator sets certified to meet the emission standards of §60.4205(b). The generators must be installed and configured according to the manufacturer’s specifications.[**Ref: §60.4211(c)**]

(5) The Permittee must purchase and install emergency generator sets certified to the emission standards for new nonroad diesel engines in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants [**Ref: §62.4202(b)(2)**];

(6) The requirements of condition (5) above do not apply to owners or operators of NSPS emergency diesel engines that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location [**Ref: §60.4208**].

Compliance Demonstration:

The Permittee shall maintain a log for the emergency generator indicating the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.).

[**Reference: MDE PTC 025-0081-9-0393 thru -9-0396 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 1**].The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s): (a) Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006 and the manufacturer model year of the diesel engine; (b) The installation date of each emergency diesel generator; and (c) The certifications of compliance or manufacturer engine test

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data required by 40 CFR §60.4211 and §60.4214(b). [Reference: MDE PTC 025-0081-9-0393 thru -9-0396 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Conditions 2]. Beginning October 1, 2007, for any NSPS emergency diesel generator the Permittee shall for each fuel delivery obtain 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. The Permittee shall maintain the required records on site for at least five (5) years. [Reference: MDE PTC 025-0081-9-0393 thru -9-0396 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 3].

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

“§63.6590 - What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of **40 CFR part 60 subpart IIII**, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. *No further requirements apply for such engines under this part.*

(1) A new or reconstructed stationary RICE located at an area source.”

Compliance Demonstration:

See NSPS Requirements.

C. Operational Limits

(1) The Permittee must operate and maintain an NSPS emergency diesel generator and control devices according to the manufacturer’s written instructions or according to procedures developed by the owner or operator that are approved by the manufacturer. Additionally the Permittee may change only those settings that are permitted by the manufacturer. The Permittee must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they may apply to an owner or operator [Ref: §60.4211].

(2) 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

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- (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)]

Note: Compliance with this requirement demonstrates compliance with COMAR 26.11.09.07A(2)(b) which limits the sulfur content of diesel fuel (No. 2 fuel oil) to 0.3 percent by weight.

(3) The Permittee must comply with the following emissions standards for the emergency generator set:

- (a) Non-methane Hydrocarbons and NO_x (NMHC+NO_x): 6.4 grams per kilowatt-hour (g/kW-hr)
- (b) Carbon Monoxide (CO): 3.5 g/kW-hr
- (c) Particulate Matter (PM): 0.2 g/kW-hr

[Ref: §60.4205(b), §60.4202(b)(2), and §89.112]

(4) The exhaust opacity from the emergency generator shall not exceed:

- (a) 20 percent during the acceleration mode;
- (b) 15 percent during the lugging mode; and
- (c) 50 percent during the peaks in either the acceleration or lugging modes.

[Ref: 40 CFR §60.4205(b), §60.4202(b)(2), and §89.113]

(5) The Permittee must use diesel fuel in the emergency generator set that meets the requirements of 40 CFR §80.510(b) (diesel fuel that has a per-gallon sulfur content that does not exceed 15 ppm, and that either has a minimum per-gallon cetane index of 40 or a maximum per-gallon aromatic content of 35 volume percent), unless a waiver is obtained from the Department and/or the EPA Administrator. **[Ref: §60.4207].**

(6) In accordance with 40 CFR §60.4211(f), non-emergency use of the emergency diesel generator set for the purpose of maintenance checks and readiness testing is limited to 100 hours per year or less unless prior approval is received from the Department.

(7) There is no time limit on the use of the emergency generator in emergency situations. **[Reference: 40 CFR §60.4211(f)(1)]**

(8) The Permittee may operate the emergency stationary ICE for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee

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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)(2)(i)]**

Note: Effective May 2, 2016, emergency generators are no longer allowed to participate for emergency demand response operation unless they meet the requirements of a non-emergency generator of the same model year. This engine does not meet the standards for a non-emergency generator, therefore, operation for emergency demand response or during periods of voltage deviation

(9) For the purpose of maintaining synthetic minor status for the C4ISR-Phase I Research and Development Facility, the combined NO_x emissions from the all fuel burning equipment (boilers and generators) at the facility must be less than 25 tons in any rolling 12-month period. **[Reference: MDE PTC 025-0081-9-0393 thru -9-0396 issued July 15, 2009, Part D-Operating Conditions, Condition 7]**

Compliance Demonstration:

In order to demonstrate compliance with the annual emissions limitations, the Permittee shall calculate and record the NO_x emissions for each previous calendar month and a total for the previous 12 consecutive calendar months for the C4ISR-Phase I Research and Development Facility. The calculations and records shall be updated monthly, within the first 15 days of each following month. These records shall be submitted to the Department as part of the semi-annual report. **[Reference: MDE PTC 025-0081-9-0393 thru -9-0396 issued July 15, 2009, Part E-Record Keeping and Reporting Requirements, Condition 4]**

The Permittee shall report the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year. **[Reference: MDE PTC 025-0081-9-0393 thru -9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 1].**

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Emission Unit: - Emergency & Non-Emergency Generators Cont'd (MACT)

MACT GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
03-0328-A01	12-9-0229	One (1) emergency generator set rated at 1072 bhp	1997
0328-A02	025-0081-9-0414	One (1) emergency generator set rated at 670.5 bhp	2006
0328-A03	025-0081-9-0418	One (1) emergency generator set rated at 804.6 bhp	2006
0311-A01	9-0419	One (1) emergency generator set rated at 600 bhp	1986
03-0394-A01 & A02	12-9-0227 & 12-9-0228	Two (2) emergency generator sets each rated at 1341 bhp	1997
03-4600-A04 & A05	12-9-0276 & 12-9-0277	Two (2) emergency generator sets each rated at 1877 bhp	1996
3660-A01	025-0081-9-0500	One (1) emergency generator set rated at 643 bhp	1995
BSS-01	9-0435	One (1) Detroit non-emergency generator rated at 600 bhp that run hydraulic equipment	2001
LWE-01 thru LWE-05	9-0436	Five (5) Detroit non-emergency generators each rated at 550 bhp that run hydraulic equipment	2006
UTF-01	9-0437	One (1) Cummins non-emergency generator rated at 500 bhp that run hydraulic equipment	1993

Compliance Status

The APG Aberdeen Area stated in their ACOMP that the following emergency and non-emergency generators maintenance schedule is followed:

- Change oil and filter every 500 hours of operation or annually, whichever comes first,
- Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Testing of Non-Emergency Engines:

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Applicable Standards and limits

§63.6595 - When do I have to comply with this subpart?

(a) *Affected sources.* (1)” If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, **or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.”.**

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

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

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

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each.	You must meet the following requirement, except during periods of startup.	During periods of startup you must.
1. Non-Emergency , non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; ¹ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first,	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

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	and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
2. Non-Emergency , non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency , non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

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¹Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

²If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

§63.6605 - What are my general requirements for complying with this subpart?

“(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.
(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.”

Compliance Demonstration:

§63.6615 - When must I conduct subsequent performance tests?

“If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.”

§63.6620 - What performance tests and other procedures must I use?

(a) “You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.”
(b) “Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-

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operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.”

§63.6625 - What are my monitoring, installation, collection, operation, and maintenance requirements?

“(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

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(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.”

“(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(3) An **existing emergency** or black start stationary RICE located at an area source of HAP emissions.”

“(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or **an existing emergency stationary RICE located at an area source of HAP emissions**, you must install a non-resettable hour meter if one is not already installed.”

“(g) If you own or operate an existing **non-emergency**, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.”

“(h) If you operate a new, reconstructed, or **existing stationary engine**, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the

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engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.”

“(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.”

§63.6640 - How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

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“(f) If you own or operate an **emergency stationary RICE**, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE 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 paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(3) *Not Applicable.*

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.”

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§63.6655 - What records must I keep?

“(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.”

“(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.”

“(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.”

“(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.”

“(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(2) An existing stationary emergency RICE.

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(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.”

“(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.”

“If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.” **[Footnote 2 of Table 2d]**

§63.6650 - What reports must I submit and when?

“(a) You must submit each report in Table 7 of this subpart that applies to you.”

“(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

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- (2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.
- (3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
- (4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
- (5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.
- (6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.
- (7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.
- (8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.
- (9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.”

“(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

- (1) Company name and address.
- (2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
- (3) Date of report and beginning and ending dates of the reporting period.
- (4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

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(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.”

“(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.”

“(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

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- (10) A brief description of the CMS.
- (11) The date of the latest CMS certification or audit.
- (12) A description of any changes in CMS, processes, or controls since the last reporting period."

"(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority."

"(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is 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) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(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 §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).
 - (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).
 - (vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

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(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(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 §63.13."

Emission Unit: - Paint Spray Booth

07-00525-A04 & A06 - Two (2) custom made cross draft paint spray booths. [12-6-0159 & 12-6-0162].

Compliance Status:

Full Compliance Inspection on August 22, 2023: An inspection of the paint spray booth areas showed that the APG Aberdeen Area was implementing proper housekeeping techniques to control for VOC emissions. No empty coating containers were observed open and used rags were being stored properly in closed containers.

Paint booth logs and a table with coatings components and solvents are kept at the APG Aberdeen Area. The APG Aberdeen Area provides annually in their Emission Certification Report to MDE a table of daily coating applications that include:

- Date of application
- Type of coating used
- Coating ID
- Coating manufacture
- Coating VOC content specifications
- Amount of coating used
- Equipment that the coating was applied to

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- Emission totals

Applicable Standards and limits

Control of Volatile Organic Compounds

COMAR 26.11.19.23E. General Requirements and Standards.

(1) VOC Content Limits.

(a) Except as provided in this regulation, effective July 1, 2013, a person who is subject to this regulation may not supply, sell, offer for sale, distribute, or manufacture for use within the State an automotive coating or cleaning solvent with a VOC content in excess of the corresponding limit specified in Table 1 of §E(1) or in §E(5) of this regulation.

(b) A person may not use or apply to a motor vehicle, mobile equipment, or associated parts and components, an automotive coating or cleaning solvent for vehicle refinishing that exceeds the VOC content specified in Table 1 of §E(1) or in §E(5) of this regulation.

Table 1. VOC Content Limits for Automotive Coatings for Motor Vehicle and Mobile Equipment Non-assembly Line Refinishing and Recoating.

Coating Category	VOC Content Limit of Coatings as Applied*	
	Pounds per gallon	Grams per liter
Adhesion promoter	4.5	540
Automotive pretreatment coating	5.5	660
Automotive primer	2.1	250
Clear coating	2.1	250
Color coating, including metallic/iridescent color coating	3.5	420
Multicolor coating	5.7	680
Other automotive coating type	2.1	250
Single-stage coating, including single-stage metallic/iridescent coating	2.8	340
Temporary protective coating	0.5	60
Truck bed liner coating	1.7	200
Underbody coating	3.6	430

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* The VOC content is determined as the weight of volatile compounds (prepared to manufacturer's maximum VOC content), less water and exempt compounds, as specified in §E(2) of this regulation.

COMAR 26.11.19.23H. Work Practice Standards.

(1) Spray guns used to apply automotive coating components or automotive coatings shall be cleaned by one or a combination of the following:

(a) A fully enclosed spray gun cleaning system that is kept closed when not in use and is maintained in accordance with the requirements of §L(1)(a)—(c) of this regulation;

(b) Unatomized discharge of solvent into a paint waste container that is kept closed when not in use;

(c) Disassembly of the spray gun and cleaning in a vat that is kept closed when not in use; or

(d) Atomized spray into a paint waste container that is filled with a device designed to capture atomized mist or spray solvent emissions.

(2) The owner or operator of an automotive refinishing facility or non-assembly line operation subject to this regulation shall implement the following work practice standards and training measures:

(a) Fresh and used automotive coating components, automotive coatings, solvents, and cleaning solvents shall be stored in vapor tight, nonabsorbent, nonleaking containers that shall be kept closed at all times except when filling or emptying;

(b) Cloth or paper, or absorbent applicators, moistened with automotive coatings components, automotive coatings, solvents, or cleaning solvents shall be stored in closed, vapor tight, nonabsorbent, nonleaking containers;

(c) Handling and transfer procedures to minimize spills during the transfer of automotive coating components, automotive coatings, solvents, and cleaning solvents; and

(d) Ensure that a person who uses or applies automotive coating components, automotive coatings, solvents, or cleaning solvents has completed training in the proper use and handling of the automotive coating components, automotive coatings, solvents, and waste products in order to minimize the emission of air contaminants and to comply with the provisions of this regulation.

Compliance Demonstration:

COMAR 26.11.19.23I. Compliance Procedures and Monitoring Requirements.

(1) Compliance Statement Requirements.

(a) For each automotive coating product or automotive coating component product, a manufacturer and repackager who is subject to the provisions of this regulation shall include the following information on product data sheets or an equivalent documentation:

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(i) The VOC actual content and VOC regulatory content, as supplied, for the coating product or coating component product, expressed in grams per liter, calculated in accordance with §E(2)(a)(i) and (ii) of this regulation;

(ii) The weight percent of volatiles, water, and exempt compounds;

(iii) The volume percent of water and exempt compounds; and

(iv) The density of the material (in grams per liter).

(b) For each ready to spray mixture (based on the manufacturer's and repackager's stated mix ratio) product, the manufacturer and repackager shall include the following information on product data sheets or an equivalent documentation:

(i) The VOC actual content and the VOC regulatory content, as applied, for the coating product or coating component product, expressed in grams per liter;

(ii) The weight percent of volatiles, water, and exempt compounds;

(iii) The volume percent of water and exempt compounds; and

(iv) The density of the material (in grams per liter).

(c) The manufacturer and repackager of cleaning solvents subject to this regulation shall include the VOC content of the cleaning solvents as supplied, calculated in accordance with the requirements of §E(2)(a)(iii) of this regulation, expressed in grams per liter, on product data sheets or an equivalent documentation.

(2) Container Labeling Requirements. The manufacturer and repackager of automotive coatings or automotive coating components shall include the following information on all containers or on a label affixed to the container:

(a) The applicable use category or categories;

(b) The VOC actual content of the coating or coating component, as supplied, calculated in accordance with the requirements of §E(2)(a)(ii) of this regulation and expressed in grams per liter;

(c) The VOC regulatory content of the coating or coating component as supplied, calculated in accordance with the requirements of §E(2)(a)(i) of this regulation and expressed in grams per liter; and

(d) The manufacturer and repackager of cleaning solvents subject to this rule shall include on all containers, or on a label affixed to the container, the VOC content for cleaning solvents, as supplied, calculated in accordance with the requirements of §E(2)(a)(iii) of this regulation and expressed in grams per liter.

COMAR 26.11.19.23J. Record Keeping.

(1) Record-Keeping Requirements for Coatings, Coating Components and Solvents. A person who uses automotive coatings, automotive coating components, ready-to-spray coatings (based on the manufacturer's stated mix ratio), or cleaning solvents subject to this regulation shall maintain and have available at all times, the following:

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- (a) A current list of all coatings, coating components and cleaning solvents used that are subject to this regulation which includes the following information for each coating, coating component and cleaning solvent:
- (i) Whether the material is a coating, coating component, or cleaning solvent;
 - (ii) Coating, coating component or cleaning solvent name and manufacturer;
 - (iii) Application method;
 - (iv) Coating type;
 - (v) The mix ratio specific to the coating, coating component or cleaning solvent; and
 - (vi) The VOC actual content and VOC regulatory content as applied, for each ready to spray or ready to apply coating or cleaning solvent and copies of data sheets documenting how the as applied values were determined;
- (b) The VOC actual content and VOC regulatory content as supplied and copies of current manufacturer specification sheets, product data sheets, material safety data sheets, technical data sheets, or air quality data sheets documenting the as supplied value; and
- (c) Purchase records identifying the following:
- (i) The coating type;
 - (ii) Coating, coating component, or cleaning solvent name; and
 - (iii) Volume purchased of the coating, coating component or cleaning solvent.
- (2) Record-Keeping Requirements for Emission Control Systems. A person using an emission control system shall maintain daily records of the following key system operating parameters which demonstrate continuous operation and compliance of the emission control system during periods of VOC emission producing activities:
- (a) Temperatures;
 - (b) Pressure drops; and
 - (c) Air flow rates.
- (3) The records under this regulation shall be maintained for not less than 3 years and made available to the Department upon request.

The Permittee shall report material usage and VOC content of coatings to the Department annually in the Emission Certification Report. **[Reference: COMAR 26.11.03.06C]**

Emission Unit: Underground Storage Tanks

26-04029-A03 & A05 – Two (2) 20,000-gallon underground storage tanks equipped with Stage I vapor recovery systems installed in 1993. **[9-0152]**. APG has a bulk gasoline/diesel terminal that is used to fill fuel trucks to deliver fuel by trucks as needed.

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Compliance Status:

Full Compliance Inspection on August 22, 2023: The loading system for the storage tanks is equipped with a vapor balance line. The APG Aberdeen Area certifies in their annual compliance certification report that the vapor balance line has been properly installed and is maintained and used.

The APG states in their annual compliance certification report that the APG performs quarterly inspections of the underground storage tanks and records ensuring that:

- Training records are on-site,
- Daily inspection records of each system are maintained,
- Records show that defective equipment is not being operated,
- Records show that defective equipment is being tagged as out of service,
- CARE-approved test records are reviewed and maintained,
- Leak test and leak rate & cracking pressure tests are performed annually for the vapor balance system. The last tests performed were on December 2 & 3, 2020.

The Stage II equipment was removed in December 2020 as allowed by COMAR and approved by MDE.

Applicable Standards and limits

Control of Volatile Organic Compounds

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 Sec. 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."

Operational Limits

COMAR 26.11.24.06-Training Requirements for Operation and Maintenance of Approved Systems.

- A. "General. An operator shall ensure that:

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- (1) At least one employee at each facility subject to this regulation is trained in accordance with the requirements of Sec. B of this regulation; and
 - (2) The trained employee assists in the training of each of the other employees at that facility who are involved in the operation or maintenance of the approved system.
- B. Approved Training Course Contents and Duration.
- (1) An approved training course shall contain, at a minimum, a discussion of the following:
 - (a) Purposes and effects of Stage II vapor recovery;
 - (b) Stage II vapor recovery equipment design, function, operation and maintenance;
 - (c) Daily inspection requirements and development and maintenance of records and files; and
 - (d) Equipment warranties and spare parts.
 - (2) The approved training course shall be of duration sufficient to properly train persons in the requirements of this chapter."

COMAR 26.11.24.08 - Instructional Signs

- A. "An operator who is subject to this chapter shall place instructional signs in conspicuous locations at each gasoline dispenser.
- B. The instructional signs shall include:
 - (1) Instructions, with illustrations, on how to insert the nozzle, dispensing gasoline, and how to remove the nozzle;
 - (2) A warning against attempts to continue refueling after automatic shutoff of the gasoline (that is , topping off); and
 - (3) The Department's toll-free telephone number, which may be used for complaints or comments concerning the use of the Stage II vapor recovery systems."

Compliance Demonstration:

COMAR 26.11.24.04 - Testing Requirements.

- A. Except as provided in §§E and F of this regulation, an owner subject to this chapter shall perform the following CARB-approved tests.
 - (1) A leak test in accordance with the Vapor Recovery Test Procedure TP-201.3 referenced in Regulation .01-1B(1) of this chapter;
 - (2) An air to liquid volume ratio test in accordance with the Vapor Recovery Test Procedure TP-201.5 referenced in Regulation .01-1B(2) of this chapter.
 - (3) A dynamic pressure performance test in accordance with the Vapor Recovery Test Procedure TP-201.4 referenced in Regulation .01-1B(3) of this chapter;
 - (4) A vapor return line vacuum integrity test for the Healy Model 400 ORVR System in accordance with Executive Order G-70-186, Exhibit 4 referenced in Regulation .01-1B(4) of this chapter; and

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(5) A vapor return line vacuum integrity test for the Healy Model 600 System in accordance with Executive Order G-70-165 Exhibit 4 referenced in Regulation .01-1B(5) of this chapter.

B. The leak and liquid blockage tests required in §A of this regulation shall be performed on each approved system before the gasoline dispensing facility is initially used to refuel motor vehicles, or by the applicable dates in Regulation .03 of this chapter, whichever occurs later.

D. If a gasoline dispensing facility fails any test required by this chapter, the owner shall notify the Department of the failure in writing within 5 working days after the test and before retesting.

E. Alternative test methods approved by CARB may be used in place of the test methods specified in §A of this regulation, if the alternative test methods are approved by the U.S. Environmental Protection Agency (EPA) as a revision to the State Implementation Plan, which is Maryland's plan for meeting the National Ambient Air Quality Standards.

F. Test methods and the frequency of testing required by this regulation may be modified for vapor assist systems, if the test methods and testing frequency are approved by the Department and the EPA.

COMAR 26.11.24.05 - Inspection Requirements.

- A. "An operator subject to this chapter shall ensure that each approved system is inspected at least once each day of operation to verify that it is working properly.
- B. Except as provided in Sec. C of this regulation, the Department shall consider an operator of a gasoline dispensing facility to be in violation of Regulation .03E of this chapter during periods of time when defective equipment at the facility is placed in operation.
- C. The operator is not in violation of Regulation .03E of this chapter during any period of time that the operator establishes, to the satisfaction of the Department, that nozzles associated with defective equipment were tagged out of service and that no nozzle associated with the defective equipment was actually used.
- D. For any defective equipment identified by the Department, the operator shall effect necessary repairs before placing the equipment in service, and shall inform the Department by telephone within 72 hours after the repair or replacement of the defective equipment has been effected."

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COMAR 26.11.24.07 - Recording Keeping and Reporting Requirements.

- A. "An operator subject to this chapter shall create and maintain a record file at the facility.
- B. The record file shall contain copies of all test reports, permits, violation notices, correspondence with the Department, equipment maintenance records, training records, and other information pertinent to the requirements of this chapter. Verification of training shall be maintained in the facility file. Equipment maintenance records required under this chapter shall be maintained for at least 2 years. All other records shall be maintained for at least 5 years.
- C. The equipment maintenance records shall include:
- (1) The date on which defective equipment was found, a description of each defect, a description of the corrective action and the date on which the defect was corrected, and the probable cause of the defect;
 - (2) If parts are replaced, the location within the approved system of the part, the part number, and assurance that the replacement part does not degrade the efficiency of the system; and
 - (3) Inspection reports and any other information relating to maintenance or care of the approved system."

If any test is failed, the Permittee shall notify the Department in writing within 5 days after the test and before retesting. **[Reference: COMAR 26.11.24.04E]**

The Permittee shall submit written notification to the Department within 5 days of the incident, unless otherwise specified by the Permit. **[Reference: COMAR 26.11.24.04E]**

COMAR 26.11.24.07E: "The following reporting requirements apply to a test under this chapter:

- (1) The Department shall be notified 5 days before a test is to be conducted;
- (2) A test protocol shall be available at the test site during testing;
- (3) Copies of all test results shall be forwarded to the Department within 30 days of the test; and
- (4) Test failures shall be reported to the Department in writing within 5 days following the date of the failure."

(1)

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Emission Unit: Facility-Wide

Facility-Wide

Compliance Status:

Full Compliance Inspection on August 22, 2023: The APG Aberdeen Area certifies that good operating practices have been verified by personnel for permitted sources such as paint spray booths and gas stations during quarterly inspection. MDE has verified APG's good operating practices. See prior sections (paint spray booths and underground gasoline storage tanks) in this report for more details.

Applicable Standards and limits

Control of VOC Emissions

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

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

(v) 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.”

Compliance Demonstration:

The Permittee shall conduct facility-wide inspections at least once per quarter to determine the compliance status of facility operations with regard to implementation of “good operating practices” designed to minimize emissions of VOC. **[Reference: COMAR 26.11.03.06C]** The Permittee shall maintain: (1) Written descriptions of all “good operating practices” designed to minimize emissions of VOC from facility-wide operations. **[Reference: COMAR 26.11.19.02I]** (2) Records of all inspections conducted to determine the facility’s compliance status with regard to implementation of “good operating practices”

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designed to minimize emissions of VOC from facility-wide operations. The records shall include for each inspection the name of the inspector, the date and time of the inspection, and an account of the findings. **[Reference: COMAR 26.11.03.06C]** Good operating practices information as required by COMAR 26.11.19.02I shall be made available to the Department upon request.

B. COMAR 26.11.19.16B, C & D - Control of VOC Equipment Leaks

“Applicability.” A person subject to any VOC emission standard or limitation established in this chapter and not otherwise subject to more specific VOC leak requirements of another regulation is subject to the requirements of this regulation.

General Requirements. A person subject to this regulation shall comply with all of the following requirements:

- (1) Visually inspect all components on the premises for leaks at least once each calendar month.
- (2) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date the leak was discovered, and the name of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.
- (3) Take immediate action to repair all observed VOC leaks that can be repaired within 48 hours.
- (4) Repair all other leaking components not later than 15 days after the leak is discovered. If a replacement part is needed, the part shall be ordered within 3 days after discovery of the leak, and the leak shall be repaired within 48 hours after receiving the part.
- (5) Maintain a supply of components or component parts that are recognized by the source to wear or corrode, or that otherwise need to be routinely replaced, such as seals, gaskets, packing, and pipe fittings.
- (6) Maintain a log that includes the name of the person conducting the inspection and the date on which leak inspections are made, the findings of the inspection, and a list of leaks by tag identification number. The log shall be made available to the Department upon request. Leak records shall be maintained for a period of not less than 2 years from the date of their occurrence.

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.”

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Compliance Demonstration:

The Permittee shall visually inspect all components on the premises for VOC leaks at least once each calendar month following the procedures specified in COMAR 26.11.19.16. [Reference: COMAR 26.11.19.16C(1)]. The Permittee shall 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, a list of leaks by tag identification number and identity of components that cannot be repaired as required in this regulation because they are inaccessible, or that cannot be repaired during operation if the source. The log shall be made available to the Department upon request. Leak records, along with the log shall be maintained for a period of not less than 2 years from the date of their occurrence. [Reference: COMAR 26.11.03.06C]. Leak inspection logs as required by COMAR 26.11.19.16 shall be made available to the Department upon request.

COMPLIANCE SCHEDULE

APG-Aberdeen Area is currently in compliance with all applicable air quality regulations.

TITLE IV – ACID RAIN

APG-Aberdeen Area is not subject to the Acid Rain Program.

TITLE VI – OZONE DEPLETING SUBSTANCES

APG-Aberdeen Area shall comply with the applicable standards and regulations pursuant to 40 CFR Part 82.

SECTION 112(r) – ACCIDENTAL RELEASE

APG-Aberdeen Area is subject to the requirements of Section 112 (r). A Risk Management Plan has been submitted.

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PERMIT SHIELD

The APG-Aberdeen Area 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. 44 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.

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See Table IV-4 for additional Requirements.

- (2) No. 87 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The affected units are subject to the following requirements:

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

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- (5) ✓ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
- (6) ✓ Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;
- (7) ✓ Confection cookers where the products are edible and intended for human consumption;
- (8) ✓ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
- (9) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
- (10) ✓ 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;
- (11) ✓ 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;
- (12) Containers, reservoirs, or tanks used exclusively for:
- (a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;
- (b) No. 365 Storage of lubricating oils;
- (c) No. 394 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (d) No. 14 Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;

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- (13) ✓ 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;
- (14) ✓ 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;
- (15) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (16) ✓ Firing and testing of military weapons and explosives;
- (17) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (18) ✓ Laboratory fume hoods and vents;

For the following, attach additional pages as necessary:

- (19) 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. 1 Building 6004 – Four (4) Paint Spray Booths used for miscellaneous metal coating.

No. 1 Fire Safety Test Enclosure

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

No. 1 See Exempt Emission Unit List. (in the Table below)._____

Reference: Memorandum dated August 2, 1996 from John S. Seitz, Director of Office of Air Quality Planning and Standards (MD-10), Subject: Major Source Determination for Military Installations under the Air Toxics, New Source Review, and Title V Operating Permit Programs of the Clean Air Act.

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Emission Unit No.	MDE Registration Number	Emission Unit Description	Facility Description
26-2379-A01	025-4-0619	Fuel oil boiler	Auto Craft Shop
26-2401-A01	025-0081-4-0619	Fuel oil boiler	PX
26-2502-A01 & A02	12-5-0152	Natural gas/No.2 fuel oil-fired boilers	Kirk Army Health Clinic
26-2522-A01	12-4-0619	Fuel Oil Boiler, 1.054 MMBtu/hr	Youth Center
26-3245-A01	025-0081-5-0152	Natural gas/No. 2 fuel oil-fired boiler	NEC
26-3300-A01	12-5-0152	Natural gas-fired Boiler	Physical Fitness Center (DFMWR)
26-3326-A02	025-0081-5-0152	Natural gas-fired boiler	Recreation Center (DFMWR)
26-3330-A01 & A02	12-5-0152	Natural gas-fired boilers	Gym (DFMWR)
26-3400-A02	12-5-0152	Natural gas boiler	Commissary (DECA)
35-2514-A01 through A03	12-9-0152	UST	AAFES Gas Station
99-2379-A01	12-6-0202	Vehicle Refinishing PSB	Auto Craft Shop

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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.

1. Applicable Regulations:

- (A) COMAR 26.11.06.08 – Nuisance. An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”
- (B) COMAR 26.11.06.09 - Odors. “A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”
- (C) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
- (D) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. 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.

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SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

The Aberdeen Proving Ground (APG) is a military installation for the testing of military equipment, laboratory research, and training. APG is divided into two distinct areas: the northern Aberdeen Area and the southern Edgewood Area. This Part 70 permit application is for the Aberdeen Area of APG. The regulated activities which produce air emissions at the Aberdeen Area include space heating, process and NSPS boilers, emergency generators, stationary engines, paint spray booths, underground storage tanks, fire test laboratory and an atmospheric burner at Heat Engine Systems Altitude Test Facility (HESATF). The applicable primary SIC code is 9711.

2. FACILITY INVENTORY LIST

Emissions Unit	ARA Registration Number	Description	Date of Installation
Miscellaneous – Consolidated oil-fired	4-0619	Consolidated Oil-fired boilers rated between 1-10 million Btu per hour heat input.	Various
0445-A01	4-0707	One (1) Burnham No. 2 fuel oil fired boiler rated at 1.116 million Btu per hour heat input	2013
0394-A01	4-0708	One (1) Smith No. 2 fuel oil fired boiler rated at 2.718 million Btu per hour heat input	2010
0339-A01	4-0710	One (1) Peerless No. 2 fuel oil fired boiler rated at 2.06 million Btu per hour heat input	2009
0507-A05	4-0717	One (1) Cleaver Brooks No. 2 fuel oil fired boiler rated at 6.70 million Btu per hour heat input	2016
0507-A04	4-0104	One (1) Cleaver Brooks No. 2 fuel oil fired boiler rated at 8.164 million Btu per hour heat input	1997
0642-A01	4-0689	One (1) Burnham No. 2 fuel oil fired boiler rated at 1.90 million Btu per hour heat input	2009

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Emissions Unit	ARA Registration Number	Description	Date of Installation
0643-A01	4-0721	One (1) Cleaver Brooks No. 2 fuel oil fired boiler rated at 1.143 million Btu per hour heat input	2016
0688-A01	4-0720	One (1) Burnham No. 2 fuel oil fired boiler rated at 1.713 million Btu per hour heat input	2016
0670-A01	4-0719	One (1) Bryan No. 2 fuel oil fired boiler rated at 2.088 million Btu per hour heat input	2016
26-0449-A01	4-0722	One (1) HB Smith Cast Iron Fuel oil fired boiler, rated at 2.088-MMBtu/hr. located Bldg. A0449	2016
906C-A01	4-0724	One (1) Weil McLain fuel oil fired boiler, each rated at 1.23-MMBtu/hr.	2018
Miscellaneous – Consolidated natural gas	5-0152	Consolidated natural gas-fired boilers rated between 1-10 million Btu per hour heat input.	Various
26-6007-C2CNT West-A01 thru A04	5-0298	Four (4) Bryan natural gas/No. 2 fuel oil fired boilers each rated at 3.5 million Btu per hour heat input	2009
26-6006-GMS Tower-A01 thru A03	5-0299	Three (3) Bryan natural gas/No. 2 fuel oil fired boilers each rated at 3.5 million Btu per hour heat input and equipped with low NO _x burners	2009
26-6002-HQ Building-A01 thru A05	5-0300	Five (5) Bryan natural gas/No. 2 fuel oil fired boilers each rated at 3.5 million Btu per hour heat input	2009
26-6003-GMS Lab-A01 thru A03	5-0301	Three (3) Bryan natural gas/No. 2 fuel oil fired boilers each rated at 3.5 million Btu per hour heat input	2009
5100-A01 & A02	5-0309 & 5-0310	Two (2) natural gas fired boilers each rated at 3.00 million Btu per hour heat input	2010
26-0525-A02	5-0315	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 8.17 million Btu per hour heat input	2010
26-3660-A01	5-0318	One (1) natural gas/No. 2 fuel oil fired boiler rated at 1.83-MMBtu/hr.	2019

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Emissions Unit	ARA Registration Number	Description	Date of Installation
2202-A01 & A02	5-0322	Two (2) Harsco Kelly natural gas fired boilers each rated at 2.00 million Btu per hour heat input	2010
26-0525-A03	5-0334	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 8.37 million Btu per hour heat input	1985
26-0525-A01	5-0335	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 8.37 million Btu per hour heat input	1985
26-04119-A03	5-0336	One (1) natural gas fired boiler rated at 8.17-MMBtu/hr.	2014
26-0459-A02	5-0337	One (1) Cleaver Brooks, Model CB200-50-30-HW natural gas-fired boiler rated at 2.095 million Btu per hour heat input located at building 0459	2011
26-367-A01	5-0352	Camus DR-1000 Propane fired boiler (Bldg. 367-ARL/AMSSA Compound). General Permit issued May 6, 2014	2014
26-2485-A01	5-0367	One (1) Harsco Patterson-Kelly natural gas fired boiler rated at 2.0-MMBtu/hr.	2016
3660-A01	5-0371	One (1) RBI Futera Fusion natural gas fired boiler rated at 2.50 million Btu per hour heat input	2016
0383A-A01 & -A02	5-0376	Two (2) Cleaver Brooks natural gas fired boilers, each rated at 3.347-MMBtu/hr.	2017
5046-A01 thru A03	5-0377	Three (3) Camus natural gas fired boilers, each rated at 1.50-MMBtu/hr.	2018
2522-A01	5-0378	GP- small fuel burning - Bldg. 2522	2019
26-0400-A02 & -A03	5-0384	Two (2) Cleaver Brooks natural gas fired boilers, each rated at 1.69-MMBtu/hr.	2020
NSPS Boilers			
26-0345-A01 & A02	5-0079 & 5-0080	Two (2) Cleaver Brooks natural gas/No. 2 fuel oil fired boilers, each rated at 64 million Btu per hour heat input	1994
26-0345-A03	5-0081	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 23.4 million Btu per hour heat input	1996

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Emissions Unit	ARA Registration Number	Description	Date of Installation
26-4600-A06 & A08	5-0085 & 5-0087	Two (2) Cleaver Brooks natural gas/No. 2 fuel oil fired boilers each rated at 21 million Btu per hour heat input.	1995
26-5014-A01 & A02	5-0164 & 5-0165	Two (2) H.B. Smith natural gas/No. 2 fuel oil fired boilers each rated at 13.5 million Btu per hour heat input	1991
26-4600-A09	5-0370	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boilers each rated at 20.13 million Btu per hour heat input.	2016
Process Boilers			
26-4219-A02	4-0522N	One (1) Clever Brooks oil-fired boiler rated at 8.4 million BTU per hour.	1994
26-4219-A03	5-0308	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 8.165 million Btu per hour heat input	2009
26-04312-A01 & A02	5-0364	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 4.18 million Btu per hour heat input	2015
26-3062-A02	5-0378	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 12.5 million Btu per hour heat input	2009
26-4404-A04	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 6.70-MMBtu/hr.	1999
26-04404-A06		One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.17-MMBtu/hr.	2012
Spray Booth			
07-0525-A04 & A06	6-0162 & 6-0159	Two (2) custom made cross draft paint spray booths	1960
Generators			
03-0328-A01	9-0229	One (1) emergency generator rated at 1072 bhp	1997
03-0394-A01 & A02	9-0227 & 9-0228	Two (2) emergency generators each rated at 1341 bhp	1997
03-4600-A04 & A05	9-0276 & 9-0277	Two (2) emergency generators each rated at 1877 bhp at ARL Materials Research Lab	1996
03-0394-A03 thru A07	9-0386 thru 9-0390	Five (5) Cummins emergency generator sets each rated at 750 bhp (500-kW) located in Bldg. 394-ARL Compound.	2008

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Emissions Unit	ARA Registration Number	Description	Date of Installation
26-6003-GMS Lab-A04	9-0393	One (1) 2500 kW (3778 bhp) Cummins diesel emergency generator set (Tier I certified) to be located at C4ISR-Research and Development – GMS Lab Building.	2009
26-6007-C2CNT West-A05	9-0394	One (1) 1500 kW (2200 bhp) Cummins diesel emergency generator set (Tier II certified) to be located at C4ISR-Research and Development – C2CNT West Building	2008
26-6006-GMS Tower-A04	9-0395	One (1) 1500 kW (2200 bhp) Cummins diesel emergency generator set (Tier II certified) to be located at C4ISR-Research and Development – GMS Tower Building	2008
26-6002-HQ Building-A06	9-0396	One (1) 2000 kW (2922 bhp) Cummins diesel emergency generator set (Tier II certified) to be located at C4ISR-Research and Development – HQ Building 2 and serves both HQ Building 1 & HQ Building 2.	2008
0120-A01	9-0408	One (1) Cummins emergency generator rated at 2922 bhp	2012
0316-A01	9-0409	One (1) Cummins emergency generator rated at 2000-kW located at Bldg. 316	2012
3090-JSEC-A01	9-0410	One (1) emergency generator rated at 2923 bhp	2010
6009-C2CNT East SEC	9-0412	One (1) emergency generator rated at 2200 bhp	2010
6010-C2CNT East	9-0411	Two (2) emergency generators each rated at 2919 bhp	2019
0328-A02	09-0414	One (1) emergency generator rated at 761 bhp	2006
0328-A03	9-0418	One (1) Detroit emergency generator rated at 804 bhp	2006
0311-A01	9-0419	One (1) emergency generator rated at 447 kW (600 brake horsepower)	1986
0120-A02	9-0433	One (1) Cummins emergency generator rated at 2922 bhp	2012
0120-A03	9-0434	One (1) Cummins emergency generator rated at 2922 bhp	2012

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Emissions Unit	ARA Registration Number	Description	Date of Installation
3147-A01	9-0491	One (1) Katolight diesel fired emergency generator rated at 500-kW (670-bhp)	2015
2202-A01	9-0499	One (1) emergency generator rated at 755 bhp	2015
3660-A01	9-0500	One (1) Kohler diesel fired emergency generator rated at 643-bhp	1995
0120-A04	9-0503	One (1) Cummins emergency generator rated at 2922 bhp	2017
0120-A05	9-0504	One (1) Cummins emergency generator rated at 2922 bhp	2016
5016-A01	9-0510	One (1) Cummins emergency generator rated at 2346 bhp	2017
5046-A01	9-0509	One (1) Cummins emergency generator rated at 617 bhp	2017
3511-A01 & A02	9-0539 & 9-540	Two (2) MTU 16V4000G84F diesel fired emergency generator sets, each rated at 2970-hp. PTC issued 2/27/2024	2024
436-A01	9-0548	One (1) MTU 8V1600DS400 diesel fired emergency generator set rated at 460-kW, Bldg. 463 (Tier III). GP issued 4/30/2025	2025
Non-Emergency Generators			
BSS-01	9-0435	One (1) Detroit non-emergency generator rated at 600 bhp	2001
LWE-01 through LWE-05	9-0436	Five (5) Detroit non-emergency generators each rated at 550 bhp	2006
UTF-01	9-0437	One (1) Cummins non-emergency generator rated at 500 bhp	1993
Miscellaneous			
26-4029-A03 & A05	9-0152	Two (2) 20,000-gallon underground storage tanks equipped with Stage I vapor recovery systems	1993
07-00P17-A01	9-0212	One (1) Fire Safety Test Enclosure facility	September 1997

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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.

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

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- d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15, but only after the Department takes final action to revise the permit.
- e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

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

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

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

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

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

- a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:
 - (1) The change is not a Title I modification;
 - (2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions

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unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;

- (3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (4) The change does not violate an applicable requirement of the Clean Air Act;
 - (5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;
 - (6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;
 - (7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and
 - (8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.
- b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:
- (1) A description of the proposed change;
 - (2) The date on which the change is proposed to be made;
 - (3) Any change in emissions resulting from the change, including the pollutants emitted;
 - (4) Any new applicable requirement of the Clean Air Act; and
 - (5) Any permit term or condition that would no longer apply.

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- c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.
- d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.
- e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.
- f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.
- g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.
- h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

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

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

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

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

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

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

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

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

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

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

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

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

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

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

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

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

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- c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and
- d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

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

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

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

24. COMPLIANCE REQUIREMENTS

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

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

- a. Enforcement action,

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- b. Permit revocation or revision,
- c. Denial of the renewal of a Part 70 permit, or
- d. Any combination of these actions.

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

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

25. CREDIBLE EVIDENCE

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

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

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

27. CIRCUMVENTION

[COMAR 26.11.01.06]

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

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28. PERMIT SHIELD

[COMAR 26.11.03.23]

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

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

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

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

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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]

The Permittee shall submit risk management plans by the date specified in 40 CFR 68.150.

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The Permittee shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

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.

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10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

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

The certification shall be in the following form:

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

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

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

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

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- f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

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

These records and support information shall include:

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

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

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

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

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

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15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

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

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

16. ACID RAIN PERMIT

Not applicable

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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)]**

INDEX TO TABLE IV		
Table	Equipment	Description
Table IV-1	94 Boilers – see list at the end of Table IV-1	Space Heating Boilers < 10 MMBtu/hr. used as space heaters
Table IV-2	7 Boilers – see list at the end of Table IV-2	Process Boilers
Table IV-3	8 Boilers – see list at the end of Table IV-3	NSPS Boilers
Table IV-4	Site maintains list of boilers subject to JJJJJJ	#2 Fuel oil-fired boilers and dual fired boilers – subject to 40 CFR Part 63, Subpart JJJJJJ.
Table IV-5	41 Generators/Engines – see list at the end of Table IV-5	Emergency and Non-Emergency Generators
Table IV-5a	26 Generators – see list at the end of Table IV-5a	NSPS Generators
Table IV-5b	17 MACT Generators/Engines – See list at the end of Table IV-5b.	Generators/Engines subject to NESHAP Subpart ZZZZ
Table IV-6	07-0525-A04 & A06	Paint Spry Booth Cross Draft Auto and equipment refinishing booth

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INDEX TO TABLE IV		
Table	Equipment	Description
Table IV-7	26-4029-A03 & A05	Underground storage tanks
Table IV-8	Facility-wide	VOC emissions facility wide

Table IV – 1	
1.0	<u>Emissions Unit Number(s): Space Heating Boilers</u> See Table Below: Boilers less than 10 million Btu per hour heat input and used as space heaters.
1.1	<u>Applicable Standards/Limits:</u> A. <u>Control of Visible Emissions</u> COMAR 26.11.09.05A – 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) <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.” <u>Condition B applies to No. 2 oil-fired boilers only</u> B. <u>Control of Sulfur Oxide Emissions</u> COMAR 26.11.09.07A(2) - 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.” C. <u>Control of Nitrogen Oxide Emissions</u> COMAR 26.11.09.08B(5) - Operator Training.

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Table IV – 1	
	(a) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. (b) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.” COMAR 26.11.09.08F - <u>Requirements for Space Heaters.</u> “(1) A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall: (a) Submit to the Department a list of each affected installation on the premises and the types of fuel used in each installation; (b) Develop an operating and maintenance plan to minimize NO_x emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience; (c) Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department; (d) Require installation operators to attend in-State operator training programs once every 3 years on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (e) Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request. (2) A person who owns or operates an installation that no longer qualifies as a space heater shall inform the Department not later than 60 days after the date when the fuel-burning equipment did not qualify and shall meet the applicable fuel-burning equipment RACT requirement in this regulation.” D. <u>Operational Limits</u> [Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued October 2009) (1) The boilers equipped with low NO_x burners not to exceed 30ppm shall only burn natural gas or No.2 fuel oil. (2) The boilers shall not burn any No.2 fuel oil with sulfur content greater than 0.3% by weight. (3) For the purpose of maintaining synthetic minor status for the C4ISR-Research and Development Facility, the combined NO_x emissions from the all fuel burning equipment (boilers and generators) at the facility must be less than 25 tons in any rolling 12-month period. (4) The total fuel oil and natural gas usage for the fifteen (15) boilers shall not exceed the following limits unless the Permittee can demonstrate, to the

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Table IV – 1				
satisfaction of the Department, that the NO _x emissions for the C4ISR-Research and Development Facility are less than 25 tons in any rolling 12-month period at a higher usage rate:				
MDE PTC No.	Location	Proposed Limit		Quantity and Size
		Natural gas (ft ³ /yr)	No. 2 fuel oil (gallons)	
5-0298	C2CNT West Building	82,355,000	160,000	Four (4) 3.5 MMBtu/hr. boilers
5-0299	GMS Tower Building	61,765,000	120,000	Three (3) 3.5 MMBtu/hr. boilers
5-0300	HQ Building 1	102,942,000	200,000	Five (5) 3.5 MMBtu/hr. boilers
5-0301	GMS Lab Building	61,765,000	120,000	Three (3) 3.5 MMBtu/hr. boilers
1.2	<u>Testing Requirements:</u> A. <u>Control of Visible Emissions</u> See Monitoring Requirements. B. <u>Control of Sulfur Oxide Emissions</u> See Monitoring Requirements. C. <u>Control of Nitrogen Oxides Emissions</u> See Monitoring Requirements. D. <u>Operational Limits</u> See Monitoring Requirements.			
1.3	<u>Monitoring Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions, in accordance with the operation and maintenance manual. [Reference: COMAR 26.11.03.06C] B. <u>Control of Sulfur Oxide Emissions</u> The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitations on the sulfur content in fuel oil. [Reference: COMAR 26.11.03.06C].			

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Table IV – 1	
	<u>C. Control of Nitrogen Oxide Emissions</u> The Permittee shall develop and maintain an operating and maintenance plan to minimize NO_x emissions. [Reference: COMAR 26.11.09.08F(1)(b)]. <u>D. Operational Limits</u> The Permittee shall calculate the NO_x emissions for the previous calendar month and a total for the previous 12 consecutive months for the C4ISR-R&D facility. The calculations shall be updated monthly within 30 days of each following month. (Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued July 16, 2009, Part E, Condition 2)
1.4	<u>Record Keeping Requirements:</u> <u>NOTE:</u> All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06C(5)(g)] <u>A. Control Visible Emissions</u> The Permittee shall maintain operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. [Reference: COMAR 26.11.03.06C]. <u>B. Control of Sulfur Oxide Emissions</u> The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with this regulation. [Reference: COMAR 26.11.09.07C]. <u>C. Control of Nitrogen Oxide Emissions</u> The Permittee shall maintain: 1) Records of maintenance performed that relates to combustion performance in keeping with the requirements of an operations and maintenance plan. [Reference: COMAR 26.11.09.08F(1)(c)]. 2) Record of training program attendance for each operator. [Reference: COMAR 26.11.09.08F(1)(e)]. 3) An operations manual and preventive maintenance plan. [Reference: COMAR 26.11.09.08F(1)(b)]. 4) Records of fuel use that demonstrate that the boiler meets the definition of a space heater. [Reference: COMAR 26.11.09.08K(3) and COMAR 26.11.03.06C]. <u>D. Operational Limits</u> The Permittee shall maintain on site and make available to the Department upon request, records of the monthly and rolling 12-month total natural gas in million cubic feet and the No. 2 fuel oil usage in gallons. (Reference: MDE

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	Reg. No. 025-0081-5-0298 thru 5-0301 issued July 16, 2009, Part E, Condition 1) The Permittee shall keep records of the NO_x emissions for each calendar month and update them monthly with 30 days of each following month. (Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued July 16, 2009, Part E, Condition 2)
1.5	<u>Reporting Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations". B. <u>Control of Sulfur Oxide Emissions</u> The Permittee shall report fuel supplier certifications to the Department upon request. [Reference: COMAR 26.11.09.07C] C. <u>Control of Nitrogen Oxide Emissions</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)] D. <u>Operational Limits</u> The Permittee shall report fuel consumption to the Department upon request. The Permittee shall submit the records to the Department as part of the semi-annual report. (Reference: COMAR 26.11.03.06C)

"A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above."

SPACE HEATER BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
0030-A01 & 0030-A02	4-0619	Two (2) No. 2 fuel oil fired boilers each rated at 2.1 million Btu per hour heat input	2012
0045-A01		One (1) No. 2 fuel oil fired boiler rated at 1.160 million Btu per hour heat input	2013
0269C-A01		One (1) No. 2 fuel oil fired boiler rated at 2.718 million Btu per hour heat input	2016
0280B-A01		One (1) No. 2 fuel oil fired boiler rated at 1.458 million Btu per hour heat input	2016

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SPACE HEATER BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
0322-A01		One (1) No. 2 fuel oil fired boiler rated at 2.07 million Btu per hour heat input	2013
0384-A01		One (1) No. 2 fuel oil fired boiler rated at 2.718 million Btu per hour heat input	2016
0402-A03		One (1) No. 2 fuel oil fired boiler rated at 3.200 million Btu per hour heat input	1985
0439-A01		One (1) No. 2 fuel oil fired boiler rated at 1.054 million Btu per hour heat input	
0456-A01		One (1) No. 2 fuel oil fired boiler rated 1.400 million Btu per hour heat input	2004
26-0699A-A01		One (1) No. 2 fuel oil fired boiler rated at 4.2 million Btu per hour heat input	2016
26-0700-A01		One (1) No. 2 fuel oil fired boiler rated at 3.347 million Btu per hour heat input	1987
26-0702-A01		One (1) No. 2 fuel oil fired boiler rated at 1.25 million Btu per hour heat input.	2002
0733A-A01		One (1) No. 2 fuel oil fired boiler rated at 1.160 million Btu per hour heat input.	2013
0740B-A01		One (1) No. 2 fuel oil fired boiler rated at 1.160 million Btu per hour heat input.	2006
0740C-A01		One (1) No. 2 fuel oil fired boiler rated at 1.987 million Btu per hour heat input.	2010
26-0860-A01	4-0619	One (1) No. 2 fuel oil fired boiler rated at 1.289 million Btu per hour heat input	2003
26-1064-A01		One (1) No. 2 fuel oil fired boiler rated at 3.36 million Btu per hour heat input	2009
26-1064-A02		One (1) No. 2 fuel oil fired boiler rated at 3.36 million Btu per hour heat input	2009
26-1100F-A01		One (1) No. 2 fuel oil fired boiler rated at 1.987 million Btu per hour heat input	1996
1134-A01		One (1) No. 2 fuel oil fired boiler rated at 1.340 million Btu per hour heat input.	2013
26-2184-A01		One (1) No. 2 fuel oil fired boiler rated at 1.116 million Btu per hour heat input	1983
26-2207-A03		One (1) No. 2 fuel oil fired boiler rated at 2.37 million Btu per hour heat input	1999
0383A-A01 & A02	5-0376	Two (2) Cleaver Brooks natural gas fired boilers each rated at 3.347 million Btu per hour hear input	2017
26-2312-A02	4-0619	One (1) No. 2 fuel oil fired boiler rated at 2.10 million Btu per hour heat input	2009
26-2377-A01		One (1) No. 2 fuel oil fired boiler rated at 2.37 million Btu per hour heat input	1987
26-2377-A02		One (1) No. 2 fuel oil fired boiler rated at 1.26 million Btu per hour heat input	2009
3070-A01		One (1) No. 2 fuel oil fired boiler rated at 8.165 million Btu per hour heat input	2004

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26-3011-A01		One (1) No. 2 fuel oil fired boiler rated at 1.110 million Btu per hour heat input	2005
26-4725-A01		One (1) No. 2 fuel oil fired boiler rated at 1.281 million Btu per hour heat input	
26-4728-A02		One (1) natural gas/No. 2 fuel oil fired boiler rated at 2.7 million Btu per hour heat input	2016
26-2485-A01	5-0367	One (1) natural gas-fired boiler rated at 2.00 million Btu per hour heat input	2017
26-5046-A01 thru A03	5-0377	Three (3) natural gas-fired boilers rated at 1.50 million Btu per hour heat input	2018
0445-A01	4-0707	One (1) No. 2 fuel oil fired boiler rated at 1.116 million Btu per hour heat input	2013
0394-A01	4-0708	One (1) No. 2 fuel oil fired boiler rated at 2.718 million Btu per hour heat input	2010
0339-A01	4-0710	One (1) No. 2 fuel oil fired boiler rated at 2.06 million Btu per hour heat input	2009
0507-A05	4-0717	One (1) No. 2 fuel oil fired boiler rated at 6.70 million Btu per hour heat input	2016
0507-A04	4-0104	One (1) No. 2 fuel oil fired boiler rated at 8.164 million Btu per hour heat input	1997
0642-A01	4-0689	One (1) No. 2 fuel oil fired boiler rated at 1.900 million Btu per hour heat input	2009
0643-A01	4-0721	One (1) No. 2 fuel oil fired boiler rated at 1.143 million Btu per hour heat input	2016
0644-A01	4-0619	One (1) No. 2 fuel oil fired boiler rated at 1.160 million Btu per hour heat input	2006
0688-A01	4-0720	One (1) No. 2 fuel oil fired boiler rated at 1.73 million Btu per hour heat input	2016
0670-A01	4-0719	One (1) No. 2 fuel oil fired boiler rated at 2.088 million Btu per hour heat input	2016
5116-A01	4-0619	One (1) No. 2 fuel oil fired boiler rated at 1.680 million Btu per hour heat input	2011
26-0120-A01 & A02	5-0152	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 2.51 million Btu per hour heat input	2008
26-0402-A01 & A02	5-0152	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 3.27 million Btu per hour heat input	1996
26-0436-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 2.5 million Btu per hour heat input	2016
26-0436 A02	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 2.200 million Btu per hour heat input	1995
26-0449-A01	4-0722	One (1) No. 2 fuel oil fired boiler rated at 2.088 million Btu per hour heat input	2016
26-0455-A01 & A02	5-0152	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 8.37 million Btu per hour heat input	1990
26-0459-A02	5-0337	One (1) natural gas fired boiler rated at 2.10 million Btu per hour heat input	2011

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Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-0525-A01 & A03	5-0335 & 5-0334	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 8.37 million Btu per hour heat input	1985
26-0525-A02	5-0315	One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.17 million Btu per hour heat input	2010
26-2312-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 5.100 million Btu per hour heat input and equipped with low NO _x burners.	1996
26-2352-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 6.28 million Btu per hour heat input	1998
906C-A01	4-0724	One (1) Weil-McLain fuel oil fired boiler rated at 1.23 million Btu per hour heat input	2018
26-3062-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 6.12 million Btu per hour heat input	2011
26-4304-A02	5-0152	One (1) natural gas-fired boiler rated at 3.0 million Btu per hour heat input	2015
26-4727-A01	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 4.0 million Btu per hour heat input	2016
26-5014-A03	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 7.500 million Btu per hour heat input	1991
26-6007-C2CNT West-A01 through A04	5-0298	Four (4) natural gas/No. 2 fuel oil fired boilers each rated at 3.500 million Btu per hour heat input	2009
26-6006-GMS Tower-A01 thru A03	5-0299	Three (3) natural gas/No. 2 fuel oil fired boilers each rated at 3.500 million Btu per hour heat input and equipped with low NO _x burners	2009
26-6002-HQ Building-A01 thru A05	5-0300	Five (5) natural gas/No. 2 fuel oil fired boilers each rated at 3.500 million Btu per hour heat input	2009
26-6003-GMS Lab-A01 thru A03	5-0301	Three (3) natural gas/No. 2 fuel oil fired boilers each rated at 3.500 million Btu per hour heat input	2009
2202-A01 & 2202-A02	5-0322	Two (2) natural gas fired boilers each rated at 2.000 million Btu per hour heat input	2010
3144-A01	5-0152	One (1) natural gas fired boiler rated at 4.81 million Btu per hour heat input	2012
26-3660-A01	5-0371	One (1) natural gas fired boiler rated at 2.50 million Btu per hour heat input	2016
26-4119-A02	5-0152	One (1) Cleaver Brooks dual-fired boiler rated at 8.165 million Btu per hour heat input	1994
26-04119-A03	5-0336	One (1) natural gas fired boiler rated at 8.17 million Btu per hour heat input	2014
5100-A01 & 5100-A02	5-0309 & 5-0310	Two (2) natural gas fired boilers each rated at 3.000 million Btu per hour heat input	2010
26-367-A01	5-0352	Camus DR-1000 Propane fired boiler (Bldg. 367-ARL/AMSSA Compound) General Permit issued May 6, 2014	2014

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SPACE HEATER BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-0400-A02 & A03	5-0384	Two (2) natural gas fired boilers each rated at 1.69 million Btu per hour heat input	2020

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2.0	<u>Emissions Unit Number(s) – Process Boilers</u> See Process Boilers Table Below
2.1	<u>Applicable Standards/Limits:</u> A. <u>Control of Visible Emissions</u> COMAR 26.11.09.05A – 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) <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.” B. <u>Control of Sulfur Oxide Emissions</u> COMAR 26.11.09.07A(2) - 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.” C. <u>Control of Nitrogen Oxide Emissions</u> COMAR 26.11.09.08B(5) - Operator Training. (a) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

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	(b) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.” COMAR 26.11.09.08E. - <u>Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less.</u> “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.”
2.2	<u>Testing Requirements:</u> A. <u>Control of Visible Emissions</u> See Monitoring Requirements. B. <u>Control of Sulfur Oxide Emissions</u> See Monitoring Requirements C. <u>Control of Nitrogen Oxide Emissions</u> The Permittee shall perform a combustion analysis once a year. [Reference: COMAR 26.11.09.08E(2)]
2.3	<u>Monitoring Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall: (1) Properly operate and maintain the boilers in a manner to prevent visible emissions; and (2) Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for each 168 hours that the boiler burns oil or at a minimum of once per year.

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	The Permittee shall perform the following, if emissions are visible: (1) Inspect combustion control system and boiler operations, (2) Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; (3) Document in writing the results of the inspections, adjustments and/or repairs to the boiler; and (4) After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. [Reference: COMAR 26.11.03.06C]. B. <u>Control of Sulfur Oxide Emissions</u> The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. [Reference: COMAR 26.11.03.06C]. C. <u>Control of Nitrogen Oxide Emissions</u> The Permittee shall optimize combustion based on the annual combustion analysis. [Reference: COMAR 26.11.09.08E(2)]
2.4	<u>Record Keeping Requirements:</u> NOTE: All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06.C(5)(g)]. A. <u>Control of Visible Emissions</u> The Permittee shall: (1) Maintain an operation manual and prevention maintenance plan on site; (2) Maintain a record of the maintenance performed that relates to combustion performance; (3) Maintain a log of visible emissions observations performed and make it available to the Department's representative upon request; (4) Maintain a record of the hours that No. 2 fuel oil is burned. [Reference: COMAR 26.11.03.06C]. B. <u>Control of Sulfur Oxide Emissions</u> The Permittee shall maintain records of fuel supplier's certification and shall make records available to the Department upon request. [Reference: COMAR 26.11.03.06C]. C. <u>Control of Nitrogen Oxide Emissions</u>

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	The Permittee shall maintain: (1) Records of the results of the annual combustion analysis on site. [Reference: COMAR 26.11.09.08E(5)]. (2) Record of combustion optimization training program attendance for each operator at the site for at least five years and make available to the Department upon request [Reference: COMAR 26.11.09.08E(5)].
2.5	<u>Reporting Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations". B. <u>Control of Sulfur Oxide Emissions</u> The Permittee shall report fuel supplier certification to the Department upon request [Reference: COMAR 26.11.09.07C]. C. <u>Control of Nitrogen Oxide Emissions</u> The Permittee shall submit: (1) The results of combustion analysis to the department and the EPA upon request. [Reference: COMAR 26.11.09.08E(3)] (2) A record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08E(5)].

"A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above."

PROCESS BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-03062-A02	5-0167	One (1) natural gas/No. 2 fuel oil fired boiler rated at 12.2 million Btu per hour heat input	2009
26-4219-A02	4-0522N	One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.37 million Btu per hour heat input	1994
26-4219-A03	5-0308	One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.165 million Btu per hour heat input	2009
26-04312-A01 & A02	5-0364	Two (2) natural gas/No. 2 fuel oil fired boilers each rated at 4.18 million Btu per hour heat input	2015
26-04404-A04	5-0152	One (1) natural gas/No. 2 fuel oil fired boiler rated at 6.695 million Btu per hour heat input	1999
4404-A06		One (1) natural gas/No. 2 fuel oil fired boiler rated at 8.165million Btu per hour heat input	2012

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3.0	<u>Emissions Unit Number(s) – NSPS Boilers</u> See NSPS Boilers Table Below
3.1	<u>Applicable Standards/Limits:</u> A. <u>Control of Visible Emissions</u> COMAR 26.11.09.05A – 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) <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.” The Federal New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 million Btu/hour but greater than 10 million Btu/hour for which construction began after <u>June 9, 1989</u> , 40 CFR 60, Subpart Dc , which contains the following: §60.43c – “(c) On and after the date on which the initial performance test is completed or required to be completed under Sec. 60.8 of this part, 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 million Btu/hr.) 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. (d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.” <i><u>Note:</u> Compliance with the “No Visible Emissions” requirement of COMAR 26.11.09.05A(2) will be used to show compliance with this NSPS standard.</i>

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	B. <u>Control of Sulfur Oxide Emissions</u> COMAR 26.11.09.07A(2) - <u>Sulfur Content Limitations for Fuel.</u> “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.” <i>The Federal New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 million Btu/hour but greater than 10 million Btu/hour for which construction began after <u>June 9, 1989</u>, 40 CFR 60, Subpart Dc, which contains the following:</i> §60.42c – <u>Standard for sulfur dioxide</u> “(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8 of this part, 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./million Btu) heat input; or 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 percent 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), or (3) 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.” <i>Note: The monitoring, record keeping, and reporting requirements under NSPS Subpart Dc will be used to demonstrate compliance with COMAR 26.11.09.07A and the NSPS sulfur in fuel standard.</i> C. <u>Control of Nitrogen Oxide Emissions</u> COMAR 26.11.09.08B(5) - <u>Operator Training.</u>

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	(1) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. (2) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.” COMAR 26.11.09.08E. - <u>Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less.</u> “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.”
3.2	<u>Testing Requirements:</u> A. <u>Control of Visible Emissions</u> See Monitoring Requirements. B. <u>Control of Sulfur Oxide Emissions</u> <u>§60.44c(h) - Compliance and performance test methods and procedures for sulfur dioxide.</u> “For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f)(1), (2), or (3), as applicable.” C. <u>Control of Nitrogen Oxide Emissions</u> The Permittee shall perform a combustion analysis once a year. [Reference: COMAR 26.11.09.08E(2)]

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3.3	<u>Monitoring Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall: (1) Properly operate and maintain the boilers in a manner to prevent visible emissions; and (2) Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation 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 emissions are visible: (1) Inspect combustion control system and boiler operations, (2) Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; (3) Document in writing the results of the inspections, adjustments and/or repairs to the boiler; and (4) After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. [Reference: COMAR 26.11.03.06C]. B. <u>Control of Sulfur Oxide Emissions</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 compliance with the SO₂ standards based on fuel supplier certification, as described under §60.48c(f)(1), (2) or (3), as applicable.” C. <u>Control of Nitrogen Oxide Emissions</u> The Permittee shall optimize combustion based on the annual combustion analysis. [Reference: COMAR 26.11.09.08E(2)]
3.4	<u>Record Keeping Requirements:</u> <u>NOTE:</u> All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06.C (5)(g)]. A. <u>Control of Visible Emissions</u> The Permittee shall: (1) Maintain an operation manual and prevention maintenance plan on site;

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(2) Maintain a record of the maintenance performed that relates to combustion performance; (3) Maintain a log of visible emissions observations performed and make it available to the Department's representative upon request; (4) Maintain a record of the hours that No. 2 fuel oil is burned. [Reference: COMAR 26.11.03.06C]. B. <u>Control of Sulfur Oxide Emissions</u> §60.48c – <u>Reporting and record keeping requirements.</u> “(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include: (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility. (2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c. (3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.” “(c) The owner or operator of each coal-fired, oil-fired, or wood-fired affected facility subject to the opacity limits under §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period.” “(e)(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2) or (3) of this section as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.” “(f) Fuel supplier certification shall include the following information: (1) For distillate oil: (i) The name of the oil supplier; and (ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c.” “(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

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	maintain records of the amount of each fuel combusted during each operating day. (2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month. (3) As an alternative to meeting the requirements of paragraph (g)(1) of this Sec. ion, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in Sec. 60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.” “(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.” C. <u>Control of Nitrogen Oxide Emissions</u> The Permittee shall maintain: (1) Records of the results of the annual combustion analysis on site. [Reference: COMAR 26.11.09.08E(5)]. (2) Record of training program attendance for each operator at the site. [Reference: COMAR 26.11.09.08E(5)].
3.5	<u>Reporting Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations”. B. <u>Control of Sulfur Oxide Emissions</u> <u>§60.48c – Reporting and record keeping requirements.</u>

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	“(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.” The Permittee shall report fuel supplier certification to the Department upon request [Reference: COMAR 26.11.09.07C]. C. <u>Control of Nitrogen Oxide Emissions</u> The Permittee shall submit: (1) The results of combustion analysis to the department and the EPA upon request. [Reference: COMAR 26.11.09.08E(3)] (2) A record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08E(5)].

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

NSPS Process BOILERS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
26-0345-A01 & A02	5-0079 & 5-0080	Two (2) Cleaver Brooks natural gas/No. 2 fuel oil fired boilers each rated at 63.80 million Btu per hour heat input	1994
26-0345-A03	5-0081	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 23.4 million Btu per hour heat input	1996
26-4600-A06	5-0085	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 21.0 million Btu per hour heat input	1995
26-4600-A09	5-0370	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 20.13 million Btu per hour heat input	2016
26-4600- A08	5-0087	One (1) Cleaver Brooks natural gas/No. 2 fuel oil fired boiler rated at 21.0 million Btu per hour heat input	1995
26-5014-A01 & A02	5-0164 & 5-0165	Two (2) H.B. Smith natural gas/No. 2 fuel oil fired boilers each rated at 13.50 million Btu per hour heat input	1991

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4.0	<u>Emissions Unit Number(s): Boilers Cont'd</u> All Oil-fired boilers: Space heaters, Process boilers & NSPS boilers.
4.1	<u>Applicable Standards/Limits:</u> <u>Control of HAPs:</u> 40 CFR Part 63, Subpart JJJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources §63.11193 - <u>Am I subject to this subpart?</u> You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in §63.2, except as specified in §63.11195. §63.11194 - <u>What is the affected source of this subpart?</u> “(a) This subpart applies to each new, reconstructed, or existing affected source as defined in paragraphs (a)(1) and (2) of this section. (1) The affected source of this subpart is the collection of all existing industrial, commercial, and institutional boilers within a subcategory, as listed in §63.11200 and defined in §63.11237, located at an area source. (2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler within a subcategory, as listed in §63.11200 and as defined in §63.11237, located at an area source. (b) An affected source is an existing source if you commenced construction or reconstruction of the affected source on or before June 4, 2010. (c) An affected source is a new source if you commenced construction of the affected source after June 4, 2010, and the boiler meets the applicability criteria at the time you commence construction.” §63.11196 - <u>What are my compliance dates?</u> (a) If you own or operate an existing affected boiler, you must achieve compliance with the applicable provisions in this subpart as specified in paragraphs (a)(1) through (3) of this section.

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(1) If the existing affected boiler is subject to a work practice or management practice standard of a tune-up, you must achieve compliance with the work practice or management practice standard no later than March 21, 2014. (2) If the existing affected boiler is subject to emission limits, you must achieve compliance with the emission limits no later than March 21, 2014. (3) If the existing affected boiler is subject to the energy assessment requirement, you must achieve compliance with the energy assessment requirement no later than March 21, 2014. (c) If you start up a new affected source after May 20, 2011, you must achieve compliance with the provisions of this subpart upon startup of your affected source. §63.11201 - What standards must I meet? (a) You must comply with each emission limit specified in Table 1 to this subpart that applies to your boiler. (b) You must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies to your boiler. An energy assessment completed on or after January 1, 2008 that meets or is amended to meet the energy assessment requirements in Table 2 to this subpart satisfies the energy assessment requirement. A facility that operates under an energy management program established through energy management systems compatible with ISO 50001, that includes the affected units, also satisfies the energy assessment requirement. (c) You must comply with each operating limit specified in Table 3 to this subpart that applies to your boiler. (d) These standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time you must comply only with Table 2 to this subpart. Table 1 to Subpart JJJJJJ of Part 63—Emission Limits As stated in §63.11201, you must comply with the following applicable emission limits:											
<table> <tr> <th colspan="3">Table 1 to Subpart JJJJJJ of Part 63—Emission Limits</th></tr> <tr> <th colspan="3">As stated in §63.11201, you must comply with the following applicable emission limits:</th></tr> <tr> <th>If your boiler is in this subcategory</th><th>For the following pollutants</th><th>You must achieve less than or equal to the following emission limits, except during periods of startup and shutdown</th></tr> </table>			Table 1 to Subpart JJJJJJ of Part 63—Emission Limits			As stated in §63.11201, you must comply with the following applicable emission limits:			If your boiler is in this subcategory	For the following pollutants	You must achieve less than or equal to the following emission limits, except during periods of startup and shutdown
Table 1 to Subpart JJJJJJ of Part 63—Emission Limits											
As stated in §63.11201, you must comply with the following applicable emission limits:											
If your boiler is in this subcategory	For the following pollutants	You must achieve less than or equal to the following emission limits, except during periods of startup and shutdown									

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	5. New oil-fired boilers with heat input capacity of 10 MMBtu/hr. or greater that do not meet the definition of seasonal boiler or limited-use boiler.	PM (Filterable)	3.0E-02 lb. per MMBtu of heat input.
Table 2 to Subpart JJJJJ of Part 63—Work Practice Standards, Emission Reduction Measures, and Management Practices As stated in §63.11201, you must comply with the following applicable work practice standards, emission reduction measures, and management practices:			
	If your boiler is in this subcategory	You must meet the following	
	4. Existing oil-fired boilers with heat input capacity greater than 5 MMBtu/hr. that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio	Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223.	
	5. New oil-fired boilers with heat input capacity greater than 5 MMBtu/hr. that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio	Conduct a tune-up of the boiler biennially as specified in §63.11223.	
	12. Existing oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr.	Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every 5 years as specified in §63.11223.	
	13. New oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr.	Conduct a tune-up of the boiler every 5 years as specified in §63.11223.	
	16. Existing coal-fired, biomass-fired, or oil-fired boilers (units with heat input	Must have a one-time energy assessment performed by a qualified energy assessor. An energy	

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	capacity of 10 MMBtu/hr. and greater), not including limited-use boilers assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used to meet the energy assessment requirements. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items (1) to (4) appropriate for the on-site technical hours listed in §63.11237:
	(1) A visual inspection of the boiler system,
	(2) An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints,
	(3) An inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator,
	(4) A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage,

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	(5) A list of major energy conservation measures that are within the facility's control,
	(6) A list of the energy savings potential of the energy conservation measures identified, and
	(7) A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
4.2	<u>Testing Requirements:</u> <u>Control of HAPs:</u> <u>CONTINUOUS COMPLIANCE REQUIREMENTS</u> <u>§63.11220 - When must I conduct subsequent performance tests or fuel analyses?</u> “(a) If your boiler has a heat input capacity of 10 million British thermal units per hour or greater, you must conduct all applicable performance (stack) tests according to §63.11212 on a triennial basis, except as specified in paragraphs (b) through (d) of this section. Triennial performance tests must be completed no more than 37 months after the previous performance test. (b) When demonstrating initial compliance with the PM emission limit, if your boiler's performance test results show that your PM emissions are equal to or less than half of the PM emission limit, you do not need to conduct further performance tests for PM but must continue to comply with all applicable operating limits and monitoring requirements. If your initial performance test results show that your PM emissions are greater than half of the PM emission limit, you must conduct subsequent performance tests as specified in paragraph (a) of this section.” “(d) For existing affected boilers that have not operated since the previous compliance demonstration and more than 3 years have passed since the previous compliance demonstration, you must complete your subsequent compliance demonstration no later than 180 days after the re-start of the affected boiler.”

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	<u>§63.11222 - How do I demonstrate continuous compliance with the emission limits?</u> “(a) You must demonstrate continuous compliance with each emission limit and operating limit in Tables 1 and 3 to this subpart that applies to you according to the methods specified in Table 7 to this subpart and to paragraphs (a)(1) through (4) of this section. (2) If you have an applicable mercury or PM emission limit, you must keep records of the type and amount of all fuels burned in each boiler during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in lower emissions of mercury than the applicable emission limit (if you demonstrate compliance through fuel analysis), or result in lower fuel input of mercury than the maximum values calculated during the last performance stack test (if you demonstrate compliance through performance stack testing). (b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 and 3 to this subpart that apply to you. These instances are deviations from the emission limits in this subpart. These deviations must be reported according to the requirements in §63.11225.” <u>§63.11223 - How do I demonstrate continuous compliance with the work practice and management practice standards?</u> “(a) For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to paragraph (b) of this section and keep records as required in §63.11225(c) to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.” “(b) Except as specified in paragraphs (c) through (f) of this section, you must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in paragraphs (b)(1) through (7) of this section. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. For a new or reconstructed boiler, the first biennial tune-up must be no later than 25 months after the initial startup of the new or reconstructed boiler. (1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for

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	sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. (4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject. (5) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. (6) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (b)(6)(i) through (iii) of this section. (i) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler. (ii) A description of any corrective actions taken as a part of the tune-up of the boiler. (iii) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. (7) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.” “(e) Oil-fired boilers with a heat input capacity of equal to or less than 5 million Btu per hour must conduct a tune-up every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed oil-fired boiler with a heat input capacity of equal to or less than 5 million Btu per hour, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in

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	paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months.”
4.3	<u>Monitoring Requirements:</u> <u>Control of HAPs:</u> The Permittee must operate and maintain, at all times, any affected source, including air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [Reference: 40 CFR §63.11205(a)]
4.4	<u>Record Keeping Requirements:</u> <u>Control of HAPs:</u> §63.11225 - What are my notification, reporting, and recordkeeping requirements? “(c) You must maintain the records specified in paragraphs (c)(1) through (7) of this section. (1) As required in §63.10(b)(2)(xiv), you must keep a copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted. (2) You must keep records to document conformance with the work practices, emission reduction measures, and management practices required by §63.11214 and §63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section. (i) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned. (ii) <i>Not Applicable.</i> (iii) For each boiler required to conduct an energy assessment, you must keep a copy of the energy assessment report. (iv) For each boiler subject to an emission limit in Table 1 to this subpart, you must also keep records of monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used. (v) For each boiler that meets the definition of seasonal boiler, you must keep records of days of operation per year. (vi) For each boiler that meets the definition of limited-use boiler, you must keep a copy of the federally enforceable permit that limits the

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	annual capacity factor to less than or equal to 10 percent and records of fuel use for the days the boiler is operating. (3) For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation that were done to demonstrate compliance with the mercury emission limits. Supporting documentation should include results of any fuel analyses. You can use the results from one fuel analysis for multiple boilers provided they are all burning the same fuel type. (4) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment. (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. (6) You must keep the records of all inspection and monitoring data required by §§63.11221 and 63.11222, and the information identified in paragraphs (c)(6)(i) through (vi) of this section for each required inspection or monitoring. (i) The date, place, and time of the monitoring event. (ii) Person conducting the monitoring. (iii) Technique or method used. (iv) Operating conditions during the activity. (v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation. (vi) Maintenance or corrective action taken (if applicable). (7) <i>Not Applicable.</i> (d) Your records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years.”
4.5	<u>Reporting Requirements:</u> <u>Control of HAPs:</u> §63.11225 - <u>What are my notification, reporting, and recordkeeping requirements?</u>

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	“(a) You must submit the notifications specified in paragraphs (a)(1) through (5) of this section to the administrator. (1) You must submit all of the notifications in §§63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply to you by the dates specified in those sections except as specified in paragraphs (a)(2) and (4) of this section. (2) An Initial Notification must be submitted no later than January 20, 2014 or within 120 days after the source becomes subject to the standard. (3) If you are required to conduct a performance stack test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin. (4) You must submit the Notification of Compliance Status no later than 120 days after the applicable compliance date specified in §63.11196 unless you must conduct a performance stack test. If you must conduct a performance stack test, you must submit the Notification of Compliance Status within 60 days of completing the performance stack test. You must submit the Notification of Compliance Status in accordance with paragraphs (a)(4)(i) and (vi) of this section. The Notification of Compliance Status must include the information and certification(s) of compliance in paragraphs (a)(4)(i) through (v) of this section, as applicable, and signed by a responsible official. (i) You must submit the information required in §63.9(h)(2), except the information listed in §63.9(h)(2)(i)(B), (D), (E), and (F). If you conduct any performance tests or CMS performance evaluations, you must submit that data as specified in paragraph (e) of this section. If you conduct any opacity or visible emission observations, or other monitoring procedures or methods, you must submit that data to the Administrator at the appropriate address listed in §63.13. (ii) “This facility complies with the requirements in §63.11214 to conduct an initial tune-up of the boiler.” (iii) “This facility has had an energy assessment performed according to §63.11214(c).” (iv) For units that install bag leak detection systems: “This facility complies with the requirements in §63.11224(f).” (v) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: “No secondary materials that are solid waste were combusted in any affected unit.” (vi) The notification must be submitted electronically using 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

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	subpart is not available in CEDRI at the time that the report is due, the written Notification of Compliance Status must be submitted to the Administrator at the appropriate address listed in §63.13. (5) If you are using data from a previously conducted emission test to serve as documentation of conformance with the emission standards and operating limits of this subpart, you must include in the Notification of Compliance Status the date of the test and a summary of the results, not a complete test report, relative to this subpart. (b) You must prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the information specified in paragraphs (b)(1) through (4) of this section. You must submit the report by March 15 if you had any instance described by paragraph (b)(3) of this section. For boilers that are subject only to a requirement to conduct a biennial or 5-year tune-up according to §63.11223(a) and not subject to emission limits or operating limits, you may prepare only a biennial or 5-year compliance report as specified in paragraphs (b)(1) and (2) of this section. (1) Company name and address. (2) Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart. Your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official: (i) "This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler." (ii) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit." (iii) "This facility complies with the requirement in §§63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available." (3) If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken.

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	(4) The total fuel use by each affected boiler subject to an emission limit, for each calendar month within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by you or EPA through a petition process to be a non-waste under §241.3(c), whether the fuel(s) were processed from discarded non-hazardous secondary materials within the meaning of §241.3, and the total fuel usage amount with units of measure.”

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

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5.0	<u>Emissions Unit Number(s): Emergency & Non-Emergency Generators</u> See Generators Listed in Table Below
5.1	<u>Applicable Standards/Limits:</u> A. <u>Control of Visible Emissions</u> COMAR 26.11.09.05E - Stationary Internal Combustion Engine Powered Equipment. “(2) Emissions During Idle Mode. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. (3) Emissions During Operating Mode. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. (4) Exceptions. (a) Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. (b) Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service: 30 minutes; (ii) All other engines: 15 minutes. (c) Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.” B. <u>Control of Sulfur Oxides</u> COMAR 26.11.09.07A(2) - Sulfur Content Limitations for Fuel.

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	“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: In Areas III and IV: () Distillate fuel oils, 0.3 percent.” C. <u>Control of Nitrogen Oxides</u> COMAR 26.11.09.08G- Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent. (1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall: (a) Provide certification of the capacity factor of the equipment to the Department in writing; (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually; (c) Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request; (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.
5.2	<u>Testing Requirements:</u> A. <u>Control of Visible Emissions</u> See Monitoring Requirements. B. <u>Control of Sulfur Oxides</u> See Monitoring Requirements. C. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year. [Reference: COMAR 26.11.09.08G(1)(b)].

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Table IV – 5	
5.3	<u>Monitoring Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions. [Reference: COMAR 26.11.03.06C] B. <u>Control of Sulfur Oxides</u> The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil complies with the limitation on sulfur content of the fuel oil. [Reference: COMAR 26.11.03.06C]. C. <u>Control of Nitrogen Oxides</u> For engines that operate more than 500 hours during a calendar year, the Permittee shall perform a combustion analysis and optimize combustion. [Reference: COMAR 26.11.03.06C]. The Permittee shall calculate the capacity factor of the engine within 30 days after the end of each month. [Reference: COMAR 26.11.03.06C].
5.4	<u>Record Keeping Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall retain records of preventive maintenance on site for at least five years and make these records available to the Department upon request. [Reference: COMAR 26.11.03.06C] B. <u>Control of Sulfur Oxides</u> The Permittee shall retain annual fuel supplier certifications stating that the fuel oil is in compliance with this regulation must be maintained for at least 5 years. [Reference: COMAR 26.11.09.07C]. C. <u>Control of Nitrogen Oxides</u> The Permittee shall maintain records of the results of the combustion analyses and any stack tests on site for at least five years and make them available to the Department and EPA upon request. [Reference: COMAR 26.11.09.08G(1)(c) & COMAR 26.11.03.06C]. The Permittee shall maintain a record of the calculated capacity factor. [Reference: COMAR 26.11.09.08G(1)(c)]. The Permittee shall maintain record of training program attendance for each operator on site for at least five years and make the records available to the Department upon request. [Reference: COMAR 26.11.09.08G(e) & COMAR 26.11.03.06C].

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Table IV – 5	
5.5	<u>Reporting Requirements:</u> A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, "Report of Excess Emissions and Deviations" B. <u>Control of Sulfur Oxides</u> The Permittee shall report annual fuel supplier certification to the Department upon request. [Reference: COMAR 26.11.09.07C]. C. <u>Control of Nitrogen Oxides</u> The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. [Reference: COMAR 26.11.03.06C]. The Permittee shall submit a list of trained operators to the Department upon request. [Reference: COMAR 26.11.09.08G(e) and COMAR 26.11.03.06C].

"A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above."

EMERGENCY & NON-EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
Emergency Generators			
03-0328-A01	9-0229	One (1) emergency generator rated at 1072-bhp.	1997
03-0394-A01 & A02	9-0227 & 9-0228	Two (2) emergency generator sets each rated at 1341 bhp	1997
03-4600-A04 & A05	9-0276 & 9-0277	Two (2) emergency generator sets each rated at 1877 bhp	1996
03-0394-A03 thru A07	9-0386 thru -9-0390	Five (5) Cummins emergency generator sets each rated at 750 bhp (500 kW) located in Bldg. 394 – ARL Compound	2008
26-6003-GMS Lab-A04	9-0393	One (1) 2500 kW (3778 bhp) diesel emergency generator set (Tier I certified) to be located at C4ISR-Phase I Research and Development – GMS Lab Building.	2009
26-6007-C2CNT West-A05	9-0394	One (1) 1500 kW (2200 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Phase I Research and Development – C2CNT West Building	2008
26-6006-GMS Tower-A04	9-0395	One (1) 1500 kW (2200 bhp) diesel emergency generator set (Tier II certified) to be located at	2008

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EMERGENCY & NON-EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
		C4ISR-Phase I Research and Development – GMS Tower Building	
26-6002-HQBuilding-A06	9-0396	One (1) 2000 kW (2900 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Phase I Research and Development – HQ Building 2 and serves both HQ Building 1 & HQ Building 2.	2008
0120-A01	9-0408	One (1) Cummins emergency generator rated at 2922 bhp	2012
0316-A01	9-0409	One (1) Cummins emergency generator set rated at 2922 bhp	2012
3090-JSEC-01	9-0410	One (1) emergency generator rated at 2000-kW	2010
26-6010-C2CNT East-	9-0411	Two (2) emergency generator sets each rated at 2919 bhp	2010
6009-JSEC	9-0412	One (1) emergency generator set rated at 2200 bhp	2010
0328-A02	9-0414	One (1) emergency generator set rated at 670.5 bhp	2006
0328-A03	9-0418	One (1) Detroit emergency generator set rated at 804.6 bhp	2006
0311-A01	9-0419	One (1) emergency generator set rated 600 bhp	1986
0120-A02 & 0120-A03	9-0433 & 9-0434	Two (2) Cummins emergency generator sets each rated at 2922 bhp	2012
3147-A01	9-0491	One (1) emergency generator set rated at 670 bhp	2015
2202-A01	9-0499	One (1) emergency generator set rated at 755 bhp	2015
3660-A01	9-0500	One (1) emergency generator set rated at 643 bhp	1995
0120-A04	9-0503	One (1) emergency generator set rated at 2922 bhp	2017
0120-A05	9-0504	One (1) emergency generator set rated at 2922 bhp	2016
5016-A01	9-0510	One (1) Cummins emergency generator rated at 2356 bhp	2017
5046-A01	9-0509	One (1) Cummins emergency generator rated at 617 bhp	2017
3511-A01 & A02	9-0539 & 9-0540	Two (2) MTU 16V4000G84F diesel fired emergency generator sets, each rated at 2970-hp. PTC issued 2/27/2024	2024
0463-A01	9-0548	One (1) MTU 8V1600DS400 diesel fired emergency generator set rated at 460-kW, Bldg. 463. (Tier III). GP issued 4/30/2025	2025
Non-Emergency Generators			
BSS-01	9-0435	One (1) Detroit non-emergency generator set rated at 600 bhp	2001
LWE-01 thru LWE-05	9-0436	Five (5) Detroit non-emergency generator sets each rated at 550 bhp	2006
UTF-01	9-0437	One (1) Cummins non-emergency generator set rated at 500 bhp	1993

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Table IV – 5a	
5a.0	<u>Emissions Unit Number(s): Emergency Generators Cont'd</u> See NSPS & NESHAP for Emergency Generators Table Below
5a.1	<u>Applicable Standards/Limits:</u> A. New Source Performance Standards (NSPS) under 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines. (1) This permit is valid only for the installation of an emergency diesel generator with piston displacement less than 10 liters per cylinder. (2) The provisions of 40 CFR Part 60, Subpart IIII apply if the emergency diesel generator uses a diesel <u>engine manufactured after April 1, 2006</u> [Ref: §60.4200]. (3) An emergency diesel generator or diesel engine subject to the requirements of 40 CFR 60, Subpart IIII (“NSPS emergency diesel generator” or “NSPS emergency diesel engine”) shall be equipped with a non-resettable hour meter [Ref: §60.4209(a)]. (4) The Permittee shall only purchase emergency generator sets certified to meet the emission standards of §60.4205(b). The generators must be installed and configured according to the manufacturer’s specifications. [Ref: §60.4211(c)] (5) The Permittee must purchase and install emergency generator sets certified to the emission standards for new nonroad diesel engines in 40 CFR §1039.105, appendix I [Ref: §62.4202(a)(2)]; (6) The requirements of condition (5) above do not apply to owners or operators of NSPS emergency diesel engines that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location [Ref: §60.4208]. B. National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines <u>“§63.6590 - What parts of my plant does this subpart cover?”</u> This subpart applies to each affected source.

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	(c) <u>Stationary RICE subject to Regulations under 40 CFR Part 60.</u> An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. <i>No further requirements apply for such engines under this part.</i> (1) A new or reconstructed stationary RICE located at an area source.” C. <u>Operational Limits</u> (1) The Permittee must operate and maintain an NSPS emergency diesel generator and control devices according to the manufacturer’s written instructions or according to procedures developed by the owner or operator that are approved by the manufacturer. Additionally the Permittee may change only those settings that are permitted by the manufacturer. The Permittee must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they may apply to an owner or operator [Ref: §60.4211]. (2) The Permittee must meet the non-road diesel fuel sulfur requirements of 40 CFR §1090.305 as follows: (a) Maximum sulfur content 15 ppm and (b) Minimum cetane index of 40; or (c) Maximum aromatic content of 35 volume percent. [Ref: 40 CFR §60.4207(b) and §1090.305] <i>Note: Compliance with this requirement demonstrates compliance with COMAR 26.11.09.07A(2)(b) which limits the sulfur content of diesel fuel (No. 2 fuel oil) to 0.3 percent by weight.</i> (3) The Permittee must comply with the following emissions standards for the emergency generator set: (a) Non-methane Hydrocarbons and NO_x (NMHC+NO_x): 6.4 grams per kilowatt-hour (g/kW-hr) (b) Carbon Monoxide (CO): 3.5 g/kW-hr (c) Particulate Matter (PM): 0.2 g/kW-hr [Ref: 40 CFR §60.4205(b), §60.4202(a)(2), and §1039.105, appendix I] <i>Note: Compliance is demonstrated by maintaining documentation that the engine is certified to meet these limits by the manufacturer.</i> (4) The exhaust opacity from the emergency generator shall not exceed: (a) 20 percent during the acceleration mode;

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	(b) 15 percent during the lugging mode; and (c) 50 percent during the peaks in either the acceleration or lugging modes. [Ref: 40 CFR §60.4205(b), §60.4202(a)(2), and §1039.105] (5) The Permittee must use diesel fuel in the emergency generator set that meets the requirements of 40 CFR §1090.305 diesel fuel that has a per-gallon sulfur content that does not exceed 15 ppm, and that either has a minimum per-gallon cetane index of 40 or a maximum per-gallon aromatic content of 35 volume percent), unless a waiver is obtained from the Department and/or the EPA Administrator. [Ref: §60.4207]. (6) In accordance with 40 CFR §60.4211(f), non-emergency use of the emergency diesel generator set for the purpose of maintenance checks and readiness testing is limited to 100 hours per year or less unless prior approval is received from the Department. (7) There is no time limit on the use of the emergency generator in emergency situations. [Reference: 40 CFR §60.4211(f)(1)] (8) The Permittee may operate the emergency stationary ICE for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the 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)(2)(i)] (9) For the purpose of maintaining synthetic minor status for the C4ISR-Phase I Research and Development Facility, the combined NO_x emissions from the all fuel burning equipment (boilers and generators) at the facility must be less than 25 tons in any rolling 12-month period. [Reference: MDE PTC 025-0081-9-0393 thru -9-0396 issued July 15, 2009, Part D-Operating Conditions, Condition 7]

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5a.2	<u>Testing Requirements:</u> A. <u>NSPS</u> See Record Keeping Requirements. B. <u>NESHAP</u> See NSPS Requirements. C. <u>Operational Limit</u> See Record Keeping Requirements.
5a.3	<u>Monitoring Requirements:</u> A. <u>NSPS</u> See Record Keeping Requirements. B. <u>NESHAP</u> See NSPS Requirements. C. <u>Operational Limit</u> See Record Keeping Requirements.
5a.4	<u>Record Keeping Requirements:</u> <u>Note:</u> All records must be maintained for a period of at least 5 years. [Reference: COMAR 26.11.03.06C(5)(g)] A. <u>NSPS</u> (1) The Permittee shall maintain a log for the emergency generator indicating the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.). [Reference: MDE PTC 025-0081-9-0393 thru -9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 1]. (2) The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s): (a) Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006 and the manufacturer model year of the diesel engine; (b) The installation date of each emergency diesel generator; and (c) The certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211 and §60.4214(b). [Reference: MDE

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	PTC 025-0081-9-0393 thru -9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Conditions 2]. (3) Beginning October 1, 2007, for any NSPS emergency diesel generator the Permittee shall, for each fuel delivery obtain from the fuel supplier a fuel supplier certification consisting of the name of the oil supplier, the date of delivery, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel oil complies with the specifications of 40 CFR §1090.305. The Permittee shall maintain the required records on site for at least five (5) years. [Reference: MDE PTC 025-0081-9-0393 thru -9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 3]. B. <u>NESHAP</u> See NSPS Requirements. C. <u>Operational Limit</u>: In order to demonstrate compliance with the annual emissions limitations, the Permittee shall calculate and record the NO_x emissions for each previous calendar month and a total for the previous 12 consecutive calendar months for the C4ISR-Phase I Research and Development Facility. The calculations and records shall be updated monthly, within the first 15 days of each following month. These records shall be submitted to the Department as part of the semi-annual report. [Reference: MDE PTC 025-0081-9-0393 thru -9-0396 issued July 15, 2009, Part E-Record Keeping and Reporting Requirements, Condition 4]
5a.5	<u>Reporting Requirements:</u> A. <u>NSPS</u> See Record Keeping Requirements. B. <u>NESHAP</u> See NSPS Requirements. C. <u>Operational Limit</u> The Permittee shall report the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year. [Reference: MDE PTC 025-0081-9-0393 thru -9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 1].

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“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
0120-A01 thru 0120-A03	9-0408 & 9-0433 & 9-0434	Three (3) emergency generator sets each rated at 2922 bhp	2012
0120-A04	9-0503	One (1) emergency generator set rated at 2922 bhp	2017
0120-A05	9-0504	One (1) emergency generator set rated at 2922 bhp	2016
0328-A02	9-0414	One (1) emergency generator set rated at 670.5 bhp	2006
0328-A03	9-0418	One (1) emergency generator set rated at 804.6 bhp	2006
03-0394-A03 thru A07	9-0386 thru -9-0390	Five (5) emergency generator sets each rated at 750 bhp (500 kW) located in Bldg. 394 – ARL Compound	2008
6009-JSEC	9-0412	One (1) emergency generator set rated at 2200 bhp	2010
26-6010-C2CNT East-	9-0411	Two (2) emergency generator sets each rated at 2919 bhp	2010
26-6003-GMS Lab-A04	9-0393	One (1) 2500 kW (3778 bhp) diesel emergency generator set (Tier I certified) to be located at C4ISR-Phase I Research and Development – GMS Lab Building.	2009
26-6007-C2CNT West-A05	9-0394	One (1) 1500 kW (2200 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Phase I Research and Development – C2CNT West Building	2008
26-6006-GMS Tower-A04	9-0395	One (1) 1500 kW (2200 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Phase I Research and Development – GMS Tower Building	2008
26-6002-HQBuilding-A06	9-0396	One (1) 2000 kW (2900 bhp) diesel emergency generator set (Tier II certified) to be located at C4ISR-Phase I Research and Development – HQ Building 2 and serves both HQ Building 1 & HQ Building 2.	2008
2202-A01	9-0499	One (1) emergency generator set rated at 755 bhp	2015
3147-A01	9-0491	One (1) Katolight diesel fired emergency generator set rated at 500-kW (670 bhp)	2015
0316-A01	9-0409	One (1) Cummins emergency generator set rated at 2922 bhp	2012
5016-A01	9-0510	One (1) Cummins emergency generator rated at 2356 bhp	2017
5046-A01	9-0509	Emergency Generator rated at 617 bhp	2017
3090-JSEC-01	9-0410	One (1) emergency generator set rated at 2923 bhp	2010
3511-A01 & A02	9-0539 & 9-0540	Two (2) MTU 16V4000G84F diesel fired emergency generator sets, each rated at 2970-hp. PTC issued 2/27/2024	2024

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EMERGENCY GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
0463-A01	9-0548	One (1) MTU 8V1600DS400 diesel fired emergency generator set rated at 460-kW, Bldg. 463. (Tier III). GP issued 4/30/2025	2025

Table IV – 5b: MACT	
5b.0	<u>Emissions Unit Number(s): Emergency & Non-Emergency Generators Cont'd</u> Emergency & non-emergency generators subject to NESHAP Subpart ZZZZ Requirements. See Table below
5b.1	<u>Applicable Standards/Limits:</u> §63.6595 - When do I have to comply with this subpart? (a) <i>Affected sources.</i> (1)” If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.”. §63.6603 - <u>What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?</u> Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. (a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you. <u>Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions</u> As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

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	For each.	You must meet the following requirement, except during periods of startup.	During periods of startup you must.
	1. Non-Emergency , non-black start CI stationary RICE ≤ 300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; ¹ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	2. Non-Emergency , non-black start CI stationary RICE $300 < \text{HP} \leq 500$	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or	
		b. Reduce CO emissions by 70 percent or more.	
	3. Non-Emergency , non-black start CI stationary RICE > 500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or	
		b. Reduce CO emissions by 70 percent or more.	
	4. Emergency stationary CI RICE and black start stationary CI RICE. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹	

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Table IV – 5b: MACT			
		b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
		c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
¹Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart. ²If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. <u>§63.6605 - What are my general requirements for complying with this subpart?</u> “(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times. (b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.”			
5b.2	<u>Testing Requirements:</u> <u>§63.6615 - When must I conduct subsequent performance tests?</u>		

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	“If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.” §63.6620 - <u>What performance tests and other procedures must I use?</u> (a) “You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.” (b) “Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.”
5b.3	<u>Monitoring Requirements:</u> §63.6625 - <u>What are my monitoring, installation, collection, operation, and maintenance requirements?</u> “(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011. (1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan. (i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations; (ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

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	(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures; (iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and (v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i). (2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan. (3) The CPMS must collect data at least once every 15 minutes (see also §63.6635). (4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger. (5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually. (6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.” “(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions: (3) An existing emergency or black start stationary RICE located at an area source of HAP emissions.” “(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.” “(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for

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	operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g). (1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or (2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.” “(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.” “(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the

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	program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.” §63.6640 - <u>How do I demonstrate continuous compliance with the emission limitations and operating limitations?</u> (a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart. (b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE. “(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (1) There is no time limit on the use of emergency stationary RICE in emergency situations. (2) You may operate your emergency stationary RICE 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 paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

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	(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. (3) <i>Not Applicable.</i> (4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.”
5b.4	<u>Record Keeping Requirements:</u> <u>Note:</u> All records must be maintained for a period of at least 5 years. <u>[Reference: COMAR 26.11.03.06C(5)(g)]</u> <u>§63.6655 - What records must I keep?</u> “(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section. (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv). (2) Records of the occurrence and duration of each malfunction of operation (<i>i.e.</i>, process equipment) or the air pollution control and monitoring equipment. (3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii). (4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

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	(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.” “(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section. (1) Records described in §63.10(b)(2)(vi) through (xi). (2) Previous (<i>i.e.</i>, superseded) versions of the performance evaluation plan as required in §63.8(d)(3). (3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.” “(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.” “(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.” “(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE; (2) An existing stationary emergency RICE. (3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.” “(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

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	(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.”
5b.5	<u>Reporting Requirements:</u> “If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.” [Footnote 2 of Table 2d] §63.6650 - What reports must I submit and when? “(a) You must submit each report in Table 7 of this subpart that applies to you.” “(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section. (1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595. (2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595. (3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

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	(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. (5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section. (6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31. (7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595. (8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31. (9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.” “(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section. (1) Company name and address. (2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report. (3) Date of report and beginning and ending dates of the reporting period. (4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction. (5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

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	(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.” “(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section. (1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period. (2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.” “(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section. (1) The date and time that each malfunction started and stopped. (2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks. (3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8). (4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period. (5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period. (6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes. (7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period. (8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

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	(9) A brief description of the stationary RICE. (10) A brief description of the CMS. (11) The date of the latest CMS certification or audit. (12) A description of any changes in CMS, processes, or controls since the last reporting period.” “(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.” “(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is 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) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(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 §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii). (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii). (vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for

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	engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. (viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period. (ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken. (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 §63.13.”

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

MACT Emergency and non-emergency GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
03-0328-A01	9-0229	One (1) emergency generator set rated at 1072 bhp	1997
0328-A02	9-0414	One (1) emergency generator set rated at 670.5 bhp	2006
0328-A03	9-0418	One (1) emergency generator set rated at 804.6 bhp	2006
0311-A01	9-0419	One (1) emergency generator set rated at 600 bhp	1986
03-0394-A01 & A02	9-0227 & 9-0228	Two (2) emergency generator sets each rated at 1341 bhp	1997
03-4600-A04 & A05	9-0276 & 9-0277	Two (2) emergency generator sets each rated at 1877 bhp	1996
3660-A01	9-0500	One (1) emergency generator set rated at 643 bhp	1995
Non-Emergency Generators			
BSS-01	9-0435	One (1) Detroit non-emergency generator rated at 600 bhp that runs hydraulic equipment	2001
LWE-01 thru LWE-05	9-0436	Five (5) Detroit non-emergency generators each rated at 550 bhp that run hydraulic equipment	2006

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MACT Emergency and non-emergency GENERATORS			
Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
UTF-01	9-0437	One (1) Cummins non-emergency generator rated at 500 bhp that runs hydraulic equipment	1993

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6.0	<u>Emissions Unit Number(s): Paint Spray Booth</u> 07-0525-A04 & A06 - Two (2) custom made cross draft paint spray booths. [12-6-0159 & 12-6-0162] .																			
6.1	<u>Applicable Standards/Limits:</u> <u>Control of Volatile Organic Compounds</u> COMAR 26.11.19.23E. General Requirements and Standards. (1) VOC Content Limits. (a) Except as provided in this regulation, effective July 1, 2013, a person who is subject to this regulation may not supply, sell, offer for sale, distribute, or manufacture for use within the State an automotive coating or cleaning solvent with a VOC content in excess of the corresponding limit specified in Table 1 of §E(1) or in §E(5) of this regulation. (b) A person may not use or apply to a motor vehicle, mobile equipment, or associated parts and components, an automotive coating or cleaning solvent for vehicle refinishing that exceeds the VOC content specified in Table 1 of §E(1) or in §E(5) of this regulation. <u>Table 1. VOC Content Limits for Automotive Coatings for Motor Vehicle and Mobile Equipment Non-Assembly Line Refinishing and Recoating.</u> <table><tr><td></td><td colspan="2">VOC Content Limit of Coatings as Applied*</td></tr><tr><td>Coating Category</td><td>Pounds per gallon</td><td>Grams per liter</td></tr><tr><td>Adhesion promoter</td><td>4.5</td><td>540</td></tr><tr><td>Automotive pretreatment coating</td><td>5.5</td><td>660</td></tr><tr><td>Automotive primer</td><td>2.1</td><td>250</td></tr><tr><td>Clear coating</td><td>2.1</td><td>250</td></tr></table>			VOC Content Limit of Coatings as Applied*		Coating Category	Pounds per gallon	Grams per liter	Adhesion promoter	4.5	540	Automotive pretreatment coating	5.5	660	Automotive primer	2.1	250	Clear coating	2.1	250
	VOC Content Limit of Coatings as Applied*																			
Coating Category	Pounds per gallon	Grams per liter																		
Adhesion promoter	4.5	540																		
Automotive pretreatment coating	5.5	660																		
Automotive primer	2.1	250																		
Clear coating	2.1	250																		

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Color coating, including metallic/iridescent color coating	3.5	420
Multicolor coating	5.7	680
Other automotive coating type	2.1	250
Single-stage coating, including single-stage metallic/iridescent coating	2.8	340
Temporary protective coating	0.5	60
Truck bed liner coating	1.7	200
Underbody coating	3.6	430

* The VOC content is determined as the weight of volatile compounds (prepared to manufacturer's maximum VOC content), less water and exempt compounds, as specified in §E(2) of this regulation.

COMAR 26.11.19.23H. Work Practice Standards.

(1) Spray guns used to apply automotive coating components or automotive coatings shall be cleaned by one or a combination of the following:

- (a) A fully enclosed spray gun cleaning system that is kept closed when not in use and is maintained in accordance with the requirements of §L(1)(a)—(c) of this regulation;
- (b) Unatomized discharge of solvent into a paint waste container that is kept closed when not in use;
- (c) Disassembly of the spray gun and cleaning in a vat that is kept closed when not in use; or
- (d) Atomized spray into a paint waste container that is filled with a device designed to capture atomized mist or spray solvent emissions.

(2) The owner or operator of an automotive refinishing facility or non-assembly line operation subject to this regulation shall implement the following work practice standards and training measures:

- (a) Fresh and used automotive coating components, automotive coatings, solvents, and cleaning solvents shall be stored in vapor tight, nonabsorbent, nonleaking containers that shall be kept closed at all times except when filling or emptying;
- (b) Cloth or paper, or absorbent applicators, moistened with automotive coatings components, automotive coatings, solvents, or cleaning solvents shall be stored in closed, vapor tight, nonabsorbent, nonleaking containers;
- (c) Handling and transfer procedures to minimize spills during the transfer of automotive coating components, automotive coatings, solvents, and cleaning solvents; and

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	(d) Ensure that a person who uses or applies automotive coating components, automotive coatings, solvents, or cleaning solvents has completed training in the proper use and handling of the automotive coating components, automotive coatings, solvents, and waste products in order to minimize the emission of air contaminants and to comply with the provisions of this regulation.
6.2	<u>Testing Requirements:</u> <u>Control of Volatile Organic Compounds</u> See Monitoring Requirements.
6.3	<u>Monitoring Requirements:</u> <u>Control of Volatile Organic Compounds</u> COMAR 26.11.19.23I. Compliance Procedures and Monitoring Requirements. (1) Compliance Statement Requirements. (a) For each automotive coating product or automotive coating component product, a manufacturer and repackager who is subject to the provisions of this regulation shall include the following information on product data sheets or an equivalent documentation: (i) The VOC actual content and VOC regulatory content, as supplied, for the coating product or coating component product, expressed in grams per liter, calculated in accordance with §E(2)(a)(i) and (ii) of this regulation; (ii) The weight percent of volatiles, water, and exempt compounds; (iii) The volume percent of water and exempt compounds; and (iv) The density of the material (in grams per liter). (b) For each ready to spray mixture (based on the manufacturer's and repackager's stated mix ratio) product, the manufacturer and repackager shall include the following information on product data sheets or an equivalent documentation: (i) The VOC actual content and the VOC regulatory content, as applied, for the coating product or coating component product, expressed in grams per liter; (ii) The weight percent of volatiles, water, and exempt compounds; (iii) The volume percent of water and exempt compounds; and (iv) The density of the material (in grams per liter). (c) The manufacturer and repackager of cleaning solvents subject to this regulation shall include the VOC content of the cleaning solvents as supplied, calculated in accordance with the requirements of §E(2)(a)(iii)

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	of this regulation, expressed in grams per liter, on product data sheets or an equivalent documentation. (2) Container Labeling Requirements. The manufacturer and repackager of automotive coatings or automotive coating components shall include the following information on all containers or on a label affixed to the container: (a) The applicable use category or categories; (b) The VOC actual content of the coating or coating component, as supplied, calculated in accordance with the requirements of §E(2)(a)(ii of this regulation) and expressed in grams per liter; (c) The VOC regulatory content of the coating or coating component as supplied, calculated in accordance with the requirements of §E(2)(a)(i) of this regulation and expressed in grams per liter; and (d) The manufacturer and repackager of cleaning solvents subject to this rule shall include on all containers, or on a label affixed to the container, the VOC content for cleaning solvents, as supplied, calculated in accordance with the requirements of §E(2)(a)(iii of this regulation) and expressed in grams per liter.
6.4	<u>Record Keeping Requirements:</u> <u>Note:</u> All records must be maintained for a period of at least 5 years. <u>[Reference: COMAR 26.11.03.06C(5)(g)]</u> <u>Control of Volatile Organic Compounds</u> <u>COMAR 26.11.19.23J. Record Keeping.</u> (1) Record-Keeping Requirements for Coatings, Coating Components and Solvents. A person who uses automotive coatings, automotive coating components, ready-to-spray coatings (based on the manufacturer's stated mix ratio), or cleaning solvents subject to this regulation shall maintain and have available at all times, the following: (a) A current list of all coatings, coating components and cleaning solvents used that are subject to this regulation which includes the following information for each coating, coating component and cleaning solvent: (i) Whether the material is a coating, coating component, or cleaning solvent; (ii) Coating, coating component or cleaning solvent name and manufacturer; (iii) Application method; (iv) Coating type; (v) The mix ratio specific to the coating, coating component or cleaning solvent; and

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	(vi) The VOC actual content and VOC regulatory content as applied, for each ready to spray or ready to apply coating or cleaning solvent and copies of data sheets documenting how the as applied values were determined; (b) The VOC actual content and VOC regulatory content as supplied and copies of current manufacturer specification sheets, product data sheets, material safety data sheets, technical data sheets, or air quality data sheets documenting the as supplied value; and (c) Purchase records identifying the following; (i) The coating type; (ii) Coating, coating component, or cleaning solvent name; and (iii) Volume purchased of the coating, coating component or cleaning solvent. (2) Record-Keeping Requirements for Emission Control Systems. A person using an emission control system shall maintain daily records of the following key system operating parameters which demonstrate continuous operation and compliance of the emission control system during periods of VOC emission producing activities: (a) Temperatures; (b) Pressure drops; and (c) Air flow rates. (3) The records under this regulation shall be maintained for not less than 3 years and made available to the Department upon request.
6.5	<u>Reporting Requirements:</u> <u>Control of Volatile Organic Compounds</u> The Permittee shall report material usage and VOC content of coatings to the Department annually in the Emission Certification Report. [Reference: COMAR 26.11.03.06C]

"A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above."

Table IV-7	
7.0	<u>Emissions Unit Number(s): Underground Storage Tank</u> 26-04029-A03 & A05 – Two (2) 20,000-gallon underground storage tanks equipped with Stage I vapor recovery systems installed in 1993. [9-0152]. APG has a bulk gasoline/diesel terminal that is used to fill fuel trucks to deliver fuel by trucks as needed.

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7.1	<u>Applicable Standards/Limits:</u> <u>Control of Volatile Organic Compounds</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 Sec. 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." <u>Operational Limits</u> COMAR 26.11.24.06-Training Requirements for Operation and Maintenance of Approved Systems. A. <u>"General.</u> An operator shall ensure that: (1) At least one employee at each facility subject to this regulation is trained in accordance with the requirements of Sec. B of this regulation; and (2) The trained employee assists in the training of each of the other employees at that facility who are involved in the operation or maintenance of the approved system. B. <u>Approved Training Course Contents and Duration.</u> (1) An approved training course shall contain, at a minimum, a discussion of the following: (a) Purposes and effects of Stage II vapor recovery; (b) Stage II vapor recovery equipment design, function, operation and maintenance; (c) Daily inspection requirements and development and maintenance of records and files; and (d) Equipment warranties and spare parts. (2) The approved training course shall be of duration sufficient to properly train persons in the requirements of this chapter." COMAR 26.11.24.08 - Instructional Signs A. "An operator who is subject to this chapter shall place instructional signs in conspicuous locations at each gasoline dispenser.

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	B. The instructional signs shall include: (1) Instructions, with illustrations, on how to insert the nozzle, dispensing gasoline, and how to remove the nozzle; (2) A warning against attempts to continue refueling after automatic shutoff of the gasoline (that is, topping off); and (3) The Department's toll-free telephone number, which may be used for complaints or comments concerning the use of the Stage II vapor recovery systems."
7.2	<u>Testing Requirements:</u> COMAR 26.11.24.04 - <u>Testing Requirements.</u> A. Except as provided in §§E and F of this regulation, an owner subject to this chapter shall perform the following CARB-approved tests. (1) A leak test in accordance with the Vapor Recovery Test Procedure TP-201.3 referenced in Regulation .01-1B(1) of this chapter; (2) An air to liquid volume ratio test in accordance with the Vapor Recovery Test Procedure TP-201.5 referenced in Regulation .01-1B(2) of this chapter. (3) A dynamic pressure performance test in accordance with the Vapor Recovery Test Procedure TP-201.4 referenced in Regulation .01-1B(3) of this chapter; (4) A vapor return line vacuum integrity test for the Healy Model 400 ORVR System in accordance with Executive Order G-70-186, Exhibit 4 referenced in Regulation .01-1B(4) of this chapter; and (5) A vapor return line vacuum integrity test for the Healy Model 600 System in accordance with Executive Order G-70-165 Exhibit 4 referenced in Regulation .01-1B(5) of this chapter. B. The leak and liquid blockage tests required in §A of this regulation shall be performed on each approved system before the gasoline dispensing facility is initially used to refuel motor vehicles, or by the applicable dates in Regulation .03 of this chapter, whichever occurs later. C. Reserved D. If a gasoline dispensing facility fails any test required by this chapter, the owner shall notify the Department of the failure in writing within 5 working days after the test and before retesting. E. Alternative test methods approved by CARB may be used in place of the test methods specified in § A of this regulation, if the alternative test methods are approved by the U.S. Environmental Protection Agency (EPA) as a revision to the State Implementation Plan, which is Maryland's plan for meeting the National Ambient Air Quality Standards.

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	F. Test methods and the frequency of testing required by this regulation may be modified for vapor assist systems, if the test methods and testing frequency are approved by the Department and the EPA.
7.3	<u>Monitoring Requirements:</u> COMAR 26.11.24.05 - Inspection Requirements. A. "An operator subject to this chapter shall ensure that each approved system is inspected at least once each day of operation to verify that it is working properly. B. Except as provided in Sec. C of this regulation, the Department shall consider an operator of a gasoline dispensing facility to be in violation of Regulation .03E of this chapter during periods of time when defective equipment at the facility is placed in operation. C. The operator is not in violation of Regulation .03E of this chapter during any period of time that the operator establishes, to the satisfaction of the Department, that nozzles associated with defective equipment were tagged out of service and that no nozzle associated with the defective equipment was actually used. D. For any defective equipment identified by the Department, the operator shall effect necessary repairs before placing the equipment in service, and shall inform the Department by telephone within 72 hours after the repair or replacement of the defective equipment has been effected."

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7.4	<u>Record Keeping Requirements:</u> COMAR 26.11.24.07 - Recording Keeping and Reporting Requirements. A. "An operator subject to this chapter shall create and maintain a record file at the facility. B. The record file shall contain copies of all test reports, permits, violation notices, correspondence with the Department, equipment maintenance records, training records, and other information pertinent to the requirements of this chapter. Verification of training shall be maintained in the facility file. Equipment maintenance records required under this chapter shall be maintained for at least 2 years. All other records shall be maintained for at least 5 years. C. The equipment maintenance records shall include: (1) The date on which defective equipment was found, a description of each defect, a description of the corrective action and the date on which the defect was corrected, and the probable cause of the defect; (2) If parts are replaced, the location within the approved system of the part, the part number, and assurance that the replacement part does not degrade the efficiency of the system; and (3) Inspection reports and any other information relating to maintenance or care of the approved system."
7.5	<u>Reporting Requirements:</u> If any test is failed, the Permittee shall notify the Department in writing within 5 days after the test and before retesting. [Reference: COMAR 26.11.24.04E] The Permittee shall submit written notification to the Department within 5 days of the incident, unless otherwise specified by the Permit. [Reference: COMAR 26.11.24.04E] COMAR 26.11.24.07E: "The following reporting requirements apply to a test under this chapter: (1) The Department shall be notified 5 days before a test is to be conducted; (2) A test protocol shall be available at the test site during testing; (3) Copies of all test results shall be forwarded to the Department within 30 days of the test; and

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	(4) Test failures shall be reported to the Department in writing within 5 days following the date of the failure.”

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

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10.0	<u>Emissions Unit Number(s)</u> Facility-Wide
10.1	<u>Applicable Standards/Limits:</u> <u>Control of VOC Emissions</u> A. <u>COMAR 26.11.19.02I. - Good Operating Practices, Equipment Cleanup, and VOC Storage.</u> “(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. (2) <u>Good Operating Practices</u> . (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) As practical, scheduling of operations to minimize color or material changes when applying VOC coatings or other materials by spray gun; (iv) For spray gun applications of coatings, use of high volume low pressure (HVLP) or other high efficiency application methods where practical; and

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	(v) 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) <u>Equipment Cleanup.</u> (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) <u>VOC Storage and Transfer.</u> (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.”

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	B. COMAR 26.11.19.16B, C & D - <u>Control of VOC Equipment Leaks</u> <u>“Applicability.</u> A person subject to any VOC emission standard or limitation established in this chapter and not otherwise subject to more specific VOC leak requirements of another regulation is subject to the requirements of this regulation. <u>General Requirements.</u> A person subject to this regulation shall comply with all of the following requirements: (1) Visually inspect all components on the premises for leaks at least once each calendar month. (2) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date the leak was discovered, and the name of the person who discovered the leak. The tag shall remain in place until the leak has been repaired. (3) Take immediate action to repair all observed VOC leaks that can be repaired within 48 hours. (4) Repair all other leaking components not later than 15 days after the leak is discovered. If a replacement part is needed, the part shall be ordered within 3 days after discovery of the leak, and the leak shall be repaired within 48 hours after receiving the part. (5) Maintain a supply of components or component parts that are recognized by the source to wear or corrode, or that otherwise need to be routinely replaced, such as seals, gaskets, packing, and pipe fittings. (6) Maintain a log that includes the name of the person conducting the inspection and the date on which leak inspections are made, the findings of the inspection, and a list of leaks by tag identification number. The log shall be made available to the Department upon request. Leak records shall be maintained for a period of not less than 2 years from the date of their occurrence. <u>Exceptions.</u> 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.”
10.2	<u>Testing Requirements:</u> <u>Control of VOC Emissions</u> A. See Monitoring Requirements.

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	B. See Monitoring Requirements.
10.3	<u>Monitoring Requirements:</u> <u>Control of VOC Emissions</u> A. The Permittee shall conduct facility-wide inspections at least once per quarter to determine the compliance status of facility operations with regard to implementation of “good operating practices” designed to minimize emissions of VOC. [Reference: COMAR 26.11.03.06C] B. The Permittee shall visually inspect all components on the premises for VOC leaks at least once each calendar month following the procedures specified in COMAR 26.11.19.16. [Reference: COMAR 26.11.19.16C(1)].
10.4	<u>Record Keeping Requirements:</u> NOTE: All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06C(5)(g)] <u>Control of VOC Emissions</u> A. The Permittee shall maintain: (1) Written descriptions of all “good operating practices” designed to minimize emissions of VOC from facility-wide operations. [Reference: COMAR 26.11.19.02I] (2) Records of all inspections conducted to determine the facility’s compliance status with regard to implementation of “good operating practices” designed to minimize emissions of VOC from facility-wide operations. The records shall include for each inspection the name of the inspector, the date and time of the inspection, and an account of the findings. [Reference: COMAR 26.11.03.06C] B. The Permittee shall 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, a list of leaks by tag identification number and identity of components that cannot be repaired as required in this regulation because they are inaccessible, or that cannot be repaired during operation if the source. The log shall be made available to the Department upon request. Leak records, along with the log shall be maintained for a period of not less than 2 years from the date of their occurrence. [Reference: COMAR 26.11.03.06C].

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10.5	<u>Reporting Requirements:</u> <u>Control of VOC Emissions</u> A. Good operating practices information as required by COMAR 26.11.19.02I shall be made available to the Department upon request. B. Leak inspection logs as required by COMAR 26.11.19.16 shall be made available to the Department upon request.

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) 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. 44 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.

See Table IV-4 for additional Requirements.

- (2) No. 87 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:

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- (A) COMAR 26.11.09.05E(2), Emissions During Idle Mode:
The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.
 - (B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.
 - (C) Exceptions:
 - (i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
 - (ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - (a) Engines that are idled continuously when not in service: 30 minutes
 - (b) all other engines: 15 minutes.
 - (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) ✓ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
 - (6) ✓ Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;

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- (7) ✓ Confection cookers where the products are edible and intended for human consumption;
- (8) ✓ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
- (9) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
- (10) ✓ 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;
- (11) ✓ 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;
- (12) Containers, reservoirs, or tanks used exclusively for:
- (a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;
- (b) No. 365 Storage of lubricating oils;
- (c) No. 394 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (d) No. 14 Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
- (13) ✓ 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;
- (14) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and

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 ABERDEEN PROVING GROUND, MD 21005-5001
 DRAFT PART 70 OPERATING PERMIT NO. 24-025-0081**

medicine preparation used in support of a manufacturing or production process;

- (15) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (16) ✓ Firing and testing of military weapons and explosives;
- (17) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (18) ✓ Laboratory fume hoods and vents;

For the following, attach additional pages as necessary:

- (19) 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. 1 Building 6004 – Four (4) Paint Spray Booths used for miscellaneous metal coating

No. 1 Fire Safety Test Enclosure

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

No. 1 See Exempt Emission Unit List. (in the Table below)._____

Reference: Memorandum dated August 2, 1996 from John S. Seitz, Director of Office of Air Quality Planning and Standards (MD-10), Subject: Major Source Determination for Military Installations under the Air Toxics, New Source Review, and Title V Operating Permit Programs of the Clean Air Act.

Emission Unit No.	MDE Registration Number	Emission Unit Description	Facility Description
26-2379-A01	025-4-0619	Fuel oil boiler	Auto Craft Shop
26-2401-A01	025-0081-4-0619	Fuel oil boiler	PX

**U.S. ARMY GARRISON ABERDEEN PROVING GROUND
 ABERDEEN AREA
 6504 RODMAN ROAD, BLDG 4304
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 DRAFT PART 70 OPERATING PERMIT NO. 24-025-0081**

26-2502-A01 & A02	12-5-0152	Natural gas/No.2 fuel oil-fired boilers	Kirk Army Health Clinic
26-2522-A01	12-4-0619	Fuel Oil Boiler, 1.054 MMBtu/hr	Youth Center
26-3245-A01	025-0081-5-0152	Natural gas/No. 2 fuel oil-fired boiler	NEC
26-3300-A01	12-5-0152	Natural gas-fired Boiler	Physical Fitness Center (DFMWR)
26-3326-A02	025-0081-5-0152	Natural gas-fired boiler	Recreation Center (DFMWR)
26-3330-A01 & A02	12-5-0152	Natural gas-fired boilers	Gym (DFMWR)
26-3400-A02	12-5-0152	Natural gas boiler	Commissary (DECA)
35-2514-A01 through A03	12-9-0152	UST	AAFES Gas Station
99-2379-A01	12-6-0202	Vehicle Refinishing PSB	Auto Craft Shop

**U.S. ARMY GARRISON ABERDEEN PROVING GROUND
ABERDEEN AREA
6504 RODMAN ROAD, BLDG 4304
ABERDEEN PROVING GROUND, MD 21005-5001
DRAFT PART 70 OPERATING PERMIT NO. 24-025-0081**

SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

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

1. Applicable Regulations:
 - (A) COMAR 26.11.06.08 – Nuisance. An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”
 - (B) COMAR 26.11.06.09 - Odors. “A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”
 - (C) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
 - (D) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.
2. Record Keeping and Reporting:

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

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



PART 70 PERMIT
RENEWAL APPLICATION
FOR
ABERDEEN AREA
OF
ABERDEEN PROVING GROUND

Prepared for:

Directorate of Public Works
U.S. Army Garrison,
Aberdeen Proving Ground



November 2023

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Attachments

2022 Emissions Certification Report for Aberdeen Area of APG
2022 Compliance Certification Report for Aberdeen Area of APG

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**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION RENEWAL
TITLE V APPLICATION CHECKLIST**

VI. Application Completeness Checklist

The purpose of this part is to list the information required to achieve a Part 70 application shield.

Cover Page

- (X) Name and address of owner or operator, including telephone number.
- (X) Name and address of facility, including the plant manager's name and telephone number.
- (X) A 24-hour emergency telephone number for air pollution matters.

Section 1 CERTIFICATION STATEMENTS

- (X) The certification statement completed and signed by a responsible official.

Section 2 FACILITY DESCRIPTION SUMMARY

- (X) A brief description of each of the source's process(es), including all applicable SIC codes and end products.
- (X) Flow diagrams indicating all emissions units, emission points, and control devices.
- (NA) A plot plan of the entire facility.
- (X) Emission Certification Report.
- (X) General Emissions Information.

Section 3 EMISSIONS UNIT DESCRIPTIONS –

This section must be completed for each emissions unit.

Part A

- (X) Emissions unit number.
- (X) Detailed description of unit, including all emission points.
- (X) Federally enforceable limit(s) on the operating schedule.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION RENEWAL
TITLE V APPLICATION CHECKLIST**

- (X) Fuel consumption information for any emissions unit that consumes fuel including the type of fuel, percent sulfur, and annual usage of fuel.

Part B

- (X) A citation and description of each federally enforceable requirement, including all emission standards, for each emissions unit.
- (X) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- (X) The frequency of submittal of the compliance demonstration during the permit term.

Part C

- (X) Emissions unit number.
- (X) Permit to construct number.
- (X) Emissions point number(s).
- (X) Date(s) the permit to construct was issued.
- (X) Condition number(s) as indicated on the permit to construct.
- (X) Description of the permit condition(s) and the reason(s) why they are believed to be obsolete, extraneous, or insignificant.

Part D

- (NA) Description of all alternate operating scenarios that apply to an emissions unit.
- (NA) Number assigned to each scenario.
- (NA) Emissions unit number.

- (NA) Description of the operating parameters for the emissions unit and other information which describes the how the operation of the unit will change under the different scenario.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION RENEWAL
TITLE V APPLICATION CHECKLIST**

Part E

- (NA) A citation and description of each federally enforceable requirement triggered by an operating scenario, including all emission standards, for each emissions unit.
- (NA) As an attachment, the date and results of the most recent compliance demonstration for each emission standard and/or emissions certification report with relevant supporting documentation.
- (NA) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- (NA) The frequency of submittal of the compliance demonstration during the permit term.

Section 4 CONTROL EQUIPMENT

- (X) The type of each piece of air pollution control equipment
- (X) The capture and control efficiencies of the control equipment.

Section 5 SUMMARY SHEET OF POTENTIAL EMISSIONS

- (NA) Quantity of potential emissions for criteria pollutants and HAPs emitted in tons per year for each emissions unit.
- (NA) Fugitive emission estimations for the entire facility for criteria pollutants and HAPs emitted in tons per year.
- (NA) Basis for all emission calculations.

**Section 6 AN EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY
ENFORCEABLE REQUIREMENTS**

- (NA) An explanation of the proposed exemption.

**Section 7 COMPLIANCE SCHEDULE FOR NONCOMPLYING
EMISSIONS UNITS**

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION RENEWAL
TITLE V APPLICATION CHECKLIST**

- (NA) Identification of emissions unit(s) not in compliance, including the requirement being violated and the effective compliance date.
- (NA) Detailed description of methods to be used to achieve compliance.
- (NA) A schedule of remedial measures, including an enforceable sequence of actions with milestones.

Attachment

- (X) Checklist of Insignificant Activities
- (NA) CAM Plan (If Applicable)

Executive Summary

The Aberdeen Proving Ground (APG) is a military installation. APG is divided into two distinct areas: the northern Aberdeen Area and the southern Edgewood Area. This Part 70 permit renewal application is for the Aberdeen Area of APG. The regulated activities, which result in air emissions at the Aberdeen Area, include space heating, process, and NSPS boilers; emergency generators; stationary engines; paint spray booths; and underground storage tanks. The current Part 70 Permit for Aberdeen Area (Number 24-025-00081) expires on January 31, 2025.

As a part of this Part 70 Permit Renewal Application, listed below are the proposed changes to the current Part 70 Permit. The changes include emission units that have been permanently removed, emission units that have been replaced, and newly permitted emission units. The changes also include air regulations that have either been repealed from COMAR or are no longer applicable to any of the emission units. In addition, the facility previously referred to as C4ISR has been renamed C5ISR.

The emission units that are proposed to be removed from the current Part 70 permit or replaced are listed in Table 1 below.

Table 1. List of Removed/Replaced Emission Units

Emission Unit (EU) Number	MDE Registration Number	Comments
0390-A01	12-4-0619	2.96 MMBtu/hr space heating boiler, fuel oil
0400-A01	12-4-0546N	1.827 MMBtu/hr space heating boiler, fuel oil
745A-A01	12-4-0619	Building Demolished, 1.680 MMBtu/hr space heating boiler, fuel oil
Bldg. 413	N/A	630 hp generator, diesel
36-02353-A01	12-6-0207	Automotive and Equipment refinishing paint spray booth
07-0525-A01	12-9-0216	Fire Test Laboratory
Bldg. 4603 – Atmospheric Burner at HESATF	25-0081-4-0692	A request to depermit this unit as it should be considered an exempt piece of bench scale lab equipment has been made.

The new emission units that are proposed to be added to the Part 70 permit are listed in Table 2 below.

Table 2. List of Newly Permitted Emission Units

Emission Unit (EU) Number	MDE Registration Number	Comments
0400-A02	025-0081-5-0384	space heating boiler
0400-A03	025-0081-5-0384	space heating boiler
0383A-A01	025-0081-5-0376	space heating boiler
0383A-A02	025-0081-5-0376	space heating boiler
3511-A01	Pending	emergency generator
3511-A02	Pending	emergency generator

Changes to the exempt emission unit list are shown in Table 3 on the following page.

Table 3. List of Changes to Exempt Emission Units

Emission Unit (EU) Number	MDE Registration Number	Comments
Bldg. 4603 – Atmospheric Burner at HESATF	25-0081-4-0692	A request to depermit this unit as it should be considered an exempt piece of lab equipment has been made

Insignificant Activities: Please note that the count of the following insignificant activities has changed due to construction and demolition of several buildings.

- 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;
- Containers, reservoirs, or tanks used exclusively for storing of lubricating oils; and
- Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel.

Air Regulations:

Given that Air regulation COMAR 26.11.36.03A, which applies to the operation of emergency generators, was revised to simply refer to 40 CFR Part 63 Subpart ZZZZ and 40 CFR 63.6585(f) excludes residential, commercial and institutional emergency RICE from the requirements of subpart ZZZZ, a determination was completed in May 2022. This determination as summarized in the picture below concluded that several emergency engines at the APG Aberdeen Area meet the Commercial, Institutional and Residential exclusion.

RICE MACT ZZZZ applies to small (non-permitted) engines if not Institutional, Commercial, or Residential.

Definition: [§63.6675](#)

Signature per 40CFR63.10(b)(3)

40 CFR 63.10(b)(3) requires that sources which qualify for an exclusion from a standard established pursuant to section 112 of the Clean Air Act must keep a record of the applicability determination and this record must be kept on site at the source for a period of 5 years for determination made prior to January 19th 2021. This file - the signed APG Air Emissions Units 2020 - stationary engine tab was modified in February 2020 to show which emergency engines meet the Commercial, Institutional and Residential exclusion based on application at APG Aberdeen and Edgewood areas based on Melanie King's *Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary Rice in the NESHAP for Stationary Rice* EPA Docket EPA-HQ-OAR-2008-0708 dated August 9, 2010 and is the applicability determination. Per appendix A of this Memo based on 2007 NAICS Code 928110 "National Security" [second from last line in memo] emergency engines at APG can be determined to be Commercial/ Institutional/Residential (ICR) or non ICR based on "depends on application". Thus the 2020 APG Air Emissions Units 2020 spread sheet - stationary engines tab was modified to add a column for ICR Column V for Building Use (I,C,R) based on NAICS code in Column U which was based on the Building Cat code from Column V which determined the ICR or NON ICR designation based on the use of the building the engine is located at. These determinations were made jointly between Marc Petrequin and Duane King ORISE.

Signed

Date 5/31/2022

Duane King

Marc Petrequin

Marc Petrequin, Physical Scientist
Signed 23 Aug 2022

PART 70 PERMIT APPLICATION FOR RENEWAL
AIR AND RADIATION ADMINISTRATION

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

Owner and Operator:

Name of Owner or Operator: U.S. Army Garrison, Aberdeen Proving Ground		
Street Address: 4304 Rodman Road		
City: Aberdeen Proving Ground	State: MD	Zip Code: 21005-5001
Telephone Number 410-306-2250		Fax Number 410-306-2252

Facility Information:

Name of Facility: APG -Aberdeen Area		
Street Address: Building 4510, 6429 Boothby Hill Avenue		
City: Aberdeen Proving Ground	State: MD	Zip Code: 21005-5001
Plant Manager: Sarah Kryston	Telephone Number: 410-306-2270	Fax Number: 410-306-2252
24-Hour Emergency Telephone Number for Air Pollution Matters: 410-306-2278 (Hazoar Khan)		

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

SECTION 1. CERTIFICATION STATEMENTS



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

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

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

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

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

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

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

4. Risk Management Plan Compliance

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

☒ [X] has been submitted;

☐ [] will be submitted at a future date; or

☐ [] does not need to be submitted.



4. Statement of Truth, Accuracy, and Completeness

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

RESPONSIBLE OFFICIAL:

X _____ 12/5/23

SIGNATURE

DATE

Sarah Kryston

PRINTED NAME

Chief, Environmental Compliance Branch

TITLE



SECTION 2. FACILITY DESCRIPTION SUMMARY

1. Major Activities of Facility

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

The Aberdeen Proving Ground (APG) is a military installation. APG is divided into two distinct areas: the northern Aberdeen Area and the southern Edgewood Area. This Part 70 permit renewal application is for the Aberdeen Area of APG. The regulated activities, which produce air emissions at the Aberdeen Area, include space heating, process, and NSPS boilers; emergency generators; stationary engines; paint spray booths; underground storage tanks; a fire test laboratory; and an atmospheric burner at Heat Engine Systems Altitude Test Facility (HESATF). The applicable primary SIC code is 9711.

2. Facility-Wide Emissions

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

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

B. List the actual facility-wide emissions below: Obtained from 2022 Annual Emissions Certification

PM10 0.53 NOx 30.09 VOC 2.29 SOx 1.30 CO 16.47 HAPs 1.08 .

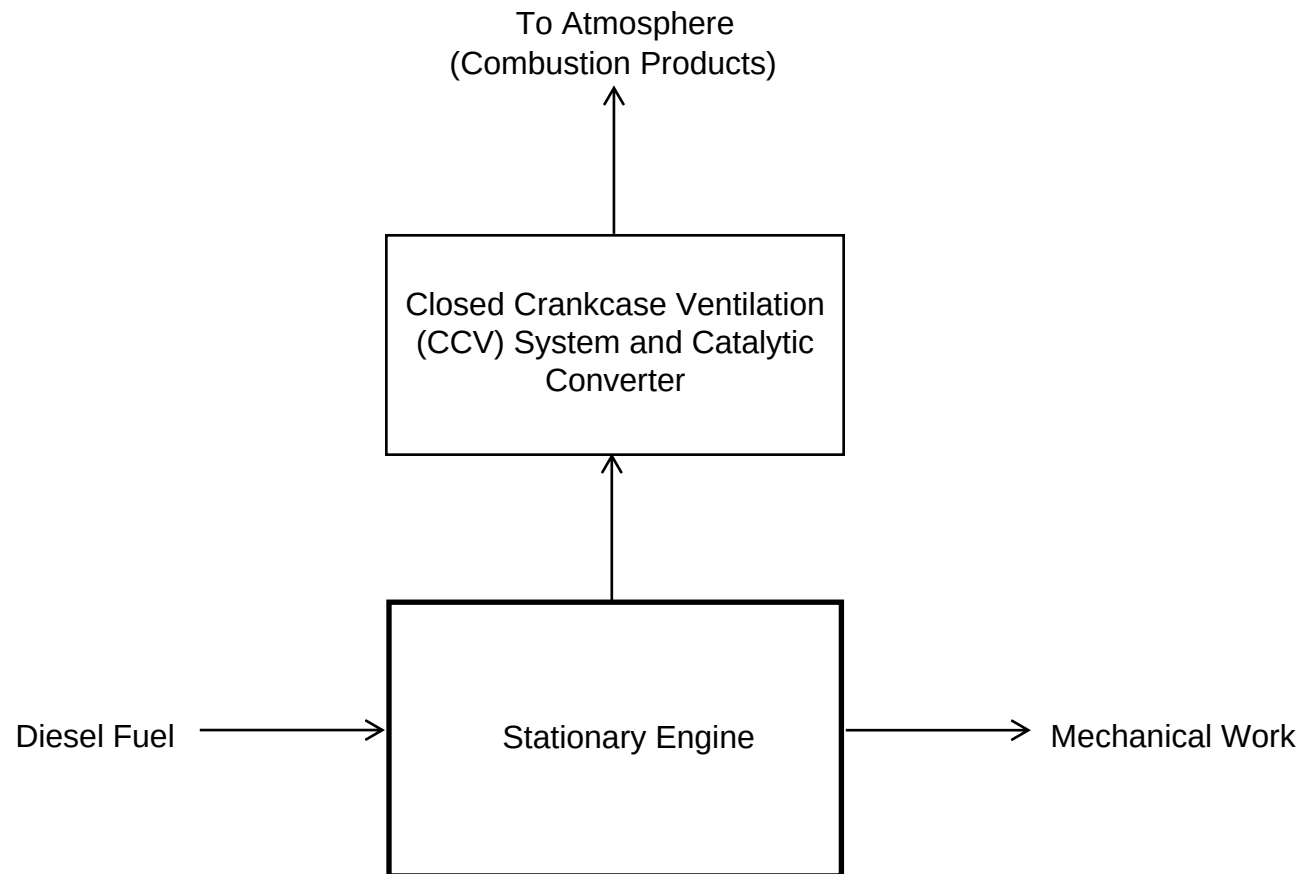
3. Include With the Application:

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

See Figure 1. Stationary Engines Line Diagram, attached.



Figure 1. Stationary Engines Line Diagram (See Stationary Engines Table)



Part 70 Permit Renewal Application

Request For Shield

Application Shield

Aberdeen Proving Ground (Aberdeen Area), upon submittal of a timely and complete Part 70 Permit Renewal Application requests an “application shield” as described in COMAR 26.11.03.01D, *Application Shield*. APG will provide any additional information pertaining to applicable requirements of the Clean Air Act requested by the Department in writing by a reasonable deadline, as provided by Regulation .02C(3) of this chapter in order to retain the “application shield”.

Plant Wide Requirements

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SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: Plant Wide 1a. Date of installation (month/year): Not Applicable	2. MDE Registration No.:(if applicable) Not Applicable												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): The Aberdeen Proving Ground (APG) Aberdeen Area is a military installation. The regulated activities which produce emissions at the Aberdeen Area include space heating, process, and NSPS boilers; generators; paint spray booths; underground storage tanks; stationary engines; a fire test laboratory; and the atmospheric burner at the Heat Engine Systems Altitude Test Facility (HESATF)													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Type(s) of Fuel</th> <th style="text-align: left; width: 20%;">% Sulfur</th> <th style="text-align: left; width: 40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u>Not Applicable</u></td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u>Not Applicable</u>			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. <u>Not Applicable</u>													
2. _____													
3. _____													
6. Emissions in Tons: A. Actual Major: <u>NOx</u> Potential Major: <u>NOx > 25 tpy</u> (note: before control device) B. Actual Emissions: NOx <u>30.09</u> SOx <u>1.30</u> VOC <u>2.29</u> PM10 <u>0.53</u> HAPs <u>1.08E+00</u>													



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

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.06.03

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.06.03D states that the permittee shall not cause or permit any building, its appurtenances, or a road to be used, altered, repaired or demolished without taking responsible precautions to prevent particulate matter from becoming airborne.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: [Click or tap here to enter text.](#)
☒ Annual Compliance Certification: Title V Compliance Certification Report
☐ Semi-Annual Monitoring Report: [Click or tap here to enter text.](#)

Methods used to demonstrate compliance:

Monitoring: Reference APG Regulation 200-30 Describe: APG shall use water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel.
"Environmental Quality Air Quality Management at
Aberdeen Proving Ground" paragraph 2-5 d. (2)(a).
(01 May 2016)

Testing: Reference _____ Describe: None

Record Keeping: Reference _____ Describe: None

Reporting: Reference _____ Describe: None

Frequency of submittal of the compliance demonstration: Annual



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

Emissions Unit No.: Plantwide **General Reference:** COMAR 26.11.07.06

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.07.06 Requires that a person who performs safety determinations at Federal facilities or other facilities under contract with the federal government shall: (1) take all responsible precautions to minimize emissions during any safety determination; (2) schedule safety determinations, whenever possible, during days when maximum dispersion for pollutants will be achieved; (3) notify the control officer at least 24 hours in advance when a safety determination is to be performed that has a duration of 2 hours or longer; and (4) submit a report of anticipated or expected safety determinations to control officer semiannually.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification Report
☒ Semi-Annual Monitoring Report: Semi-Annual Report of Safety Determinations

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference _____ Describe: None

Record Keeping: Reference _____ Describe: None

Reporting: Reference COMAR 26.11.07.06C Describe: APG shall submit a report including: (1) time frame during which each known safety determination is to occur; (2) the duration of each determination; (3) general information related to each safety determination. APG shall submit this report no later than 15 days prior to each semi-annual period, or no less than 1 week before any safety determination not anticipated six months in advance. This will be verified by periodic review of notifications and reports by DPW Environmental Personnel.

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



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

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.05.04

Briefly describe the Emission Standard/Limit or Operational Limitation:

COMAR 26.11.05.04 states that 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. Standby emissions reduction plans shall be designed to reduce or eliminate emissions in accordance with the objectives set forth in Tables I, II, and III of COMAR 26.11.05.06 as applicable.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: [Click or tap here to enter text.](#)
☒ Annual Compliance Certification: Title V Compliance Certification Report
☐ Semi-Annual Monitoring Report: [Click or tap here to enter text.](#)

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference _____ Describe: None

Record Keeping: Reference _____ Describe: None

Reporting: Reference COMAR 26.11.05.04 Describe: If requested by the Department, APG shall submit standby emissions reduction plans to the Department. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



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

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.01.07 & 26.11.03.06C(7)

Briefly describe the Emission Standard/Limit or Operational Limitation:

The permittee shall comply with the following conditions for occurrences of excess emissions from requirements of this permit including the State-only enforceable section: (See attached page)

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification Report
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference: APG Regulation 200-30 **Describe:** Garrison and Tenant operating personnel are responsible for observing and monitoring their operations, and if a deviation occurs, are to report immediately to DPW Environmental. DPW Environmental will contact regulatory agencies, as appropriate.
"Environmental Quality Air Quality Management at Aberdeen Proving Ground" Paragraph 2-11 d.(2), (01 May 2016)

Testing: Reference _____ **Describe:** None

Record Keeping: Reference _____ **Describe:** None

Reporting: Reference COMAR 26.11.01.07C and D **Describe:** APG shall report the onset and termination of all occurrences of excess emissions that are expected to last for one hour or longer by telephone to the Department. When requested by the Department, APG shall submit a written report within 10 days of receiving the request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: As Necessary and Annual



Emission Standard/Limit or Operational Limitation:

(Continued from previous page)

- (1) 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;
- (2) 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;
- (3) When requested by the Department, the permittee shall report all deviations from the 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;
- (4) 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 the 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 at the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and time of onset and termination, identification of person who observed or discovered the deviation, causes and corrective actions taken, and action to prevent recurrence. If no deviations from the permit conditions occurred during a reporting period, the permittee shall submit a written report that so states;
- (5) 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).



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

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.03.03B(23) & 40 CFR 68

Briefly describe the Emission Standard/Limit or Operational Limitation:

APG is subject to 40 CFR 68 and shall submit a Risk Management Plan by the dates specified in 40 CFR Part 68.150. APG will certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR Part 70.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification Report
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference 40 CFR 68.79 Describe: APG reviews and updates the Risk Management Plan as necessary, at least every three years, per 40 CFR 68.79. This will be verified by periodic internal inspections by DPW Environmental Personnel.

Testing: Reference _____ Describe: None

Record Keeping: Reference _____ Describe: None

Reporting: Reference COMAR 26.11.03.03B(23) Describe APG shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Plant Wide General Reference: COMAR 26.11.01.04

Briefly describe the Emission Standard/Limit or Operational Limitation:

The Department may require the permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, as 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.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: [Click or tap here to enter text.](#)
☒ Annual Compliance Certification: Title V Compliance Certification Report
☐ Semi-Annual Monitoring Report: [Click or tap here to enter text.](#)

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference COMAR 26.11.01.04 Describe: APG shall conduct testing as required by the Department. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Record Keeping: Reference _____ Describe: None

Reporting: Reference COMAR 26.11.04 Describe APG shall provide information gathered during testing operations upon completion of the tests. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Plant Wide General Reference: COMAR 26.11.01.04C

Briefly describe the Emission Standard/Limit or Operational Limitation:

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. Documents referenced in the test methods approved by the Department include: (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", (Jan 1991), as amended through Supplement 3, (Oct 1, 1997).

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: [Click or tap here to enter text.](#)
☒ Annual Compliance Certification: Title V Compliance Certification Report
☐ Semi-Annual Monitoring Report: [Click or tap here to enter text.](#)

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference COMAR 26.11.01.04C Describe: Test methods used by APG will be consistent with approved methods and test protocol. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Record Keeping: Reference _____ Describe: None

Reporting: Reference _____ Describe None

Frequency of submittal of the compliance demonstration: Annual



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

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.01.05-1, COMAR 26.11.02.19C
and COMAR 26.11.02.19D

Briefly describe the Emission Standard/Limit or Operational Limitation:

The permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis. (See attached page).

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: [Click or tap here to enter text.](#)
☒ Annual Compliance Certification: Title V Compliance Certification and Annual Emission Certification
☐ Semi-Annual Monitoring Report: [Click or tap here to enter text.](#)

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference _____ Describe: None

Record Keeping: Reference COMAR 26.11.02.19C(2) Describe: Information required by COMAR 26.11.02.19C(1) shall be retained for a period of 5 years and made available to the Department upon request. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.02.19D Describe APG shall submit an annual emission certification to the Department not later than April 1 of the year following the year for which certification is required. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



Emission Standard/Limit or Operational Limitation:

(Continued from previous page)

- a. The certification shall be on a form 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, in accordance with COMAR 26.11.02.02F. The individual shall be:
 - 1) Familiar with each source for which the certification form is submitted, and
 - 2) Responsible for the accuracy of the emission information; and
- c. The permittee shall maintain records necessary to support the emission 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 methods used to quantify the emissions and operating schedules and production data that was used to determine emissions, including significant assumptions made;
 - 3) Amounts, types, and analyses of all fuels used;
 - 4) Emissions data from continuous data monitors that are required by this permit, including monitor calibration and malfunction information;
 - 5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:
 - a) Significant maintenance performed,
 - b) Malfunctions and downtime, and
 - c) Episodes of reduced efficiency of all the 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.



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Plant Wide General Reference: COMAR 26.11.01.05-1, COMAR 26.11.02.19C

Briefly describe the Emission Standard/Limit or Operational Limitation:

The permittee shall submit to the Department and EPA Region III simultaneously a report certifying compliance with each term of this Part 70 permit including each applicable standard, emission limitation, and work practice for the previous calendar year by April 1 of each year. The compliance certification shall include: the identification of each term or condition of the permit, the compliance status, whether compliance was continuous or intermittent, the methods used to determine compliance status, and any other required information necessary to determine compliance status.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: [Click or tap here to enter text.](#)
☒ Annual Compliance Certification: [Title V Compliance Certification](#)
☐ Semi-Annual Monitoring Report: [Click or tap here to enter text.](#)

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference _____ Describe: None

Record Keeping: Reference _____ Describe: None

Reporting: Reference COMAR 26.11.03.06G Describe The compliance certification will be submitted to the Department and EPA simultaneously by April 1 of each year. All other information required by the permit will be reported as part of the annual report or supplemental reports as applicable. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



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

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.02.02F

Briefly describe the Emission Standard/Limit or Operational Limitation:

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

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference _____ Describe: None

Record Keeping: Reference _____ Describe: None

Reporting: Reference COMAR 26.11.02.02F Describe APG makes this certification annually as part of the annual report.
This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



Emission Standard/Limit or Operational Limitation:

(Continued from previous page)

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 the enquiry 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.”



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

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.03.06C(5)

Briefly describe the Emission Standard/Limit or Operational Limitation:

The permittee shall gather and retain the following information when sampling and testing for compliance demonstration: a. The location as specified in the 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 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.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference _____ Describe: None

Record Keeping: Reference COMAR 26.11.03.06C(5) Describe: APG will maintain sampling and testing records. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference _____ Describe None

Frequency of submittal of the compliance demonstration: Annual



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

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.03.06C(6)

Briefly describe the Emission Standard/Limit or Operational Limitation:

The permittee shall retain records of all monitoring data and information that supports the compliance certification for a period of five 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 the permit.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference _____ Describe: None

Record Keeping: Reference COMAR 26.211.03.06C(6) Describe: APG will retain records of all monitoring and support information for a period of 5 years. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference _____ Describe: None

Frequency of submittal of the compliance demonstration: Annual



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Plant Wide General Reference: COMAR 26.11.26.09

Briefly describe the Emission Standard/Limit or Operational Limitation:

The permittee shall comply with the General Conformity requirements of 40 CFR Part 93, Subpart B and COMAR 26.11.26.09

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference APG Regulation 200-30 Describe: Army regulations require documentation to comply with conformity regulations. Documentation is reviewed by APG Environmental Division. Paragraph 2-3 d. of APG Regulation 200-30 "Environmental Quality Air Quality Management at Aberdeen Proving Ground" (01 May 2016) requires action that may produce emissions subject to General Conformity be evaluated. This will be verified by periodic internal reviews of documentation (i.e. REC and RONA)

Testing: Reference _____ Describe: None

Record Keeping: Reference APG Regulation 200-30 Describe: APG maintains records of RONA and REC documentation. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records

Reporting: Reference _____ Describe None

Frequency of submittal of the compliance demonstration: Annual



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Plant Wide General Reference: 40 CFR 61 Subpart M

Briefly describe the Emission Standard/Limit or Operational Limitation:

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

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference 40 CFR 61 Subpart M Describe: APG requires adherence via internal air regulation and Asbestos Management Plan and policy. This will be verified by periodic internal inspections by DPW Environmental personnel.

Testing: Reference _____ Describe: None

Record Keeping: Reference 40 CFR 61.150 Describe: APG shall retain a copy of all waste shipment records for at least 2 years. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference 40 CFR 61.150 Describe APG shall report if a copy of the signed waste shipment record is not received by the waste generator within 45 days of the date the waste was accepted by the initial transporter. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel

Frequency of submittal of the compliance demonstration: Annual



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Plant Wide General Reference: 40 CFR 82 Subpart F

Briefly describe the Emission Standard/Limit or Operational Limitation:

The Permittee shall comply with the standards for recycling and emission reduction pursuant to 40 CFR Part 82 Subpart F, except as provided for MVACs in Subpart B. (See attached page).

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference 40 CFR 82.157 and 156 Describe: APG shall conduct internal inspections to verify technician credentials and equipment certification. APG or its contractor will perform any required calculations. APG Environmental personnel will conduct internal inspections of these records

Testing: Reference 40 CFR 82.157 Describe: APG or its contractor will conduct any required verification testing. APG Environmental personnel will perform internal inspections of verification testing records.

Record Keeping: Reference 40 CFR 82.157(l) and 161 Describe: APG or its contractor will maintain maintenance, service, repair and disposal records for at least three years. APG will require technicians to be certified. APG Environmental personnel will perform internal inspections of maintenance, service, repair and disposal records and technician certification cards

Reporting: Reference 40 CFR 82.157(m) Describe APG or its contractor will notify EPA as applicable. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



Emission Standard/Limit or Operational Limitation:

(Continued from previous page)

- a. Persons opening appliances for maintenance, service, repair, or disposal must 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 must 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 must be certified by an approved technician certification program pursuant to 40 CFR 82.161;
- d. Persons performing maintenance, service, repair or disposal of appliances must certify with the Administrator pursuant to 40 CFR 82.162;
- e. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, must comply with recordkeeping requirements pursuant to 40 CFR 82.166;
- f. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR 82.156 and 40 CFR 82.157; and
- g. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.



Space Heating Boilers

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SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: See Space Heating Boilers Table 1a. Date of installation (month/year): See Space Heating Boilers Table	2. MDE Registration No.:(if applicable) See Space Heating Boilers Table												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>See Space Heating Boilers Table</u> <u>EU 26-0896-A01: insignificant unit (radiant tube furnace) is a burner and not subject to JJJJJ.</u> _____ _____ _____ _____ _____ _____ _____ _____													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: See Space Heating Boilers Table General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Type(s) of Fuel</th> <th style="text-align: left; width: 40%;">% Sulfur Annual Usage (specify units)</th> <th style="text-align: left; width: 20%;"></th> </tr> </thead> <tbody> <tr> <td>1. Distillate fuel oil</td> <td><0.3</td> <td>See Space Heating Boilers Table</td> </tr> <tr> <td>2. Natural Gas</td> <td>negligible</td> <td>See Space Heating Boilers Table</td> </tr> <tr> <td colspan="3">3. _____</td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur Annual Usage (specify units)		1. Distillate fuel oil	<0.3	See Space Heating Boilers Table	2. Natural Gas	negligible	See Space Heating Boilers Table	3. _____		
Type(s) of Fuel	% Sulfur Annual Usage (specify units)												
1. Distillate fuel oil	<0.3	See Space Heating Boilers Table											
2. Natural Gas	negligible	See Space Heating Boilers Table											
3. _____													
6. Emissions in Tons: See Space Heating Boilers Table A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 _____ HAPs _____													



MARYLAND DEPARTMENT OF THE ENVIRONMENT
Title V Permit Renewal Application - Permit No. 24-025-00081
Aberdeen Proving Ground - Aberdeen Area
November 2023

Section 3A for Space Heating Boilers - Emissions Units Table

Emission Unit No.	Date of Installation (month/yr)	MDE Registration No.	Size (MMBtu/hr)	Federally Enforceable Limit on the Operating Schedule	Fuel Type	2022 Fuel Oil Usage (gallons)	2022 Natural Gas Usage (Therm)	2022 NOx (tons)	2022 SOx (tons)	2022 VOC (tons)	2022 PM10 (tons)	2022 HAPs (tons)	Actual Major	Potential Major (before control device)	Heat Input Capacity >5 MMBtu/hr	Heat Input Capacity ≤5 MMBtu/hr
0030-A01	2012	25-0081-4-0619	2.1	N/A	Fuel Oil	5,139	0	0.05	0.02	0.0009	2.77E-04	1.92E-03	No	No		X
0030-A02	2012	25-0081-4-0619	2.1	N/A	Fuel Oil	5,139	0	0.05	0.02	0.0009	2.77E-04	1.92E-03	No	No		X
0045-A01	2013*	25-0081-4-0619	1.16	N/A	Fuel Oil	1,130	0	0.01	0.00	0.0002	6.10E-05	4.21E-04	No	No		X
0322-A01	2013	25-0081-4-0619	2.07	N/A	Fuel Oil	0	0	0.00	0.00	0.0000	0.00E+00	0.00E+00	No	No		X
0384-A01	2016	025-0081-4-0619	2.718	N/A	Fuel Oil	6,234	0	0.06	0.02	0.0011	3.37E-04	2.32E-03	No	No		X
0394-A01	2010	12-4-0708	2.718	N/A	Fuel Oil	5,738	0	0.06	0.02	0.0010	3.10E-04	2.14E-03	No	No		X
0402-A03	1985	12-4-0619	3.2	N/A	Fuel Oil	0	0	0.00	0.00	0.0000	0.00E+00	0.00E+00	No	No		X
0439-A01	unknown	12-4-0619	1.054	N/A	Fuel Oil	5,183	0	0.05	0.02	0.0009	2.80E-04	1.93E-03	No	No		X
0445-A01	2013	12-4-0707	1.116	N/A	Fuel Oil	5,063	0	0.05	0.02	0.0009	2.73E-04	1.89E-03	No	No		X
26-0449-A01	2016	25-0081-4-0722	2.088	N/A	Fuel Oil	7,389	0	0.07	0.03	0.0013	3.99E-04	2.75E-03	No	No		X
0456-A01	2004	25-0081-4-0619	1.4	N/A	Fuel Oil	5,216	0	0.05	0.02	0.0009	2.82E-04	1.94E-03	No	No		X
0507-A05	2014	25-0081-4-0717	6.695	N/A	Fuel Oil	28,383	0	0.28	0.10	0.0048	1.53E-03	1.06E-02	No	No	X	
0507-A04	1997	12-4-0104N	8.164	N/A	Fuel Oil	28,383	0	0.28	0.10	0.0048	1.53E-03	1.06E-02	No	No	X	
0642-A01	2009	12-4-0689	1.9	N/A	Fuel Oil	6,496	0	0.06	0.02	0.0011	3.51E-04	2.42E-03	No	No		X
0643-A01	2016	025-0081-4-0721	1.143	N/A	Fuel Oil	4,676	0	0.05	0.02	0.0008	2.53E-04	1.74E-03	No	No		X
0644-A01	2006	025-0081-4-0619	1.16	N/A	Fuel Oil	4,690	0	0.05	0.02	0.0008	2.53E-04	1.75E-03	No	No		X
0670-A01	2016	025-0081-4-0719	2.088	N/A	Fuel Oil	5,160	0	0.05	0.02	0.0009	2.79E-04	1.92E-03	No	No		X
0688-A01	2016	025-0081-4-0720	1.773	N/A	Fuel Oil	2,578	0	0.03	0.01	0.0004	1.39E-04	9.61E-04	No	No		X
26-0699A-A01	2016	025-0081-4-0619	4.2	N/A	Fuel Oil	20,264	0	0.20	0.07	0.0034	1.09E-03	7.55E-03	No	No		X
26-0700-A01	1987	12-4-0619	3.347	N/A	Fuel Oil	2,374	0	0.02	0.01	0.0004	1.28E-04	8.77E-04	No	No		X
26-0702-A01	2002	12-4-0619	1.25	N/A	Fuel Oil	2,846	0	0.03	0.01	0.0005	1.54E-04	1.06E-03	No	No		X
26-0860-A01	2003	12-4-0619	1.289	N/A	Fuel Oil	1,932	0	0.02	0.01	0.0003	1.04E-04	7.20E-04	No	No		X
26-0896-A01^^^	1998	12-4-0619	1.5	N/A	Fuel Oil	0	0	0.00	0.00	0.0000	0.00E+00	0.00E+00	No	No		X
906C-A01	2018	25-0081-4-0724	1.23	N/A	Fuel Oil	0	0	0.00	0.00	0.0000	0.00E+00	0.00E+00	No	No		X
26-1064-A01	2009	12-4-0619	3.36	N/A	Fuel Oil	16,985	0	0.17	0.06	0.0029	9.17E-04	6.33E-03	No	No		X
26-1064-A02	2009	12-4-0619	3.36	N/A	Fuel Oil	16,985	0	0.17	0.06	0.0029	9.17E-04	6.33E-03	No	No		X
1134-A01	2013	12-4-0619	1.34	N/A	Fuel Oil	435	0	0.00	0.00	0.0001	2.35E-05	1.62E-04	No	No		X
26-2184-A01	1983	12-4-0619	1.116	N/A	Fuel Oil	0	0	0.00	0.00	0.0000	0.00E+00	0.00E+00	No	No		X
26-2207-A03	1999	12-4-0619	2.37	N/A	Fuel Oil	1,602	0	0.02	0.01	0.0003	8.65E-05	5.97E-04	No	No		X
26-2377-A02	2009	12-4-0619	1.26	N/A	Fuel Oil	0	0	0.00	0.00	0.0000	0.00E+00	0.00E+00	No	No		X
26-2377-A01	1987	12-4-0619	2.37	N/A	Fuel Oil	10,029	0	0.10	0.04	0.0017	5.42E-04	3.74E-03	No	No		X
26-3011-A01	2005	12-4-0619	1.11	N/A	Fuel Oil	5,544	0	0.06	0.02	0.0009	2.99E-04	2.07E-03	No	No		X
3070-A01	2004	12-5-0152	8.165	N/A	Fuel Oil	28,586	0	0.29	0.10	0.0049	1.54E-03	1.07E-02	No	No	X	
26-4725-A01	unknown	12-4-0619	1.281	N/A	Fuel Oil	9,386	0	0.09	0.03	0.0016	5.07E-04	3.50E-03	No	No		X
26-4728-A02	2016	025-0081-4-0619	2.7	N/A	Fuel Oil	13,932	0	0.14	0.05	0.0024	7.52E-04	5.19E-03	No	No		X
5116-A01	2011	25-0081-4-0619	1.68	N/A	Fuel Oil	6,145	0	0.06	0.02	0.0010	3.32E-04	2.29E-03	No	No		X
26-1100F-A01	1996	12-4-0619	1.987	N/A	Fuel Oil	422	0	0.00	0.00	0.0001	2.28E-05	1.57E-04	No	No		X
0269B-A01	2016	25-0081-4-0619	2.718	N/A	Fuel Oil	6,367	0	0.06	0.02	0.0011	3.44E-04	2.37E-03	No	No		X
0280B-A01	2016	25-0081-4-0619	1.458	N/A	Fuel Oil	6,145	0	0.06	0.02	0.0010	3.32E-04	2.29E-03	No	No		X

Emission Unit No.	Date of Installation (month/yr)	MDE Registration No.	Size (MMBtu/hr)	Federally Enforceable Limit on the Operating Schedule	Fuel Type	2022 Fuel Oil Usage (gallons)	2022 Natural Gas Usage (Therm)	2022 NOx (tons)	2022 SOx (tons)	2022 VOC (tons)	2022 PM10 (tons)	2022 HAPs (tons)	Actual Major	Potential Major (before control device)	Heat Input Capacity >5 MMBtu/hr	Heat Input Capacity ≤5 MMBtu/hr
0733A-A01	2013	25-0081-4-0619	1.16	N/A	Fuel Oil	2,887	0	0.03	0.01	0.0005	1.56E-04	1.08E-03	No	No		X
0740B-A01	2006	25-4-0687	1.16	N/A	Fuel Oil	2,225	0	0.02	0.01	0.0004	1.20E-04	8.29E-04	No	No		X
0740C-A01	2010	25-4-0619	1.987	N/A	Fuel Oil	5,479	0	0.05	0.02	0.0009	2.96E-04	2.04E-03	No	No		X
26-0120-A01	2008	12-5-0152	2.51	N/A	Dual Fuel	0	13,675	0.07	0.00	0.0038	1.30E-03	1.29E-03	No	No		X
26-0120-A02	2008	12-5-0152	2.51	N/A	Dual Fuel	0	13,675	0.07	0.00	0.0038	1.30E-03	1.29E-03	No	No		X
26-0402-A01	1996	12-5-0152	3.27	N/A	Dual Fuel	0	44,376	0.22	0.00	0.0122	4.22E-03	4.19E-03	No	No		X
26-0402-A02	1996	12-5-0152	3.27	N/A	Dual Fuel	0	44,376	0.22	0.00	0.0122	4.22E-03	4.19E-03	No	No		X
26-0455-A01	1990	12-5-0152	8.37	N/A	Dual Fuel	13,614	0	0.14	0.05	0.0023	7.35E-03	5.07E-03	No	No	X	
26-0455-A02	1990	12-5-0152	8.37	N/A	Dual Fuel	13,614	0	0.14	0.05	0.0023	7.35E-03	5.07E-03	No	No	X	
26-0525-A02	2010	12-5-0315	8.17	N/A	Dual Fuel	0	8,566	0.04	0.00	0.0024	8.14E-04	8.08E-04	No	No	X	
26-0525-A03	1985	12-5-0334	8.37	N/A	Dual Fuel	0	8,566	0.04	0.00	0.0024	8.14E-04	8.08E-04	No	No	X	
26-0525-A01	1985	12-5-0335	8.37	N/A	Dual Fuel	0	8,566	0.04	0.00	0.0024	8.14E-04	8.08E-04	No	No	X	
26-2312-A01	1996	12-4-0619	5.10	N/A	Dual Fuel	0	0	0.00	0.00	0.0000	0.00E+00	0.00E+00	No	No	X	
26-2312-A02	2009	12-4-0619	2.10	N/A	Dual Fuel	0	0	0.00	0.00	0.0000	0.00E+00	0.00E+00	No	No		X
26-2352-A01	1998	12-5-0152	6.28	N/A	Dual Fuel	0	2,352	0.01	0.00	0.0006	2.23E-04	2.22E-04	No	No	X	
26-3062-A01	2011	25-0081-5-0152	6.12	N/A	Dual Fuel	0	33,087	0.17	0.00	0.0091	3.14E-03	3.12E-03	No	No	X	
26-3660-A01	2009	25-5-0318	1.83	N/A	Dual Fuel	0	16,847	0.08	0.00	0.0046	1.60E-03	1.59E-03	No	No		X
26-04119-A03	2014	12-5-0336	8.17	N/A	Dual Fuel	0	15,015	0.08	0.00	0.0041	1.43E-03	1.42E-03	No	No	X	
26-4119-A02	1994	12-5-0152	8.17	N/A	Dual Fuel	0	15,015	0.08	0.00	0.0041	1.43E-03	1.42E-03	No	No	X	
26-4727-A01	2016	025-0081-5-0152	4.00	N/A	Dual Fuel	0	24,719	0.12	0.00	0.0068	2.35E-03	2.33E-03	No	No		X
26-5014-A03	1991	12-5-0152	7.50	N/A	Dual Fuel	0	12,368	0.06	0.00	0.0034	1.17E-03	1.17E-03	No	No	X	
26-6002-HQBuilding-A01	2009	25-0081-5-0300	3.50	**	Dual Fuel	0	35,535	0.06	0.00	0.0098	3.38E-03	3.35E-03	No	No		X
26-6002-HQBuilding-A02	2009	25-0081-5-0300	3.50	**	Dual Fuel	0	35,535	0.06	0.00	0.0098	3.38E-03	3.35E-03	No	No		X
26-6002-HQBuilding-A03	2009	25-0081-5-0300	3.50	**	Dual Fuel	0	35,535	0.06	0.00	0.0098	3.38E-03	3.35E-03	No	No		X
26-6002-HQBuilding-A04	2009	25-0081-5-0300	3.50	**	Dual Fuel	0	35,535	0.06	0.00	0.0098	3.38E-03	3.35E-03	No	No		X
26-6002-HQBuilding-A05	2009	25-0081-5-0300	3.50	**	Dual Fuel	0	35,535	0.06	0.00	0.0098	3.38E-03	3.35E-03	No	No		X
26-6003-GMSLab-A01	2009	25-0081-5-0301	3.50	**	Dual Fuel	0	37,366	0.07	0.00	0.0103	3.55E-03	3.53E-03	No	No		X
26-6003-GMSLab-A02	2009	25-0081-5-0301	3.50	**	Dual Fuel	0	37,366	0.07	0.00	0.0103	3.55E-03	3.53E-03	No	No		X
26-6003-GMSLab-A03	2009	25-0081-5-0301	3.50	**	Dual Fuel	0	37,366	0.07	0.00	0.0103	3.55E-03	3.53E-03	No	No		X
26-6006-GMSTower-A01	2009	25-0081-5-0299	3.50	**	Dual Fuel	0	14,955	0.03	0.00	0.0041	1.42E-03	1.41E-03	No	No		X
26-6006-GMSTower-A02	2009	25-0081-5-0299	3.50	**	Dual Fuel	0	14,955	0.03	0.00	0.0041	1.42E-03	1.41E-03	No	No		X
26-6006-GMSTower-A03	2009	25-0081-5-0299	3.50	**	Dual Fuel	0	14,955	0.03	0.00	0.0041	1.42E-03	1.41E-03	No	No		X
26-6007-C2CNTWest-A01	2009	25-0081-5-0298	3.50	**	Dual Fuel	0	46,775	0.08	0.00	0.0129	4.44E-03	4.41E-03	No	No		X
26-6007-C2CNTWest-A02	2009	25-0081-5-0298	3.50	**	Dual Fuel	0	46,775	0.08	0.00	0.0129	4.44E-03	4.41E-03	No	No		X
26-6007-C2CNTWest-A03	2009	25-0081-5-0298	3.50	**	Dual Fuel	0	46,775	0.08	0.00	0.0129	4.44E-03	4.41E-03	No	No		X
26-6007-C2CNTWest-A04	2009	25-0081-5-0298	3.50	**	Dual Fuel	0	46,775	0.08	0.00	0.0129	4.44E-03	4.41E-03	No	No		X
0339-A01	2009	12-4-0710	2.06	N/A	Natural Gas	0	13,490	0.07	0.00	0.0037	1.28E-03	1.27E-03	No	No		X
26-0400-A02	2020	025-0081-5-0384	1.69	N/A	Natural Gas	0	13,279	0.07	0.00	0.0037	1.26E-03	1.25E-03	No	No		X
26-0400-A03	2020	025-0081-5-0384	1.69	N/A	Natural Gas	0	13,279	0.07	0.00	0.0037	1.26E-03	1.25E-03	No	No		X
26-0436-A01	2016	025-0081-5-0152	2.50	N/A	Natural Gas	0	1,865	0.01	0.00	0.0005	1.77E-04	1.76E-04	No	No		X
26-0436-A02	1995	12-5-0152	2.20	N/A	Natural Gas	0	1,865	0.01	0.00	0.0005	1.77E-04	1.76E-04	No	No		X
26-0459-A02	2011	12-5-0337	2.10	N/A	Natural Gas	0	19,376	0.10	0.00	0.0053	1.84E-03	1.83E-03	No	No		X
2202-A01	2010	12-5-0322	2.00	N/A	Natural Gas	0	26,046	0.13	0.00	0.0072	2.47E-03	2.46E-03	No	No		X
2202-A02	2010	12-5-0322	2.00	N/A	Natural Gas	0	26,046	0.13	0.00	0.0072	2.47E-03	2.46E-03	No	No		X
26-2485-A01	2016	25-0081-5-0367	2.00	N/A	Natural Gas	0	13,530	0.07	0.00	0.0037	1.29E-03	1.28E-03	No	No		X
3144-A01	2012	12-5-0152	4.81	N/A	Natural Gas	0	68,665	0.34	0.00	0.0189	6.52E-03	6.48E-03	No	No		X

Emission Unit No.	Date of Installation (month/yr)	MDE Registration No.	Size (MMBtu/hr)	Federally Enforceable Limit on the Operating Schedule	Fuel Type	2022 Fuel Oil Usage (gallons)	2022 Natural Gas Usage (Therm)	2022 NOx (tons)	2022 SOx (tons)	2022 VOC (tons)	2022 PM10 (tons)	2022 HAPs (tons)	Actual Major	Potential Major (before control device)	Heat Input Capacity >5 MMBtu/hr	Heat Input Capacity ≤5 MMBtu/hr
3660-A01	2016	025-0081-5-0371	2.50	N/A	Natural Gas	0	16,847	0.08	0.00	0.0046	1.60E-03	1.59E-03	No	No		X
26-4304-A02	2015	025-0081-5-0152	3.00	N/A	Natural Gas	0	12,154	0.06	0.00	0.0033	1.15E-03	1.15E-03	No	No		X
5046-A01	2018	025-0081-5-0377	1.50	N/A	Natural Gas	0	6,167	0.03	0.00	0.0017	5.86E-04	5.82E-04	No	No		X
5046-A02	2018	025-0081-5-0377	1.50	N/A	Natural Gas	0	6,167	0.03	0.00	0.0017	5.86E-04	5.82E-04	No	No		X
5046-A03	2018	025-0081-5-0377	1.50	N/A	Natural Gas	0	6,167	0.03	0.00	0.0017	5.86E-04	5.82E-04	No	No		X
5100-A01	2010	12-5-0309	3.00	***	Natural Gas	0	62,246	0.31	0.00	0.0171	5.91E-03	5.87E-03	No	No		X
5100-A02	2010	12-5-0310	3.00	***	Natural Gas	0	62,246	0.31	0.00	0.0171	5.91E-03	5.87E-03	No	No		X
0383A-A01	2017	25-0081-5-0376	3.347	N/A	Natural Gas	0	23,036	0.12	0.00	0.0063	2.19E-03	2.17E-03	No	No		X
0383A-A02	2017	25-0081-5-0376	3.347	N/A	Natural Gas	0	23,036	0.12	0.00	0.0063	2.19E-03	2.17E-03	No	No		X
26-367-A01	2014	25-0081-5-0352	1.00	N/A	Propane	1,346	0	0.01	0.00	0.0005	7.27E-05	5.02E-04	No	No		X

Notes:

1 All 2022 emissions data was taken from the APG AA Title V ECR for 2022.

2 Grey highlight indicates EU was added after current permit was issued.

* Date of installation is estimated based on the date that the PTC or registration was issued.

** The 15 C5ISR Phase I boilers combined cannot burn more than 308,827,000 cf/yr of natural gas and 600,000 gal/yr of No. 2 fuel oil. To maintain synthetic minor status for the C5ISR Phase I, the combined Nox emissions from the 15 boilers and four generators at the facility must be less than 25 tons in any rolling 12-month period.

*** To maintain synthetic minor status for the C5ISR Phase II, the combined Nox emissions from the two boilers and four generators at the facility must be less than 25 tons in any rolling 12-month period.

^^^ Radiant tube furnace not Subject to JJJJJ

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Space Heating Boilers Table **General Reference:** COMAR 26.11.09.05A(2) and (3)

Briefly describe the Emission Standard/Limit or Operational Limitation:

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. This regulation does not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if the visible emissions are not greater than 40 percent opacity and the visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period.

Permit Shield Request: APG requests a permit shield for all of the Space Heating Boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG shall operate and maintain the boilers in a manner to prevent visible emissions, in accordance with the operation and maintenance manual. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for boiler operation and maintenance.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference COMAR 26.211.03.06C Describe: APG will maintain operations manual and preventative maintenance plans for 5 years. APG will maintain a log of maintenance performed that relates to combustion performance for 5 years. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of tune-ups and other records.

Reporting: Reference PTC Describe APG will report incidents of visible emissions in accordance with permit condition 4, Section III, "Report of excess Emissions and Deviations" This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



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

Emissions Unit No.: See Space Heating Boilers Table **General Reference:** COMAR 26.11.09.07A(2)(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

A person may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG Will obtain an annual certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for fuel supply.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference COMAR 26.11.09.07C Describe: APG will retain annual fuel supplier certifications stating that the fuel oil is in compliance with this regulation. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.09.07C Describe: APG will report annual fuel supplier certification to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Space Heating Boilers Table General Reference: COMAR 26.11.09.08B(5)

Briefly describe the Emission Standard/Limit or Operational Limitation:

For the purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Permit Shield Request: APG requests a permit shield for all of the Space Heating Boilers

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference _____ Describe: None

Record Keeping: Reference COMAR 26.11.09.08F(1) Describe: Prepare and maintain a record of combustion optimization training program attendance for each operator at the site. This will be verified by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.09.08F(1)(e) Describe: APG shall submit a record of training program attendance for each operator to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Space Heating Boilers Table **General Reference:** COMAR 26.11.09.08(1) &(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:

A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall: (See attached page) A person who owns or operates an installation that no longer qualifies as a space heater will inform the Department no later than 60 days after the date when the fuel burning equipment did not qualify, and will meet the applicable fuel-burning equipment RACT requirement in the regulation.

Permit Shield Request: APG requests a permit shield for all of the Space Heating Boilers

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: COMAR 26.11.03.06C & 26.11.09.08(F)(1)(b) Reference Describe: APG shall develop and maintain an operating and maintenance plan to minimize NOx emissions. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for boiler operation and maintenance.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: COMAR 26.11.09.08(F)(1), 26.11.03.06C, 26.11.09.07C, 26.11.09.08K(3) Reference Describe: APG will maintain operations manuals and preventative maintenance plans. APG will maintain a log of maintenance performed that relates to combustion performance. APG shall maintain: Records of maintenance performed that relates to combustion performance in keeping with the requirements of an operations and maintenance plan; Records of fuel use that demonstrates that the boiler meets the definition of space heater. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference Describe: None

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



Emissions Standard/Limit or Operational Limitation:

(Continued from previous page)

- a) Submit to the Department, a list of each affected installation on the premises and the types of fuel used in each installation;
- b) Develop an operating and maintenance plan to minimize NO_x emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience;
- c) Implement the operating and maintenance plan and maintain the plant 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.



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

Emissions Unit No.: C5ISR Phase I (R&D) boilers: **General Reference:** PTC 025-0081-5-0298 to -0301
26-C2CNT West-A01 through A04, 26-GMS Tower-A01 through A03, 26-HQ Building-A01 through A05, 26-GMS Lab-A01 through A03

Briefly describe the Emission Standard/Limit or Operational Limitation:

The fifteen 3.5 MMBtu/hr heat input boilers shall be equipped with low NO_x burners not to exceed 30 ppm and shall only burn natural gas or No. 2 fuel oil. For the purpose of maintaining synthetic minor status for the C5ISR-Phase I R&D Facility, the combined NO_x emissions from the boilers and generators must be less than 25 tons in any rolling 12-month period. The total fuel oil and natural gas usage for the fifteen boilers shall not exceed the limits on the attached page.

Permit Shield Request: APG requests a permit shield for all of the Space Heating Boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: [Click or tap here to enter text.](#)
☒ Annual Compliance Certification: [Title V Compliance Certification](#)
☒ Semi-Annual Monitoring Report: [SIXMON report](#)

Methods used to demonstrate compliance:

Monitoring: Reference PTC Describe: APG will calculate NO_x emissions for the previous calendar month and a total for the previous 12 consecutive months for the C5ISR Phase I R&D facility. The calculations will be updated monthly within 30 days of each following month. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personal responsible for fuel supply.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference PTC Describe: APG will maintain on site and make available to the Department upon request, records of the monthly and rolling 12-month total natural gas in million cubic feet and the No. 2 fuel oil usage in gallons. APG will keep records of the NO_x emissions for each calendar month and update them monthly with 30 days of each following month. This will be verified by periodic inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.03.06C Describe APG will report annual fuel consumption to the Department upon request. APG will submit the records to the Department as part of the semi-annual report. This will be verified by periodic reviews of notification and reports by DPW Environmental personnel.

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



Emissions Standard/Limit or Operational Limitation:

(Continued from previous page)

The total fuel oil and natural gas usage for the fifteen (15) boilers shall not exceed the following limits unless the Permittee can demonstrate, to the satisfaction of the Department, that the NOx emissions for the C51SR-Phase I Facility are less than 25 tons in any rolling 12- month period at a higher usage rate:

MDE PTC No.	Location	Proposed Limit		Quantity and Size
		Natural gas (ft ³ /yr)	No. 2 fuel oil (gallons)	
025-0081-5-0298	C2CNTWest Building	82,355,000	160,000	Four (4) 3.5 MMBtu/hr boilers
025-0081-5-0299	GMS Tower Building	61,765,000	120,000	Three (3) 3.5 MMBtu/hr boilers
025-0081-5-0300	HQ Building 1	102,942,000	200,000	Five (5) 3.5 MMBtu/hr boilers
025-0081-5-0301	GMS Lab Building	61,765,000	120,000	Three (3) 3.5 MMBtu/hr boilers

MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: C5ISR Phase II Boilers: General Reference: PTC 025-0081-5-0309 and -0310
5100-A01 and A-02

Briefly describe the Emission Standard/Limit or Operational Limitation:

For the purpose of maintaining synthetic minor status for the C5ISR-Fabrication, Industrial and Field Operations Facility (Phase II), the combined NO_x emissions from all fuel burning equipment (boilers and generators) at the facility must be less than 25 tons in any rolling 12-month period.

Permit Shield Request: APG requests a permit shield for all of the space heating boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: [Click or tap here to enter text.](#)
☒ Annual Compliance Certification: [Title V Compliance Certification](#)
☒ Semi-Annual Monitoring Report: [SIXMON report](#)

Methods used to demonstrate compliance:

Monitoring: Reference [See Record Keeping](#)

Describe: [See Record Keeping](#)

Testing: Reference [See Record Keeping](#)

Describe: [See Record Keeping](#)

Record Keeping: Reference [PTC 025-0081-5-0309 and -0310](#)

Describe: [The NO_x emissions for each previous calendar month and a total for the previous 12 consecutive calendar months are calculated and recorded for the C5ISR Phase II Facility. The calculations and records are updated monthly, within the first 15 days of each following month. The records are submitted to the Department as part of the semi-annual report. APG will maintain and make available to the Department upon request, monthly and rolling 12-month total natural gas usage in million cubic feet. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.](#)

Reporting: Reference [See Record Keeping](#)

Describe [See Record Keeping](#)

Frequency of submittal of the compliance demonstration: [Annual and Semi-Annual](#)



**SECTION 3C.
CONDITIONS**

OBSOLETE, EXTRANEEOUS, OR INSIGNIFICANT PERMIT

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

See Space Heating

Emissions Unit No.: Boilers Table **Permit to Construct No.** _____

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion
			Not Applicable.



Not Applicable.

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

Scenario No.: _____

See Space Heating

Emissions Unit No.: Boilers Table General Reference: _____

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

Not Applicable.

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: Not Applicable.

Testing: Reference _____ Describe: Not Applicable.

Record Keeping: Reference _____ Describe: Not Applicable.

Reporting: Reference _____ Describe: Not Applicable.

Frequency of submittal of the compliance demonstration: Not Applicable



SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : See Space Heating Boilers Table	2. <u>Emissions Point No.</u> :
3. <u>Type and Description of Control Equipment</u> :	
Not Applicable.	
4. Pollutants Controlled:	Control Efficiency:
Not Applicable.	Not Applicable.
5. Capture Efficiency: Not Applicable	



SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant	Not Applicable.				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					



SECTION 6.

EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS

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

1. Applicable Requirement:

Not Applicable.

2. Brief Description:

Not Applicable.

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

Not Applicable.



SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS

1. Emissions Unit #	Anticipated Compliance Date
See Space Heating Boilers Table	Not Applicable.
Applicable Federally Enforceable Requirement being Not Applicable. Violated:	

2. Description of Plan to Achieve Compliance: <u>Not Applicable.</u>

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



Process Boilers

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SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: See Process Boilers Table 1a. Date of installation (month/year): See Process Boilers Table	2. MDE Registration No.:(if applicable) See Process Boilers Table												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>See Process Boilers Table</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: See Process Boilers Table General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Type(s) of Fuel</th> <th style="text-align: left; width: 20%;">% Sulfur</th> <th style="text-align: left; width: 40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. Distillate fuel oil</td> <td><0.3</td> <td>See Process Boilers Table</td> </tr> <tr> <td>2. Natural Gas</td> <td>negligible</td> <td>See Process Boilers Table</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. Distillate fuel oil	<0.3	See Process Boilers Table	2. Natural Gas	negligible	See Process Boilers Table	3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. Distillate fuel oil	<0.3	See Process Boilers Table											
2. Natural Gas	negligible	See Process Boilers Table											
3. _____													
6. Emissions in Tons: See Process Boilers Table A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NO_x_____ SO_x_____ VOC_____ PM₁₀_____ HAPs_____													



MARYLAND DEPARTMENT OF THE ENVIRONMENT
Title V Permit Renewal Application - Permit No. 24-025-00081
Aberdeen Proving Ground - Aberdeen Area
November 2023

Section 3A for Process Boilers - Emissions Units Table

Emission Unit No.	Date of Installation (month/yr)	MDE Registration No.	Size (MMBtu/hr)	Federally Enforceable Limit on the Operating Schedule	Fuel Type	2022 Fuel Oil Usage (gallons)	2022 Natural Gas Usage (Therm)	2022 NOx (tons)	2022 SOx (tons)	2022 VOC (tons)	2022 PM10 (tons)	2022 HAPs (tons)	Actual Major	Potential Major (before control device)	Heat Input Capacity >5 MMBtu/hr	Heat Input Capacity ≤5 MMBtu/hr	Heat Input Capacity ≥10 MMBtu/hr
26-03062-A02	2009	12-5-0167	12.2	N/A	Dual Fuel	0	33087	0.17	0.00	0.0091	3.14E-03	3.12E-03	No	No			X
26-4219-A02	1994	12-4-0522N	8.37	N/A	Dual Fuel	0	2109.5	0.01	0.00	0.0006	2.00E-04	1.99E-04	No	No	X		
26-4219-A03	2009	25-5-0308	8.17	N/A	Dual Fuel	0	2109.5	0.01	0.00	0.0006	2.00E-04	1.99E-04	No	No	X		
26-04312-A02	2015	025-0081-5-0364	4.18	N/A	Dual Fuel	0	55417	0.28	0.00	0.0152	5.26E-03	5.23E-03	No	No		X	
26-04312-A01	2015	025-0081-5-0364	4.18	N/A	Dual Fuel	0	55417	0.28	0.00	0.0152	5.26E-03	5.23E-03	No	No		X	
4404-A06	2012	12-5-0152	8.17	N/A	Dual Fuel	429.5	2202	0.02	0.00	0.0007	4.41E-04	3.68E-04	No	No	X		
26-04404-A04	1999	12-5-0152	6.70	N/A	Dual Fuel	429.5	2202	0.02	0.00	0.0007	4.41E-04	3.68E-04	No	No	X		

Notes:

1. All 2022 data was taken from APG AA Title V ECR for 2022.
2. Grey highlight indicates EU was added after current permit was issued.

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Process Boilers Table **General Reference:** COMAR 26.11.09.05A(2) and (3)

Briefly describe the Emission Standard/Limit or Operational Limitation:

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. This regulation does not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if the visible emissions are not greater than 40 percent opacity and the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

Permit Shield Request: APG requests a permit shield for all of the Process Boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG shall operate and maintain the boilers in a manner to prevent visible emissions, in accordance with the operation and maintenance manual. APG will perform a visual observation for a 6-minute period once for each 168 hours. That the boiler burns oil or at a minimum of once per year. If emissions are visible, APG will inspect the combustion control system and boiler operations; perform all necessary adjustments and/or repairs to the boiler within 48 hrs.; document in writing the results of the inspections, adjustments and/or repairs to the boiler; and after 48 hrs., if the required adjustments and/or repairs have not eliminated the visible emissions, *

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference COMAR 26.11.03.06C Describe: APG will maintain an operations manual and preventative maintenance plan on site; a record of maintenance performed that relates to combustion performance; a log of visible emissions observations performed and make it available to the Department's representative upon request; and a record of the hours that No. 2 fuel oil is burned for a period of 5 years. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of tune-up and other records.

Reporting: Reference PTC Describe: APG will report incidents of visible emissions in accordance with permit condition 4, Section III, "Report of Excess Emissions and Deviations". This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

* perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for boiler operation and maintenance.

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



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Process Boilers Table General Reference: COMAR 26.11.09.07A(2)(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

A person may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

Permit Shield Request: APG requests a permit shield for all of the Process Boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG will obtain an annual certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for fuel supply.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference COMAR 26.11.03.06C Describe: APG will maintain records of fuel supplier's certification and will make records available to the Department upon request. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.09.07C Describe: APG will report annual fuel supplier certification to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



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

Emissions Unit No.: See Process Boilers Table **General Reference:** COMAR 26.11.09.08E

Briefly describe the Emission Standard/Limit or Operational Limitation:

A person who owns or operates fuel-burning equipment with a rated heat capacity of 100 MMBtu/hr or less will: (See attached page).

Permit Shield Request: APG requests a permit shield for all of the Process Boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.09.08E(2) Describe: APG will optimize combustion based on the annual combustion analysis. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for boiler operation and maintenance.

Testing: Reference COMAR 26.11.09.08E(2) Describe: APG will perform a combustion analysis once a year.

Record Keeping: Reference COMAR 26.11.09.08E(5) Describe: APG will maintain records of the results of the annual combustion analysis on site and will maintain records of combustion optimization training program attendance for each operator at the site for at least five years and make available to the Department upon request. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.09.08E(3) Describe: APG Will submit the results of combustion analysis to the Department and the EPA upon request, and a record of training program attendance for each operator to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



Emissions Standard/Limit or Operational Limitation:

(Continued from previous page)

- (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.



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

Emissions Unit No.: See Process Boilers Table **General Reference:** COMAR 26.11.09.08B(5)

Briefly describe the Emission Standard/Limit or Operational Limitation:

For the purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Permit Shield Request: APG requests a permit shield for all of the Process Boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None. _____

Testing: Reference _____ Describe: None. _____

Record Keeping: Reference _____ Describe: None. _____

Reporting: Reference _____ Describe: None _____

Frequency of submittal of the compliance demonstration: Annual



**SECTION 3C.
CONDITIONS**

OBSOLETE, EXTRANEEOUS, OR INSIGNIFICANT PERMIT

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

See Process Boilers

Emissions Unit No.: Table **Permit to Construct No.** _____

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion
			Not Applicable.



Emissions Unit No.: See Process Boilers Table

Not Applicable.

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

Scenario No.: _____

Emissions Unit No.: See Process Boilers Table **General Reference:** _____

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

Not Applicable.

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: Not Applicable.

Testing: Reference _____ Describe: Not Applicable.

Record Keeping: Reference _____ Describe: Not Applicable.

Reporting: Reference _____ Describe: Not Applicable.

Frequency of submittal of the compliance demonstration: _____



SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : See Process Boilers Table	2. <u>Emissions Point No.</u> :
3. <u>Type and Description of Control Equipment</u> :	
Not Applicable.	
4. Pollutants Controlled:	Control Efficiency:
Not Applicable.	Not Applicable.
5. Capture Efficiency: Not Applicable.	



SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant	Not Applicable.				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
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Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					



SECTION 6.

EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS

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

1. Applicable Requirement:

Not Applicable.

2. Brief Description:

Not Applicable.

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

Not Applicable.



**SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS**

1. Emissions Unit #	Anticipated Compliance Date
See Process Boilers Table	Not Applicable.
Applicable Federally Enforceable Requirement being Not Applicable. Violated:	

2. Description of Plan to Achieve Compliance: Not Applicable.

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



NSPS Boilers

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SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: See NSPS Boilers Table 1a. Date of installation (month/year): See NSPS Boilers Table	2. MDE Registration No.:(if applicable) See NSPS Boilers Table												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): See NSPS Boilers Table													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: See NSPS Boilers Table General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Type(s) of Fuel</th> <th style="text-align: left; width: 30%;">% Sulfur</th> <th style="text-align: left; width: 30%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. Distillate fuel oil</td> <td><0.3</td> <td>See NSPS Boilers Table</td> </tr> <tr> <td>2. Natural Gas</td> <td>negligible</td> <td>See NSPS Boilers Table</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. Distillate fuel oil	<0.3	See NSPS Boilers Table	2. Natural Gas	negligible	See NSPS Boilers Table	3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. Distillate fuel oil	<0.3	See NSPS Boilers Table											
2. Natural Gas	negligible	See NSPS Boilers Table											
3. _____													
6. Emissions in Tons: See NSPS Boilers Table A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 _____ HAPs _____													



MARYLAND DEPARTMENT OF THE ENVIRONMENT
Title V Permit Renewal Application - Permit No. 24-025-00081
Aberdeen Proving Ground - Aberdeen Area
November 2023

Section 3A for NSPS Boilers - Emissions Units Table

Emission Unit No.	Date of Installation (month/yr)	MDE Registration No.	Size (MMBtu/hr)	Federally Enforceable Limit on the Operating Schedule	Fuel Type	2022 Fuel Oil Usage (gallons)	2022 Natural Gas Usage (Therm)	2022 NOx (tons)	2022 SOx (tons)	2022 VOC (tons)	2022 PM10 (tons)	2022 HAPs (tons)	Actual Major	Potential Major (before control device)
26-0345-A01	1994	12-5-0079	63.80	*	Dual Fuel	0	227082	1.14	0.01	0.95	6.24E-02	2.14E-02	No	Yes
26-0345-A02	1994	12-5-0080	63.80	*	Dual Fuel	0	227082	1.14	0.01	0.95	6.24E-02	2.14E-02	No	Yes
26-0345-A03	1996	12-5-0081	23.40	*	Dual Fuel	0	227082	1.14	0.01	0.95	6.24E-02	2.14E-02	No	No
26-4600-A06	1995	12-5-0085	21.00	N/A	Dual Fuel	334	249088	1.25	0.01	1.05	6.86E-2E	2.36E-02	No	No
26-4600-A09	2016	025-0081-5-0370	20.13	N/A	Dual Fuel	334	249088	1.25	0.01	1.05	6.86E-2E	2.36E-02	No	No
26-4600-A08	1995	12-5-0087	21.00	N/A	Dual Fuel	334	249088	1.25	0.01	1.05	6.86E-2E	2.36E-02	No	No
26-5014-A01	1991	12-5-0164	13.50	N/A	Dual Fuel	0	12368	0.06	0.00	0.05	3.40E-03	1.62E-03	No	No
26-5014-A02	1991	12-5-0165	13.50	N/A	Dual Fuel	0	12368	0.06	0.00	0.05	3.40E-03	1.62E-03	No	No

Notes:

1. All 2022 data taken from APG EA Title V ECR for 2022.
 2. All of the EUs in this table have heat input capacities greater than 5 MMBtu/hr and equal to or greater than 10 MMBtu/hr to determine applicability with NESHAP Table 2.
- * The total annual fuel consumption of the three boilers shall not exceed 3.5 million gallons of No. 2 fuel oil or 510 million standard cubic feet of natural gas. If the boilers burn both natural gas and No. 2 fuel oil, the total annual heat input to the boilers shall not exceed 500 billion BTUs.

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

Emissions Unit No.: See NSPS Boilers Table **General Reference:** COMAR 26.11.09.05A(2) and (3)

Briefly describe the Emission Standard/Limit or Operational Limitation:

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. This regulation does not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if the visible emissions are not greater than 40 percent opacity and the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

Permit Shield Request: APG requests a permit shield for all of the NSPS Boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON Report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: See attached page. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for boiler operation and maintenance.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference COMAR 26.11.03.06C Describe: See attached page. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

COMAR

Reporting: Reference 26.11.01.07 and 26.11.03.06C(7) Describe: See attached page. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



Monitoring, Record Keeping, and Reporting Requirements:

(Continued from previous page)

- a) **Monitoring:** Reference (26.11.03.06C): APG will: Properly operate and maintain the boilers in a manner to prevent the visible emissions; and verify no visible emissions when burning No.2 fuel oil. APG will perform a visual observation for a 6-minute period once for each 168 hours that the boiler burns oil or at a minimum of once per year. APG will perform the following, if emissions are visible: 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 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.
- b) **Record Keeping:** Reference (26.11.03.06C): APG will: Maintain an operational manual and prevention maintenance plan on site; maintain a record of the maintenance performed that relates to combustion performance; maintain a log of visible emissions observations performed and make it available to the Department's representative upon request; and maintain a record of the hours that No.2 fuel oil is burned.
- c) **Reporting:** Reference (26.11.01.07 and 26.11.03.06C (7)): APG will report incidents of visible emissions in accordance with permit condition 4, Section III, "Report of Excess Emissions and Deviations".



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

Emissions Unit No.: See NSPS Boilers Table **General Reference:** 40 CFR 60.43c (Subpart Dc)

Briefly describe the Emission Standard/Limit or Operational Limitation:

New Source Performance Standard for particulate matter – limits opacity to 20 % during oil combustion. Compliance demonstration with COMAR 26.11.09.05A(2) will be used to comply with this standard. Applies to small industrial-commercial-institutional steam generating units with a heat input capacity less than 100 MMBtu/hr but greater than 10 MMBtu/hr for which construction began after June 9, 1989.

Permit Shield Request: APG requests a permit shield for all of the NSPS Boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON Report

Methods used to demonstrate compliance:

Monitoring: See Section 3B. for Reference COMAR 26.11.09.05A(2) **Describe:** Compliance demonstration with COMAR 26.11.09.05A(2) will be used to comply with this standard.

Testing: Reference See Monitoring **Describe:** See Monitoring

Record Keeping: See Section 3B. for Reference COMAR 26.11.09.05A(2) **Describe:** Compliance demonstration with COMAR 26.11.09.05A(2) will be used to comply with this standard

Reporting: See Section 3B. for COMAR Reference 26.11.09.05A(2) **Describe:** Compliance demonstration with COMAR 26.11.09.05A(2) will be used to comply with this standard.

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



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

Emissions Unit No.: See NSPS Boilers Table **General Reference:** COMAR 26.11.09.07A(2)(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

A person may not burn, sell or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

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 the NSPS sulfur in fuel standard.

Permit Shield Request: APG requests a permit shield for all of the NSPS Boilers

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON Report

Methods used to demonstrate compliance:

Monitoring: Reference 40 CFR 60.46c(e) Describe: The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to 40 CFR 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 40 CFR 60.48c(f)(1), (2). Or (3), as applicable. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for boiler operation and maintenance.

Testing: Reference COMAR 26.11.09.08E(2) Describe: APG Will demonstrate compliance with the fuel supplier certification/contract

Record Keeping: Reference 40 CFR 60.48c(a), (c), (e), (f), (g), and (i) Describe: APG APPG will submit excess emissions reports for any excess emissions from the facility that occur during the reporting period. APG will keep annual fuel supplier certifications for at least 5 years. The fuel supplier certification shall include the name of the oil supplier and a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c. APG keeps records of the amount of each fuel combusted by NSPS Boilers during each *

Reporting: Reference 40 CFR 60.48c(j) Describe: The reporting period for the reports required under this subpart is each six-month period. All reports shall be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

* Operating day. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

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



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

Emissions Unit No.: See NSPS Boilers Table **General Reference:** 40 CFR 60.42c (Subpart Dc)

Briefly describe the Emission Standard/Limit or Operational Limitation:

New Source Performance Standard for Sulfur dioxide – limits sulfur content in fuel oil to 0.5%. Applies to small industrial-commercial-institutional steam generating units with a heat input capacity less than 100 MMBtu/hr for which construction began after June 9, 1989. The monitoring, record keeping, and reporting requirements under NSPS Subpart Dc will be used to demonstrate compliance with COMAR 26.11.09.07A and the NSPS sulfur in fuel standard.

Permit Shield Request: APG requests a permit shield for all of the NSPS Boilers

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON Report

Methods used to demonstrate compliance:

Monitoring: Reference See Section 3B. for COMAR 26.11.09.07A(2)(b) Describe: See Section 3B. for COMAR 26.11.09.07A(2)(b).

Testing: Reference See Section 3B. for COMAR 26.11.09.07A(2)(b) Describe: See Section 3B. for COMAR 26.11.09.07A(2)(b).

Record Keeping: Reference See Section 3B. for COMAR 26.11.09.07A(2)(b) Describe: See Section 3B. for COMAR 26.11.09.07A(2)(b).

Reporting: Reference See Section 3B. for COMAR 26.11.09.07A(2)(b) Describe: See Section 3B. for COMAR 26.11.09.07A(2)(b).

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



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

Emissions Unit No.: See NSPS Boilers Table **General Reference:** COMAR 26.11.09.08B(5)

Briefly describe the Emission Standard/Limit or Operational Limitation:

For the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes necessary adjustments for efficient operation. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Permit Shield Request: APG requests a permit shield for all of the NSPS Boilers

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None.

Testing: Reference _____ Describe: None.

Record Keeping: Reference _____ Describe: None.

Reporting: Reference _____ Describe: None.

Frequency of submittal of the compliance demonstration: Annual



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

Emissions Unit No.: See NSPS Boilers Table **General Reference:** COMAR 26.11.09.08E

Briefly describe the Emission Standard/Limit or Operational Limitation:

A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 MMBtu/hr or less will: (See attached page)

Permit Shield Request: APG requests a permit shield for all of the NSPS Boilers

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.09.08E(2) Describe: APG will optimize combustion based on the annual combustion analysis. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for boiler operation and maintenance.

Testing: Reference COMAR 26.11.09.08E(2) Describe: APG Will perform combustion analysis at least once a year. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Record Keeping: Reference COMAR 26.11.09.08E(5) Describe: APG Will maintain records of the annual combustion analysis and training program attendance for each operator at the site on-site. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.09.08E(3) & (5) Describe: APG will submit the results of combustion analysis to the Department and EPA upon request; a record of combustion optimization training program attendance for each operator to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



Emission Standard/Limit or Operational Limitation:

(Continued from previous page)

- (1) Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and 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 EAP 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 combustion optimization training program attendance for each operator at the site, and make these records available to the Department upon request.



See NSPS Boilers

[illegible]

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: See NSPS Boilers Table

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

Not Applicable.



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

Scenario No.: _____

Emissions Unit No.: See NSPS Boilers Table **General Reference:** _____

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

Not Applicable _____

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: Not Applicable _____

Testing: Reference _____ Describe: Not Applicable _____

Record Keeping: Reference _____ Describe: Not Applicable _____

Reporting: Reference _____ Describe: Not Applicable _____

Frequency of submittal of the compliance demonstration: _____



SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> :		2. <u>Emissions Point No.</u> :	
See NSPS Boilers Table			
3. <u>Type and Description of Control Equipment</u> :			
Not Applicable.			
4. Pollutants Controlled:		Control Efficiency:	
Not Applicable.		Not Applicable.	
5. Capture Efficiency: Not Applicable			



SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant	Not Applicable.				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					



SECTION 6.

**EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS**

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

1. Applicable Requirement:

Not Applicable.

2. Brief Description:

Not Applicable.

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

Not Applicable.



**SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS**

1. Emissions Unit #	Anticipated Compliance Date
See NSPS Boilers Table	Not Applicable.
Applicable Federally Enforceable Requirement being Violated: Not Applicable.	

2. Description of Plan to Achieve Compliance: <u>Not Applicable.</u>

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



All Oil Fired Boilers

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SECTION 3A.

EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: See Space Heating, Process, and NSPS Boilers Tables - All Oil-Fired Boilers 1a. Date of installation (month/year): See Space Heating, Process, and NSPS Boilers Tables	2. MDE Registration No.:(if applicable) See Space Heating, Process, and NSPS Boilers Tables												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): See Space Heating, Process, and NSPS Boilers Table													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: See Space Heating, Process, and NSPS Boilers Tables General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. Distillate fuel oil</td> <td><0.3</td> <td>See Space Heating, Process, and NSPS Boilers Tables</td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. Distillate fuel oil	<0.3	See Space Heating, Process, and NSPS Boilers Tables	2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. Distillate fuel oil	<0.3	See Space Heating, Process, and NSPS Boilers Tables											
2. _____													
3. _____													
6. Emissions in Tons: See Space Heating, Process, and NSPS Boilers Tables A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NO_x_____ SO_x_____ VOC_____ PM₁₀_____ HAPs_____													



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

See Space Heating, Process, and
Emissions Unit No.: NSPS Boilers Tables – All Oil **General Reference:** 40 CFR 63, Subpart JJJJJJ (NESHAP)
Fired Boilers

Briefly describe the Emission Standard/Limit or Operational Limitation:

Oil-fired boilers must comply with the work practice standards and management standards summarized on the attached pages. For EU 26-3062-A02 only, you must achieve less than or equal to the following emission limits, except during periods of startup and shutdown: 3.0E-02 lb of PM (filterable) per MMBtu of heat input. This EU is in the subcategory of new oil-fired boilers with heat input capacity of 10 MMBtu/hr or greater that do not meet the definition of seasonal boiler or limited-use boiler.

Permit Shield Request: APG requests a permit shield for all of the Oil Fried Boilers.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference 40 CFR 63.11205(a) Describe: See attached pages

Testing: Reference 40 CFR 63.11222 Describe: See attached pages

Record Keeping: Reference 40 CFR 63.11225 Describe: See attached pages

Reporting: Reference 40 CFR 63.11225 Describe: See attached pages

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



Work Practice Standards and Management Standards, 40 CFR Part 63.11223.

Boiler subcategory	Requirement
Existing oil-fired boilers with heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio	Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223.
New oil-fired boilers with heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio	Conduct a tune-up of the boiler biennially as specified in §63.11223.
Existing oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr	Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every 5 years as specified in §63.11223.
New oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr	Conduct a tune-up of the boiler every 5 years as specified in §63.11223.
Existing oil-fired boilers (units with heat input capacity of 10MMBtu/hr and greater), not including limited-use boilers	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used to meet the energy assessment requirements. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items (1) to (4) appropriate for the on-site technical hours listed in §63.11237: (1) A visual inspection of the boiler system, (2) An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints, (3) An inventory of major energy use systems consuming energy from affected boiler(s) and



	which are under control of the boiler owner or operator, (4) A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage, (5) A list of major energy conservation measures that are within the facility's control, (6) A list of the energy savings potential of the energy conservation measures identified, and (7) A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments

Methods that will be used to demonstrate continuous compliance are as follows:

Testing Requirements

Reference: 40 CFR 63.11222

APG will demonstrate continuous compliance with the emission limit for EU 26-3062-A02 by keeping records of the type and amount of all fuels burned in the boiler during the reporting period to demonstrate that all fuel types and mixtures of fuels burned will result in lower emissions of mercury than the applicable emission limit. APG will report each instance in which the emissions limit was not met. These instances are deviations from the emission limit and will be reported according to the requirements in 40 CFR 63.11225. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of tune-up records.

Reference: 40 CFR 63.11223

APG will conduct performance tune-ups according to 40 CFR 63.11223(b) (1) through (e) and keep records as required in 40 CFR 63.11225(c). This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of tune-up records.

Monitoring Requirements

Reference: 40 CFR 63.11205(a)

APG will operate and maintain, at all times, these boilers and any air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for boiler operation and maintenance.



Record-keeping Requirements

Reference: 40 CFR 63.11225

APG will maintain the records specified in 40 CFR 63.11225(c)(1) through (7). This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of tune-up and other records. Required records include:

-  Types and amount of fuel used monthly for boilers with emission limits.
-  Documentation that startups and shutdowns were done according to manufacturer's recommended procedures for boilers subject to emission limits.
-  All required notifications and reports, with supporting documentation.
- the energy assessment, as applicable.
-  Demonstration of compliance with emission limits, operating limits, tune-ups, and the energy assessment, as applicable.
-  Malfunction occurrences, duration, and actions taken.

Reporting Requirements

Reference: 40 CFR 63.11225

APG will submit the notifications and reports specified in 40 CFR 63.11225(a)(1) through (5). This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel. Required notifications and reports include:

- Initial Notification by 1/20/14 (was submitted)
- Notification of Compliance Status. Certify completion of energy assessment and/or tune-up, as applicable. Submit electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) on EPA's Central Data Exchange (CDX).
- Compliance Certification Report by March 1 of the year after the calendar year during which a tune-up is completed for boilers not subject to emission limits. Submit upon request.
- Annual Compliance Certification Report for boilers with emission limits by March 1 of each year. Submit upon request. Prepare and submit the Report by March 15 if any deviations from an emission limit or operating parameter.
- Notification within 30 days of a fuel switch or physical change resulting in the boiler being in a different subcategory within subpart JJJJJ, becoming subject to subpart JJJJJ, or switching out of subpart JJJJJ.
- Test results to EPA's WebFIRE database using CEDRI that is accessed through EPA's CDX within 60 days of each performance test. Submit the data in the file format of EPA's Electronic Reporting Tool.



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

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

Emissions Unit No.: All Oil Fired Boilers **Permit to Construct No** _____

[illegible]

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: All Oil Fired Boilers

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

Not Applicable.



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

Scenario No.: _____

Emissions Unit No.: All Oil Fired Boilers **General Reference** _____

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

Not Applicable.

Compliance Demonstration:

Methods used to demonstrate compliance:

Monitoring: Reference Describe: Not Applicable.

Testing: Reference Describe: Not Applicable.

Record Keeping: Reference Describe: Not Applicable.

Reporting: Reference Describe: Not Applicable.

Frequency of submittal of the compliance demonstration _____



SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No. :</u> All Oil Fired Boilers	2. <u>Emissions Point No.:</u>
3. <u>Type and Description of Control Equipment:</u>	
Not Applicable.	
4. Pollutants Controlled:	Control Efficiency:
Not Applicable.	Not Applicable.
5. Capture Efficiency: Not Applicable.	



SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant	Not Applicable.				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					



SECTION 6.

EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS

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

1. Applicable Requirement:

Not Applicable.

2. Brief Description:

Not Applicable.

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

Not Applicable.



**SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS**

1. Emissions Unit #	Anticipated Compliance Date
All Oil Fired Boilers	Not Applicable.
Applicable Federally Enforceable Requirement being Violated:	

2. Description of Plan to Achieve Compliance: Not Applicable.

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



Generators

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SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: See Generators Table 1a. Date of installation (month/year): See Generators Table	2. MDE Registration No.:(if applicable) See Generators Table															
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>See Generators Table</u>																
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: See Generators Table General Reference: <u>PTC for each generator</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year																
<table style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left; width: 40%;">5. Fuel Consumption:</th> <th style="width: 30%;"></th> <th style="width: 30%;"></th> </tr> <tr> <td style="text-align: center;">Type(s) of Fuel</td> <td style="text-align: center;">% Sulfur</td> <td style="text-align: center;">Annual Usage (specify units)</td> </tr> <tr> <td>1. Distillate Fuel Oil</td> <td style="text-align: center;">=<0.3%*</td> <td style="text-align: center;">See Generators Table</td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </table>		5. Fuel Consumption:			Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. Distillate Fuel Oil	=<0.3%*	See Generators Table	2. _____			3. _____		
5. Fuel Consumption:																
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)														
1. Distillate Fuel Oil	=<0.3%*	See Generators Table														
2. _____																
3. _____																
6. Emissions in Tons: See Generators Table A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 _____ HAPs _____																

*Lower limits apply to NSPS generators



MARYLAND DEPARTMENT OF THE ENVIRONMENT
Title V Permit Renewal Application - Permit No. 24-025-00081
Aberdeen Proving Ground - Aberdeen Area
November 2023

Section 3A for Generators - Emissions Units Table

Emission Unit No.	Date of Installation (month/yr)	MDE Registration No.	Size (HP)	Federally Enforceable Limit on the Operating Schedule (hours per year)	Fuel Type	2022 Usage (hours)	2022 NOx (tons)	2022 SOx (tons)	2022 VOC (tons)	2022 PM10 (tons)	2022 HAPs (tons)	Actual Major	Potential Major (before control device)	Subject to NSPS Subpart IIII
0120-A01	2012	025-0081-9-0408	2922	N/A	Diesel	15.0	5.05E-01	2.39E-04	1.29E-02	7.83E-03	6.57E-03	No	No	No
0120-A02	2012	025-0081-9-0433	2922	*	Diesel	14.7	4.95E-01	2.34E-04	1.27E-02	7.67E-03	6.44E-03	No	No	No
0120-A03	2012	025-0081-9-0434	2922	*	Diesel	14.0	4.71E-01	2.23E-04	1.21E-02	7.30E-03	6.13E-03	No	No	No
0120-A04	2017	025-0081-9-0503	2922	100 non-emergency use	Diesel	13.9	4.68E-01	2.22E-04	1.20E-02	7.25E-03	6.09E-03	No	No	Yes
0210-A05	2016 ****	025-0081-9-0504	2922	100 non-emergency use	Diesel	14.6	4.91E-01	2.33E-04	1.26E-02	7.62E-03	6.39E-03	No	No	Yes
0311-A01	1986	025-0081-9-0419	600	N/A	Diesel	10.7	7.40E-02	3.50E-05	1.89E-03	1.15E-03	9.62E-04	No	No	No
0316-A01	2012	025-0081-9-0409	2922	N/A	Diesel	18.5	6.23E-01	2.95E-04	1.59E-02	9.65E-03	8.10E-03	No	No	No
3-00328-A01	1997	12-9-0229	1072	120	Diesel	17.0	2.10E-01	9.94E-05	5.37E-03	3.25E-03	2.73E-03	No	No	No
0328-A02	2006	025-0081-9-0414	761	100 non-emergency use	Diesel	7.6	5.87E-02	2.78E-05	1.50E-03	9.10E-04	7.64E-04	No	No	Yes
0328-A03	2006	025-0081-9-0418	804	100 non-emergency use	Diesel	10.1	9.36E-02	4.43E-05	2.40E-03	1.45E-03	1.22E-03	No	No	Yes
3-00394-A01	1997	12-9-0227	1341	120	Diesel	22.0	3.40E-01	1.61E-04	8.70E-03	5.27E-03	4.42E-03	No	No	No
3-00394-A02	1997	12-9-0228	1341	120	Diesel	21.0	3.24E-01	1.54E-04	8.30E-03	5.03E-03	4.22E-03	No	No	No
3-00394-A03	2008	12-9-0386	750	500	Diesel	21.0	1.81E-01	8.59E-05	4.64E-03	2.81E-03	2.36E-03	No	No	Yes
3-00394-A04	2008	12-9-0387	750	500	Diesel	16.0	1.38E-01	6.54E-05	3.54E-03	2.14E-03	1.80E-03	No	No	Yes
3-00394-A05	2008	12-9-0388	750	500	Diesel	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No	No	Yes
3-00394-A06	2008	12-9-0389	750	500	Diesel	22.0	1.90E-01	9.00E-05	4.86E-03	2.95E-03	2.47E-03	No	No	Yes
3-00394-A07	2008	12-9-0390	750	500	Diesel	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No	No	Yes
2202-A01	2015	25-0081-9-0499	755	100 non-emergency use	Diesel	19.7	1.71E-01	8.11E-05	4.39E-03	2.66E-03	2.23E-03	No	No	Yes
3147-A01	2015	25-0081-9-0491	670	100 non-emergency use	Diesel	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No	No	Yes
3660-A01	1995	25-0081-9-0500	643	N/A	Diesel	3.8	2.81E-02	1.33E-05	7.20E-04	4.36E-04	3.66E-04	No	No	No
3-04600-A04	1996	12-9-0276	1877	N/A	Diesel	31.0	6.70E-01	3.17E-04	1.72E-02	1.04E-02	8.72E-03	No	No	No
3-04600-A05	1996	12-9-0277	1877	N/A	Diesel	30.1	6.51E-01	3.08E-04	1.67E-02	1.01E-02	8.47E-03	No	No	No
5016-A01	2017	25-0081-9-0510	2346	100 non-emergency use	Diesel	3.8	1.03E-01	4.86E-05	2.63E-03	1.59E-03	1.34E-03	No	No	Yes
5046-A01	2017	25-0081-9-0509	617	100 non-emergency use	Diesel	1.5	1.07E-02	5.05E-06	2.73E-04	1.65E-04	1.39E-04	No	No	Yes
26-6007-GMS Lab-A04	2009	25-0081-9-0393	1980	**	Diesel	6.0	2.18E-01	1.24E-04	3.97E-03	4.05E-03	3.40E-03	No	No	Yes
26-6002-C2CNTWest-A05	2009	25-0081-9-0394	2922	**	Diesel	12.0	1.90E-01	1.44E-04	3.41E-03	4.71E-03	3.96E-03	No	No	Yes
26-6003-GMS Tower-A04	2009	25-0081-9-0395	2922	**	Diesel	1.0	1.58E-02	1.20E-05	2.84E-04	3.93E-04	3.30E-04	No	No	Yes
26-6006-HQBuilding-A06	2009	25-0081-9-0396	1980	**	Diesel	2.0	3.93E-02	3.19E-05	1.02E-03	1.04E-03	8.76E-04	No	No	Yes
6009-JSEC	2010	25-0081-9-0412	1490	145 ***	Diesel	12.5	2.16E-01	1.02E-04	5.54E-03	3.35E-03	2.81E-03	No	No	Yes
3090-JSEC-01	2010	25-0081-9-0410	2922	145 ***	Diesel	27.2	9.16E-01	4.34E-04	2.34E-02	1.42E-02	1.19E-02	No	No	Yes
3511-A01 - Pending	2023	Pending	3350	100 non-emergency use		This EU was not in the 2022 Title V ECR							No	No
3511-A02 - Pending	2023	Pending	3350	100 non-emergency use		This EU was not in the 2022 Title V ECR							No	No
26-6010-C2CNT East	2010	25-0081-9-0411	2919	145 ***	Diesel	13.0	4.40E-01	2.08E-04	1.13E-02	6.82E-03	5.72E-03	No	No	Yes
26-6010-C2CNT East	2010	25-0081-9-0411	2919	145 ***	Diesel	8.0	2.71E-01	1.28E-04	6.93E-03	4.20E-03	3.52E-03	No	No	Yes

Notes:

- All 2022 data was taken from APG AA Title V ECR for 2022.
 - Grey highlight indicates EU was added after current permit was issued.
 - Potential Majors were determined using 500 hours of operation per year, per EPA Memorandum on "Calculating Potential to Emit (PTE) for Emergency Generators", 06 September 1995, John S. Seitz.
 - Federally Enforceable Limits on the Operating Schedule were obtained from the Permit to Construct (PTC) for each EU.
- * The combined Nox emissions from the two generators must be less than 25 tons in any rolling 12-month period.
- ** To maintain synthetic minor status for the C5ISR Phase I, the combined Nox emissions from the 15 boilers and four generators at the facility must be less than 25 tons in any rolling 12-month period.
- *** To maintain synthetic minor status for the C5ISR Phase II, the combined Nox emissions from the two boilers and four generators at the facility must be less than 25 tons in any rolling 12-month period.
- **** Date of installation is based on the date that the PTC was issued. If the PTC was issued in the first half of a year, the date of installation is given as that year. If the PTC was issued in the second half of a year, the date of installation is given as the next year.

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Generators Table General Reference: COMAR 26.11.09.05E(2) through (4)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Visible emissions from any engine, operating at idle, cannot exceed 10% opacity, and operating at other than idle conditions, cannot exceed 40% opacity. Exceptions: (2) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of cleaning the exhaust system; (b) Section E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service; 30 minutes; (ii) All other engines: 15 minutes; (c) Sections E(2) and (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

Permit Shield Request: APG requests a permit shield for all of the Generators

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG will properly operate and maintain the engines in a manner to minimize visible emissions. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for generator operation and maintenance.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference COMAR 26.11.03.06C Describe: APG will retain records of preventative maintenance on site for at least 5 years and make them available to the Department upon request. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of tune-up and other records.

Reporting: Reference COMAR 26.11.09.07C Describe: APG shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations". This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual and Semi-annual



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

Emissions Unit No.: See Generator Table **General Reference:** COMAR 26.11.09.07A(2)(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Fuel oil for engines cannot contain sulfur by weight in excess of 0.3%.

Permit Shield Request: APG requests a permit shield for all of the Generators.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG will obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for fuel supply. Compliance with the 15 ppm sulfur limit in 40 CFR 80.510(b) will be used to demonstrate compliance with the 0.3% sulfur standard.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference COMAR 26.11.03.06C Describe: APG will maintain annual fuel supplier certifications stating that the fuel oil is in compliance with the regulation for at least 5 years. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of fuel supplier certifications.

Reporting: Reference COMAR 26.11.09.07C Describe: APG will supply the annual fuel supplier certification to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual and Semi-annual



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

Emissions Unit No.: See Generators Table **General Reference:** COMAR 26.11.09.08B(5) and 08G(1)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Fuel-burning equipment with a capacity factor of 15% or less must: provide written certification of the capacity factor of the equipment; perform a combustion analysis and optimize combustion at least once annually for equipment that operates >500 hr/yr; maintain the combustion analysis results on-site for at least 2 years and make the results available to the Department and EPA upon request; require each generator operator (except combustion turbines) to attend combustion optimization training at least once every 3 years; and maintain training program attendance records and make the records available to the Department upon request. The equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Permit Shield Request: APG requests a permit shield for all of the Generators

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON report

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG will calculate the capacity factor within 30 days after the end of each month. If any engine operates >500 hours/year, APG will perform a combustion analysis and optimize combustion at least once every year. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for generator operation and maintenance.

COMAR 26.11.03.06C

Testing: Reference COMAR 26.11.09.08G(1)(b) Describe: If any engine operates >500 hr/yr, APG will perform a combustion analysis and optimize combustion at least once every year. If an engine is operated in excess of 15% capacity factor, APG will demonstrate compliance with the 42-ppm limit by submitting a test protocol to the Department for approval and performing an EPA Reference Method Test within 120 days after exceeding the 15 % capacity factor. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of combustion analysis records.

COMAR 26.11.09.08G(1)(c) and (e)

Record Keeping: Reference COMAR 26.11.03.06C Describe: APG will maintain a record of the calculated capacity factor. For any engines that operate >500 hours/year, APG will maintain records of the results of combustion analyses for at least 5 years and make them available to the Department and EPA upon request. APG will maintain a record of training program attendance for each operator on site for at least 5 years and make them available to the Department upon request. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

COMAR 26.11.03.06C and

Reporting: Reference COMAR 26.11.09.08G(e) Describe: APG will provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. APG will submit a list of trained operators to the Department upon request. APG will maintain annual fuel use records for at least 3 years and make them available to the department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual and Semi-annual



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

Emissions Unit No.: See Generators Table **General Reference:** Permits to Construct

Briefly describe the Emission Standard/Limit or Operational Limitation:

Each standby generator will not be operated more than the hours per year specified on their permit to construct unless approval is obtained from the Department.

Permit Shield Request: APG requests a permit shield for all of the Generators

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☐ Semi-Annual Monitoring Report: Click or tap here to enter text.

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None

Testing: Reference _____ Describe: None

Record Keeping: Reference PTC _____ Describe: The records of hours of operation and fuel use will be kept for at least 5 years. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference PTC _____ Describe: The records of hours of operation and fuel use will be made available to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



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

Emissions Unit No.: See Generators Table - NSPS Generators **General Reference:** Permits to Construct/40 CFR 60 Subpart IIII (NSPS)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Regulation 40 CFR 60.4207 limits the maximum sulfur content of the fuel to 15 ppm. This permit is valid only for the installation of an emergency diesel generator with piston displacement less than 10 liters per cylinder. This subpart applies if the emergency diesel generator uses a diesel engine manufactured after April 1, 2006. An emergency diesel generator or diesel engine subject to this subpart shall be equipped with a non-resettable hour meter. (See attached page)

Permit Shield Request: APG requests a permit shield for all of the Generators

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON Reports

Methods used to demonstrate compliance:

Monitoring: Reference See Record Keeping Describe: See Record Keeping

Testing: Reference See Record Keeping Describe: See Record Keeping

Record Keeping: Reference PTC COMAR 26.11.03.06C Describe: APG will maintain a log of the amount of fuel used, the hours of operation and reason for generator operation; documentation of the date of manufacture of the engine, the manufacturer model number, the installation date of each generator, and the certifications of compliance of manufacturer engine test data required by 40 CFR 60.4211 and 60.4214(b); and annual fuel supplier certifications stating that the fuel oil is in compliance with this regulation. All these records must be maintained for 5 years. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference See Record Keeping Describe: See Record Keeping

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



Emissions Standard/Limit or Operational Limitation:

(Continued from previous page)

The Permittee shall only purchase emergency generator sets certified to meet the emission standards of §60.4205(b). The generators must be installed and configured according to the manufacturer's specifications.[Ref: §60.4211 (c)]

The Permittee must purchase and install emergency generator sets certified to the emission standards for new nonroad diesel engines in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants [Ref: §62.4202(b)(2)];

The requirements of the condition above do not apply to owners or operators of NSPS emergency diesel engines that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location [Ref: §60.4208].



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

Emissions Unit No.: See Generators Table - NSPS Generators **General Reference:** 40 CFR 63.6590 (NESHAP)

Briefly describe the Emission Standard/Limit or Operational Limitation:

A stationary RICE constructed or reconstructed after June 12, 2006, at an area source must meet requirements of this section (NESHAP) by meeting the requirements of 40 CFR 60 Subpart IIII (NSPS)

Permit Shield Request: APG requests a permit shield for all of the Generators

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON Reports

Methods used to demonstrate compliance:

Monitoring: Reference See NSPS Requirements Describe: See NSPS Requirements

Testing: Reference See NSPS Requirements Describe: See NSPS Requirements

Record Keeping: Reference See NSPS Requirements Describe: See NSPS Requirements

Reporting: Reference See NSPS Requirements Describe: See NSPS Requirements

Frequency of submittal of the compliance demonstration: Annual and Semi-annual



SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Generators Table - NSPS Generators

General Reference: 40 CFR: 60.4211, 60.4207, 80.510(b), 60.4205(b), 60.4202(b)(2), 89.112, and 89.113

PTC 025-0081-9-0393 through 025-0081-9-0396

Briefly describe the Emission Standard/Limit or Operational Limitation:

NSPS Generators at APG must: be operated according to the manufacturer's approved procedures; meet the fuel sulfur limits in 40 CFR 80.510(b); meet the emission standards in 40 CFR 89.112 Table 1 for model years 2006 (and later); meet opacity standards in 40 CFR 89.113; and be used for no more than 100 hours of non-emergency use (maintenance checks and testing). In addition, the combined NOx emissions from the C5ISR-Phase I R&D Facility boilers and generators cannot exceed 25 tons in any rolling 12-month period.

Permit Shield Request: APG requests a permit shield for all of the Generators.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON Reports

Methods used to demonstrate compliance:

Monitoring: Reference See Record Keeping Describe: See Record Keeping

Testing: Reference See Record Keeping Describe: See Record Keeping

PTC 025-0081-9-0393

Record Keeping: Reference through 025-0081-9-0396 Describe: The NOx emissions for each previous calendar month and a total for the previous 12 consecutive calendar months are calculated and recorded for the C5ISR-Phase I R&D Facility. The calculations and records are updated monthly, within the first 15 days of each following month. The records are submitted to the Department as part of the semi-annual report. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.03.06C Describe: The amounts of fuel oil combusted, the hours of operation, and reason for generator operation (i.e. maintenance or operational testing, power outage, etc.) are reported to the Department in the annual emission certification report due on April 1 of each year. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Emergency Generator Table – Emergency **General Reference:** 40 CFR 63 Subpart ZZZZ (NESHAP)
generators not subject to NSPS Subpart IIII Requirements

Briefly describe the Emission Standard/Limit or Operational Limitation:

Existing emergency stationary RICE located at an area source of HAP emissions, such as APG, must be maintained in accordance with 40 CFR 63 Subpart ZZZZ Appendix Table 2D: a. Change oil and filter every 500 hours of operation or annually, whichever comes first; b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Permit Shield Request: APG requests a permit shield for all of the Generators

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON Reports

Methods used to demonstrate compliance:

Monitoring: Reference 40 CFR 63.6625 Describe: APG will operate and maintain the stationary RICE and any after-treatment control device in a manner consistent with good air pollution control practices for minimizing emissions; will install a non-resettable hour meter on engines with a site rating of less than or equal to 500 bHP; will minimize the engine's idle time during startup and minimize startup time; and will have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2D. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for generator operation and maintenance.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference 40 CFR 63.6655 Describe: APG will keep records of maintenance on the existing emergency stationary RICE to demonstrate that they are being maintained per Table 2D. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference Table 2D to Subpart ZZZZ Describe: APG will perform the management practice requirements in accordance with Footnote 2 of Table 2D. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual and Semi-annual



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

Emissions Unit No.: See Generators Table – Emergency generators **General Reference:** 40 CFR 63 Subpart ZZZZ (NESHAP)
not subject to NSPS Subpart IIII Requirements

Briefly describe the Emission Standard/Limit or Operational Limitation:

There are time limits on the use of existing institutional emergency stationary RICE at an area source such as APG(40 CFR 63.6640). Owners of an existing emergency stationary RICE at an area source of HAPs, must operate the emergency stationary RICE as follows for the engines to be considered an emergency engine; operate the engine without time limit for emergency situations; operate the engine for up to 100 hours/year for maintenance checks and readiness testing and operate the engine for up to 50 hr/yr for non-emergency situations (those 50 hrs. count toward the 100 hr limit).

Permit Shield Request: APG requests a permit shield for all of the generators

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON Reports

Methods used to demonstrate compliance:

Monitoring: Reference 40 CFR 63.6640 Describe: See Emission Standard/Limit or Operational Limitation above. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for generator operation and maintenance.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference 40 CFR 63.6655 Describe: Records of maintenance on the existing stationary emergency RICE are kept to demonstrate that it and the after-treatment device (if any) are being operated and maintained according to the maintenance plan. Records of hours of operation of the existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines are kept through the non-resettable hour meter. Hours spent for emergency and non-emergency operation and reason for operation are documented. This will be verified by periodic inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference 40 CFR 63.6650 Describe: If APG operates an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is 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) or that operates for the purposes specified in 63.6640(f)(4)(ii). APG will submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel

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



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

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

Emissions Unit No.: See Generators Table **Permit to Construct No.** Various

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion
			Permit Condition 5.1.C.(2) - A person who owns or operates a combustion turbine with a capacity factor greater than 15 % shall meet an hourly average NOx emission rate of not more than 42 ppm when
			burning gas or 65 ppm when burning fuel oil (dry volume at 15 % oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive.
			This permit condition is extraneous because there is no combustion turbine at Aberdeen Area.



SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: See Generators Table

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

Not Applicable.



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

Scenario No.: _____

Emissions Unit No.: See Generators Table **General Reference:** _____

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

Not Applicable

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: Not Applicable _____

Testing: Reference _____ Describe: Not Applicable _____

Record Keeping: Reference _____ Describe: Not Applicable _____

Reporting: Reference _____ Describe: Not Applicable _____

Frequency of submittal of the compliance demonstration: _____



SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.:</u> See Generators Table	2. <u>Emissions Point No.:</u>
3. <u>Type and Description of Control Equipment:</u>	
Not Applicable.	
4. Pollutants Controlled:	Control Efficiency:
Not Applicable.	Not Applicable.
5. Capture Efficiency: Not Applicable.	



SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant	Not Applicable.				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					



SECTION 6.

**EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS**

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

1. Applicable Requirement:

Not Applicable.

2. Brief Description:

Not Applicable.

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

Not Applicable.



**SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS**

1. Emissions Unit #	Anticipated Compliance Date
See Generators Table.	Not Applicable.
Applicable Federally Enforceable Requirement being Not Applicable. Violated:	

2. Description of Plan to Achieve Compliance: Not Applicable.

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



Stationary Engines

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SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: See Stationary Engines Table 1a. Date of installation (month/year): See Stationary Engines Table	2. MDE Registration No.:(if applicable) See Stationary Engines Table												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): See Stationary Engines Table													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: See Stationary Engines Table General Reference: <u>PTC 025-0081-9-0435 through 9-0437</u> Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: <table style="width:100%; border: none;"> <tr> <td style="width:40%;">Type(s) of Fuel</td> <td style="width:40%;">% Sulfur Annual Usage (specify units)</td> <td style="width:20%;"></td> </tr> <tr> <td>1. <u>Distillate fuel oil</u></td> <td><u>=<0.3%</u></td> <td><u>See Stationary Engines Table</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> <td>_____</td> </tr> </table>		Type(s) of Fuel	% Sulfur Annual Usage (specify units)		1. <u>Distillate fuel oil</u>	<u>=<0.3%</u>	<u>See Stationary Engines Table</u>	2. _____	_____	_____	3. _____	_____	_____
Type(s) of Fuel	% Sulfur Annual Usage (specify units)												
1. <u>Distillate fuel oil</u>	<u>=<0.3%</u>	<u>See Stationary Engines Table</u>											
2. _____	_____	_____											
3. _____	_____	_____											
6. Emissions in Tons: See Stationary Engines Table A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NO_x _____ SO_x _____ VOC _____ PM₁₀ _____ HAPs _____													



MARYLAND DEPARTMENT OF THE ENVIRONMENT
Title V Permit Renewal Application - Permit No. 24-025-00081
Aberdeen Proving Ground - Aberdeen Area
November 2023

Section 3A for Stationary Engines - Emissions Units Table

Emission Unit No.	Date of Installation (month/yr)	MDE Registration No.	Size (HP)	Federally Enforceable Limit on the Operating Schedule (hours per year)	Fuel Type	2022 Usage (hours)	2022 NOx (tons)	2022 SOx (tons)	2022 VOC (tons)	2022 PM10 (tons)	2022 HAPs (tons)	Actual Major	Potential Major (before control device)	Subject to NSPS Subpart IIII
BSS-01	2001	025-0081-9-0435	600	3500	Diesel	249	1.72E+00	8.13E-04	4.40E-02	2.66E-02	2.23E-02	No	No	No
LWE-01	2007	025-0081-9-0436	550	3500	Diesel	115	7.29E-01	3.45E-04	1.86E-02	1.13E-02	9.48E-03	No	No	No
LWE-02	2007	025-0081-9-0436	550	3500	Diesel	114	7.22E-01	3.42E-04	1.85E-02	1.12E-02	9.40E-03	No	No	No
LWE-03	2007	025-0081-9-0436	550	3500	Diesel	115	7.29E-01	3.45E-04	1.86E-02	1.13E-02	9.48E-03	No	No	No
LWE-04	2007	025-0081-9-0436	550	3500	Diesel	117	7.41E-01	3.51E-04	1.90E-02	1.15E-02	9.64E-03	No	No	No
LWE-05	2007	025-0081-9-0436	550	3500	Diesel	116	7.35E-01	3.48E-04	1.88E-02	1.14E-02	9.56E-03	No	No	No
UTF-01	1995	025-0081-9-0437	500	3500	Diesel	34.4	1.98E-01	9.39E-05	5.08E-03	3.07E-03	2.58E-03	No	No	No

Notes:

1. All 2022 data was taken from APG AA Title V ECR for 2022.
2. Federally Enforceable Limits on the Operating Schedule were obtained from Permits to Construct (PTC) 025-0081-9-0435 through 9-0437.
3. To maintain synthetic minor status for the bridge simulator system, wave simulator system, and marine railway system engines, the combined Nox emissions from the seven stationary engines must be less than 25 tons in any rolling 12-month period.
4. The potential major was determined based on the operating limit of 3500 hours per year; however, the engines are used for far fewer than 3500 hours per year.

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Stationary Engines Table **General Reference:** COMAR 26.11.09.05E(2) through (4)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Visible emissions from any engine, operating at idle, cannot exceed 10 % opacity, and operating at other than idle conditions, cannot exceed 40 % opacity. Exceptions: (2) Section E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of cleaning the exhaust system; (b) Section E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service: 30 minutes; (ii) All other engines: 15 minutes (c) Section E(2) and (3) do not apply while maintenance repair, or testing is being performed by qualified mechanics

Permit Shield Request: APG requests a permit shield for all of the Stationary Engines.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON Reports

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C **Describe:** APG will properly operate and maintain the engines in a manner to minimize visible emissions. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for stationary engine operation and maintenance.

Testing: Reference See Monitoring **Describe:** See Monitoring

Record Keeping: Reference COMAR 26.11.03.06C **Describe:** APG will retain records of preventative maintenance on site for at least 5 years and make them available to the Department upon request. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of tune-up and other records.

Reporting: Reference COMAR 26.11.09.07C **Describe:** APG shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations". This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual and Semi-annual



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

Emissions Unit No.: See Stationary Engines Table **General Reference:** COMAR 26.11.09.07A(2)(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Fuel oil for engines cannot contain sulfur by weight in excess of 0.3%.

Permit Shield Request: APG requests a permit shield for all of the Stationary Engines.

Compliance Demonstration:

Check appropriate reports required to be submitted:

☐ Quarterly Monitoring Report: Click or tap here to enter text.

☒ Annual Compliance Certification: Title V Compliance Certification

☒ Semi-Annual Monitoring Report: SIXMON Reports

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C **Describe:** APG will obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. This will be verified by periodic internal inspections by DWP Environmental personnel and interviews of personnel responsible for fuel supply. Compliance with the 15 ppm sulfur limit in 40 CFR 80.510 (b) will be used to demonstrate compliance with the 0.3 % sulfur standard.

Testing: Reference See Monitoring **Describe:** See Monitoring

Record Keeping: Reference COMAR 26.11.03.06C **Describe:** APG will maintain annual fuel supplier certifications stating that the fuel oil is in compliance with the regulation for at least 5 years. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of fuel supplier certifications.

Reporting: Reference COMAR 26.11.09.07C **Describe:** APG will supply the annual fuel supplier certification to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Stationary Engines Table General Reference: COMAR 26.11.09.08B(5)

Briefly describe the Emission Standard/Limit or Operational Limitation:

For the purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Permit Shield Request: APG requests a permit shield for all of the Stationary Engines.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: [Click or tap here to enter text.](#)
☒ Annual Compliance Certification: [Title V Compliance Certification](#)
☐ Semi-Annual Monitoring Report: [Click or tap here to enter text.](#)

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: None.

Testing: Reference _____ Describe: None.

Record Keeping: Reference _____ Describe: None.

Reporting: Reference _____ Describe: None.

Frequency of submittal of the compliance demonstration: Annual



SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Stationary Engines Table General Reference: COMAR 26.11.09.08G(1)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Fuel-burning equipment with a capacity factor of 15% or less must: provide written certification of the capacity factor of the equipment; perform a combustion analysis and optimize combustion at least once annually for equipment that operates >500 hr/yr; maintain the combustion analysis results on-site for at least 2 years and make the results available to the Department and EPA upon request; require each generator operator (except combustion turbines) to attend combustion optimization training at least once every 3 years; and maintain training program attendance records and take the records available to the Department upon request.

Permit Shield Request: APG requests a permit shield for all of the Stationary Engines.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG will calculate the capacity factor within 30 days after the end of each month. If any engine operates > 500 hours/year, APG will perform a combustion analysis and optimize combustion at least once every year. This will be verified by periodic internal inspections by DWP Environmental personnel and interviews of personnel responsible for stationary engine operation and maintenance.

COMAR 26.11.03.06C

Testing: Reference COMAR 26.11.09.08G(1)(b) Describe: If any engine operates > 500 hr/yr, APG will perform a combustion analysis and optimize combustion at least once every year. If an engine is operated in excess of 15 % capacity factor, APG will demonstrate compliance with the 42-ppm limit by submitting a test protocol to the Department for approval and performing an EPA Reference Method Test within 120 days after exceeding the 15 % capacity factor. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of combustion analysis records.

COMAR 26.11.09.08G(1)(c) and (e)

Record Keeping: Reference COMAR 26.11.03.06C Describe: APG will maintain a record of the calculated capacity factor. For any engines that operate >500 hours/year, APG will maintain records of the results of combustion analyses for at least 5 years and make them available to the Department and EPA upon request. APG will maintain a record of training program attendance for each operator on site for at least 5 years and make them available to the Department upon request. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

COMAR

Reporting: Reference 26.11.03.06C and 26.11.09.08G(e) Describe: APG will provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. APG will submit a list of trained operators to the Department upon request. APG will maintain annual fuel use records for at least 3 years and make the available to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual



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

Emissions Unit No.: See Stationary Engines Table **General Reference:** PTC 025-0081-9-0435 through 9-0437

Briefly describe the Emission Standard/Limit or Operational Limitation:

Each stationary engine will not be operated more than the hours per year specified on their permit to construct unless approval is obtained from the Department. In addition, the combined NOx emissions from the seven stationary engines cannot exceed 25 tons in any rolling 12-month period. Also, APG will operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

Permit Shield Request: APG requests a permit shield for all of the Stationary Engines.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON

Methods used to demonstrate compliance:

Monitoring: Reference: See Record Keeping. Describe: See Record Keeping.

Testing: Reference See Record Keeping. Describe: See Record Keeping.

PTC 025-0081-9-0435

Record Keeping: Reference through 025-0081-9-0437 Describe: The records of hours of operation and fuel use will be kept for at least 5 years. The NOx emissions for each previous calendar month and a total for the previous 12 consecutive calendar months are calculated and recorded for the stationary engines. The calculations and records are updated monthly, within the first 15 days of each following month. The records are submitted to the Department as part of the semi-annual report. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference PTC, COMAR 26.11.03.06C Describe: The records of hours of operation and fuel use will be made available to the Department upon request. The amounts of fuel oil combusted, the hours of operation, and monthly NOx emissions calculations are reported to the Department in the SIXMON reports. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



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

Emissions Unit No.: See Stationary Engines Table **General Reference:** 40 CFR 63.6604 and 40 CFR 80.510(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

If displacement < 30 liters (L)/cylinder, existing non-emergency stationary RICE at APG must meet the following standards from 40 CFR 80.510(b) for nonroad diesel fuel: sulfur limit of 15 ppm, cetane index above 40, and aromatic content below 35 volume percent.

Permit Shield Request: APG requests a permit shield for all of the Stationary Engines.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG shall obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for fuel supply.

Testing: Reference See Monitoring. Describe: See Monitoring.

Record Keeping: Reference COMAR 26.11.03.06C Describe: APG shall maintain annual fuel supplier certifications stating that the fuel oil is in compliance with the regulation for at least 5 years. This will be verified by periodic internal inspections by DPW Environmental personnel

Reporting: Reference COMAR 26.11.09.07C Describe: APG shall supply the annual fuel supplier certification to the Department upon request. This will be verified by periodic review of notifications and reports by DPW Environmental personnel.

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



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

Emissions Unit No.: See Stationary Engines Table **General Reference:** 40 CFR 63 Subpart ZZZZ (NESHAP)

Briefly describe the Emission Standard/Limit or Operational Limitation:

There are emission and operating limits on the use of existing stationary CI RICE at an area source of HAP emissions, such as APG (40 CFR 63.6603 and 63.6640). APG will limit concentration of CO in the stationary RICE exhaust to 23 or 49 ppmvd at 15% O₂ or reduce CO emissions by 70 % or more except during periods of startup (Table 2D to Subpart ZZZZ). APG will maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water (in H₂O) at 100 % load +/- 10 % from the pressure drop across the catalyst that was measured during the initial performance test, and will maintain the temperature of the exhaust so that the catalyst inlet temperature is between 450 and 1350 degrees Fahrenheit.

Permit Shield Request: APG requests a permit shield for all of the Stationary Engines.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
- ☒ Annual Compliance Certification: Title V Compliance Certification
- ☒ Semi-Annual Monitoring Report: SIXMON

Methods used to demonstrate compliance:

Monitoring: Reference 40 CFR 63.6605, 63.6625, 63.6635 and 63.6640 Describe: See attached. APG will operate and maintain any affected source, air pollution control equipment, and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. APG will monitor continuously at all times that the stationary RICE is operating. APG will demonstrate continuous compliance with each emission limitation or operating limitation in Tables 2b and 2d and will report each instance when the limitations were not met. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for engine operation and maintenance.

Testing: Reference 40 CFR 63.6615 and 63.6620 Describe: APG will conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first, according to the requirements in Table 4 to Subpart ZZZZ of Part 63 for stationary RICE greater than 500 HP (all but UTF-01) complying with the requirement to limit the concentration of formaldehyde or CO in the stationary RICE exhaust. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of performance test records.

Record Keeping: Reference 40 CFR 63.6655 Describe: APG will keep a copy of each notification and report submitted; records of the occurrence and duration of each malfunction of operation or the air pollution control and monitoring equipment; records of performance tests and performance evaluations; records of all required maintenance performed on the air pollution control and monitoring equipment; records of actions taken during periods of malfunction to minimize emissions, including corrective actions; CPMS records; and records to show continuous compliance with each emission or operating limitation. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference 40 CFR 63.6650 Describe: APG will submit a Compliance Report in accordance with Table 7 to Subpart ZZZZ of Part 63 for existing non-emergency, non-black start stationary CI RICE > 300 HP located at an area source of HAPs. Semiannual Compliance Reports will cover the periods January 1 through June 30 and July 1 through December 31 and will be submitted by July 31 or January 31, respectively. Annual Compliance Reports will cover the period January 1 through December 31 and will be submitted by January 31. See attached page. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual and Semi-annual



Monitoring:

(Continued from previous page)

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.



Reporting:

(Continued from previous page)

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report. (3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks. (3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE. (9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.



Emissions Unit No.: See Stationary Permit to Construct No.

[illegible]

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: See Stationary Engines Table

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

Not Applicable.



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

Scenario No.: _____

Emissions Unit No.: See Stationary **General Reference:** _____
Engines Table.

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

Not Applicable _____

Compliance Demonstration:

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: Not Applicable .

Testing: Reference _____ Describe: Not Applicable .

Record Keeping: Reference _____ Describe: Not Applicable .

Reporting: Reference _____ Describe: Not Applicable .

Frequency of submittal of the compliance demonstration: _____



SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> : See Stationary Engines Table.	2. <u>Emissions Point No.</u> :
3. <u>Type and Description of Control Equipment</u> : The stationary engines were retrofitted with emission controls.	
The controls consist of closed crankcase ventilation (CCV) systems and catalytic converters. The engines	
are equipped with Parker/Raycor CCV6000 crankcase filter systems. Collected oil is returned to the	
crankcase via a 1/2" diameter return oil line, or routed to a collection container. The catalyst housings are installed	
above the engines and are wrapped in 1" thermal insulation blankets made of silicone impregnated fiberglass	
outer cover and knitted wire mesh inner liner. The overall blanket temperature rating is 1100°F. A monitoring	
system is included to monitor catalyst temperature and differential pressure across the catalyst.	
4. Pollutants Controlled:	Control Efficiency:
CO	equal to or greater than 70% CO emissions reduction
5. Capture Efficiency: 100 %	



SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant	Not Applicable.				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					



SECTION 6.

**EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS**

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

1. Applicable Requirement:

Not Applicable.

2. Brief Description:

Not Applicable.

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

Not Applicable.



**SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS**

1. Emissions Unit #	Anticipated Compliance Date
See Stationary Engines Table.	Not Applicable.
Applicable Federally Enforceable Requirement being Violated:	Not Applicable.

2. Description of Plan to Achieve Compliance: <u>Not Applicable.</u>

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



Paint Spray Booths

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SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: See Paint Spray Booths Table 1a. Date of installation (month/year): See Paint Spray Booths Table	2. MDE Registration No.:(if applicable) See Paint Spray Booths Table												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <u>See Paint Spray Booths Table</u>													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable. General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Not Applicable. <table style="width:100%; border: none;"> <tr> <td style="width:40%;">Type(s) of Fuel</td> <td style="width:20%;">% Sulfur</td> <td style="width:40%;">Annual Usage (specify units)</td> </tr> <tr> <td>1. _____</td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. _____			2. _____			3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. _____													
2. _____													
3. _____													
6. Emissions in Tons: See Paint Spray Booths Table A. Actual Major: _____ Potential Major: _____ (note: before control device) B. Actual Emissions: NO_x_____ SO_x_____ VOC_____ PM₁₀_____ HAPs_____													



MARYLAND DEPARTMENT OF THE ENVIRONMENT
Title V Permit Renewal Application - Permit No. 24-025-00081
Aberdeen Proving Ground - Aberdeen Area
November 2023

Section 3A for Paint Spray Booths - Emissions Units Table

Emission Unit No.	Date of Installation (month/yr)	MDE Registration No.	Description of the Emissions Units	2022 NO _x (tons)	2022 SO _x (tons)	2022 VOC (tons)	2022 PM ₁₀ (tons)	2022 HAPs (tons)	Actual Major	Potential Major (before control device)
7-00525-A04	1960	12-6-0162	Custom made cross draft paint spray booth. Particulate filters on the exhaust are an integral part of the booth. Operation includes, but not limited to, painting large military tactical equipment such as tanks, gun tubes, and artillery as well as non-tactical vehicles.	N/A	N/A	3.46E-01	4.51E-03	N/A	No	No
7-00525-A06	1960	12-6-0159	Custom made cross draft paint spray booth. Particulate filters on the exhaust are an integral part of the booth. Operation includes, but not limited to, painting large military tactical equipment such as tanks, gun tubes, and artillery as well as non-tactical vehicles.	N/A	N/A	1.99E-01	3.28E-03	N/A	No	No

Notes:

1. All 2022 data was taken from APG AA Title V ECR for 2022.

SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: See Paint Spray Booths Table General Reference: COMAR 26.11.19.23E

Briefly describe the Emission Standard/Limit or Operational Limitation:

Except as provided in this regulation, a person who is subject to this regulation may not use within the State an automotive coating or cleaning solvent with a VOC content in excess of the VOC content limit as follows: Adhesion promoter 4.5 lb/gal, automotive pretreatment coating 5.5 lb/gal, automotive primer 2.1 lb/gal, clear coating 2.1 lb/gal, color coating 3.5 lb/gal, multicolor coating 5.7 lb/gal, other automotive coating types 2.1 lb/gal, single-stage coating 2.8 lb/gal, temporary protective coating 0.5 lb/gal, truck bed liner coating 1.7 lb/gal and underbody coating 3.6 lb/gal.

Permit Shield Request APG requests a permit shield for all of the Paint Spray Booths.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.19.23I Describe: APG will only use approved coatings that comply with COMAR 26.11.19.23E. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for paint spray booth operation and maintenance.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference COMAR 26.11.19.23J Describe: APG will maintain the following: current list of all materials used; identify material as coating, coating compound or cleaning solvent; material name and manufacturer; application method; coating type; specific mix ratio; and the VOC actual and regulatory as applied. APG will maintain Safety Data Sheets (SDSs) and purchase records. These records will be maintained for at least 3 years and made available to the Department upon request. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.03.06C Describe: APG will report material usage and VOC content of coatings in the annual emissions certification. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual and Semi-annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT

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

Emissions Unit No.: See Paint Spray Booths Table General Reference: COMAR 26.11.19.23H

Briefly describe the Emission Standard/Limit or Operational Limitation:

A person subject to this regulation will: (1) store fresh and used coating components, coatings, solvents and cleaning solvents in vapor tight, nonabsorbent, nonleaking containers that are to be kept closed, (2) cloth, paper or absorbent applicators moistened with automotive coating components, automotive coatings, solvents or cleaning solvents will be stored in closed, vapor tight, nonabsorbent, nonleaking containers, (3) handling and transfer procedures to minimize spills and (4) ensure a person handling the equipment has completed training in the proper use and handling of the automotive coating components, automotive coatings, solvents and cleaning solvents

Permit Shield Request: APG requests a permit shield for all of the Paint Spray Booths.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.19.23H Describe: APG paint spray booth operators ensure compliance with required practices. DPW performs quarterly inspections to verify that the practices are being followed

Testing: Reference Describe: None

Record Keeping: Reference COMAR 26.11.19.23H Describe: APG maintains training records and DPW periodically reviews the records.

Reporting: Reference Describe: None

Frequency of submittal of the compliance demonstration: Annual

See Paint Spray Booths

Emissions Unit No.: Table **Permit to Construct No.** _____

[illegible]

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: See Paint Spray Booths Table

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

Not Applicable.



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

Scenario No.: _____

See Paint Spray

Emissions Unit No.: Booths Table **General Reference:** _____

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

Not Applicable.

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: Not Applicable.

Testing: Reference _____ Describe: Not Applicable.

Record Keeping: Reference _____ Describe: Not Applicable.

Reporting: Reference _____ Describe: Not Applicable.

Frequency of submittal of the compliance demonstration: _____



SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.:</u> See Paint Spray Booths Table	2. <u>Emissions Point No.:</u>
3. <u>Type and Description of Control Equipment:</u>	
Not Applicable.	
4. Pollutants Controlled:	Control Efficiency:
Not Applicable.	Not Applicable.
5. Capture Efficiency: Not Applicable.	



SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant	Not Applicable.				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					



SECTION 6.

**EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS**

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

1. Applicable Requirement:

Not Applicable.

2. Brief Description:

Not Applicable .

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

Not Applicable.



**SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS**

1. Emissions Unit #	Anticipated Compliance Date
See Paint Spray Booths Table	Not Applicable.
Applicable Federally Enforceable Requirement being Violated: Not Applicable.	

2. Description of Plan to Achieve Compliance: <u>Not Applicable.</u>

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



Underground Storage Tanks

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SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 26-4029-A03 and 26-4029-A05 (Underground Storage Tanks) 1a. Date of installation (month/year): 1993	2. MDE Registration No.:(if applicable) 12-9-0152 12-9-0152												
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): 26-04029-A03 & A05 - Two 20,000-gallon underground storage tanks equipped with Stage I vapor recovery systems installed in 1993. APG has a bulk gasoline/diesel terminal that is used to fill fuel trucks to deliver fuel by trucks as needed.													
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: Not Applicable. General Reference: _____ Continuous Processes: _____ hours/day _____ days/year Batch Processes: _____ hours/batch _____ batches/day _____ days/year													
5. Fuel Consumption: Responses for -A03 presented over -A05. <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 30%;">Type(s) of Fuel</th> <th style="text-align: left; width: 30%;">% Sulfur</th> <th style="text-align: left; width: 40%;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. Gasoline</td> <td>negligible</td> <td>212,671 gallons</td> </tr> <tr> <td>2. Gasoline</td> <td>negligible</td> <td>17,520 gallons</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. Gasoline	negligible	212,671 gallons	2. Gasoline	negligible	17,520 gallons	3. _____		
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)											
1. Gasoline	negligible	212,671 gallons											
2. Gasoline	negligible	17,520 gallons											
3. _____													
6. Emissions in Tons: Responses combined emissions for -A03 and -A05. A. Actual Major: <u>No</u> Potential Major: <u>No</u> (note: before control device) B. Actual Emissions: NOx <u>N/A</u> SOx <u>N/A</u> VOC <u>1.00</u> PM10 <u>N/A</u> HAPs <u>0.53</u>													

SECTION 3B.

**CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: 26-04029-A03 and 26-04029-A05 **General Reference:** COMAR 26.11.13.04C
(Underground Storage Tanks)

Briefly describe the Emission Standard/Limit or Operational Limitation:

APG will not cause or permit gasoline to be loaded into the storage tanks unless the loading system is equipped with a vapor balance line that is properly installed, maintained, and used.

Permit Shield Request: APG requests a permit shield for both of the underground storage tanks.

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.24.05 Describe: APG will inspect control equipment daily, except during national holidays and weekends when the motor pool operations are not manned, to verify that it is working properly. APG will repair any defective equipment identified by the Department before placing the equipment into service, and will inform the Department by telephone within 72 hours after the repair or replacement of the defective equipment. This will be verified by periodic inspections by DPW Environmental personnel and interviews of personnel responsible for equipment operation and maintenance.

Testing: Reference COMAR 26.11.24.04 Describe: See attached page. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of testing reports.

Record Keeping: Reference COMAR 26.11.24.07 Describe: See attached page. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

COMAR 26.11.24.04D

Reporting: Reference 26.11.24.05D, and 26.11.24.07E Describe: See attached page. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

Frequency of submittal of the compliance demonstration: Annual and Semi-annual

Testing:

- A. APG will perform a leak test in accordance with the CARB Vapor Recovery Test Procedure TP-201.3 referenced in Regulation .01-1B(1) of COMAR 26.11.24.04; an air to liquid volume ratio test in accordance with the CARB Vapor Recovery Test Procedure TP-201.5 referenced in Regulation .01-1B(2) of COMAR 26.11.24.04; a dynamic pressure performance test in accordance with the CARB Vapor Recovery Test Procedure TP-201.4 referenced in Regulation .01-1B(3) of COMAR 26.11.24.04; a vapor return line vacuum integrity test for the Healy Model 400 ORVR System in accordance with Executive Order G-70-165 Exhibit 4 referenced in Regulation .01-1B(4) of COMAR 26.11.24.04; and a vapor return line vacuum integrity test for the Healy Model 600 System in accordance with Executive Order G-70-165 Exhibit 4 referenced in Regulation .01-1B(5) of COMAR 26.11.24.04.
- C. If a gasoline dispensing facility fails any test required by this chapter, APG will notify the Department of the failure in writing within 5 working days after the test and before retesting.

Record Keeping:

- A. APG will create and maintain a record file at the facility.
- B. The record file shall contain copies of all test reports, permits, violation notices, correspondence with the Department, equipment maintenance records, training records, and other information pertinent to the requirements of this chapter. Verification of training shall be maintained in the facility file. Equipment maintenance records shall be maintained for at least 2 years. Test records shall be maintained for at least 5 years.
- C. The equipment maintenance records shall include:
 - 1. The date on which defective equipment was found, a description of each defect, a description of the corrective action and the date on which the defect was corrected, and the probable cause of the defect;
 - 2. If parts are replaced, the location within the approved system of the part, the part number, and assurance that the replacement part does not degrade the efficiency of the system; and
 - 3. Inspection reports and any other information relating to maintenance or care of the system.
- D. APG, as an owner or operator of a gasoline dispensing facility exempted according to COMAR 26.11.24.02C ("The owner or operator of any new gasoline dispensing facility that has total gasoline storage tank capacity less than 2,000 gallons"), will create and maintain records on gasoline throughput and tank sizes and make records available to the Department upon request.

Reporting:

COMAR 26.11.24.04D: APG will notify the Department in writing within 5 days after any test fails, and before retesting.

COMAR 26.11.24.05D: For defective equipment that was identified by the Department, APG will inform the Department by telephone within 72 hours after the repair or replacement of the defective equipment.

COMAR 26.11.24.07E: APG will notify the Department 21 days before a test is to be conducted; have available a test protocol at the test site during testing; forward copies of all test results to the Department; and report test failures to the Department in writing within 5 days following the date of the failure.

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

Not Applicable.

[illegible]

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

Scenario No.: _____

Emissions Unit No.: Underground Storage Tanks **General Reference:** _____

26-04029-A03 and 26-04029-A05

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

Not Applicable.

Compliance Demonstration:

Methods used to demonstrate compliance:

Monitoring: Reference Describe: Not Applicable.

Testing: Reference Describe: Not Applicable.

Record Keeping: Reference Describe: Not Applicable.

Reporting: Reference Describe: Not Applicable.

Frequency of submittal of the compliance demonstration: _____

SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.:</u> Underground Storage Tanks: 26-04029-A03 and -A05		2. <u>Emissions Point No.:</u>	
3. <u>Type and Description of Control Equipment:</u>			
Not Applicable.			
4. Pollutants Controlled:		Control Efficiency:	
Not Applicable.		Not Applicable.	
5. Capture Efficiency: Not Applicable.			

SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant	Not Applicable.				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					

SECTION 6.

EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS

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

1. Applicable Requirement:

Not Applicable.

2. Brief Description:

Not Applicable.

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

Not Applicable.

**SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS**

1. Emissions Unit # Underground Storage Tanks: 26-04029-A03 and -A05	Anticipated Compliance Date
	Not Applicable.
Applicable Federally Enforceable Requirement being Violated: Not Applicable.	

2. Description of Plan to Achieve Compliance: Not Applicable.

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

Facility-Wide

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SECTION 3B.

CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: Facility Wide General Reference: COMAR 26.11.19.02I (Good Operating Practices)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Good Operating Practices, Equipment Cleanup and VOC Storage (see attached page).

Permit Shield Request: APG requests a permit shield for all of the Emissions Units in the Facility

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.03.06C Describe: APG personnel working with VOCs will conduct routine inspections of their work area with regard to implementation of "good operating practices" designed to minimize emissions of VOC, at least once per month. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for paint spray booth operation and maintenance..

Testing: Reference See Monitoring Describe: See Monitoring

COMAR 26.11.19.02I

Record Keeping: Reference COMAR 26.11.03.06C Describe: APG will maintain written descriptions of all "good operating practices" and records of all inspections conducted to determine the facility's compliance status with regard to implementation of "good operating practices" designed to minimize emissions of VOC from facility-wide operations. The records shall include for each inspection the name of the inspector, the date and time of the inspection, and an account of the findings. Records will be maintained for at least 5 years. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.19.02I Describe: Good operating practices information shall be made available to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



Emission Standard/Limit or Operational Limitation:

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

(2) Good Operating Practices.

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

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

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

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

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

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

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

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

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

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

(c) A person subject to this regulation shall:

(i) Establish good operating practices in writing;

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

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

(3) Equipment Cleanup.

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

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

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

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

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

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

(4) VOC Storage and Transfer.

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

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



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

Emissions Unit No.: Facility-Wide **General Reference:** COMAR 26.11.19.16B, C, and D

Briefly describe the Emission Standard/Limit or Operational Limitation:

A person subject to any VOC emission standard or limitation established in this chapter and not otherwise subject to more specific VOC leak requirements of another regulation is subject to the requirements of this regulation. General requirements for control of VOC equipment leaks with exceptions (see attached page).

Permit Shield Request: APG requests a permit shield for all of the Emissions Units in the Facility

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: Click or tap here to enter text.
☒ Annual Compliance Certification: Title V Compliance Certification
☒ Semi-Annual Monitoring Report: SIXMON

Methods used to demonstrate compliance:

Monitoring: Reference COMAR 26.11.19.16C(1) Describe: APG personnel working with VOCs will visually inspect VOC equipment in their work area with regard to identifying VOC leaks and will initiate necessary repairs, at least once per month. This will be verified by periodic internal inspections by DPW Environmental personnel and interviews of personnel responsible for paint spray booth operation and maintenance.

Testing: Reference See Monitoring Describe: See Monitoring

Record Keeping: Reference COMAR 26.11.19.16C(6) Describe: APG will maintain a log that includes the name of the person conducting the inspection, the date on which VOC leak inspection was made, the findings of the inspection, a list of VOC leaks by tag identification number, the date the part was ordered, and the date the VOC leak was repaired; and make the log available to the Department upon request and maintain the log for a period of not less than two years from the date of the VOC leaks' occurrence. This will be verified by periodic internal inspections by DPW Environmental personnel and reviews of records.

Reporting: Reference COMAR 26.11.19.16 Describe: VOC leak inspection log shall be made available to the Department upon request. This will be verified by periodic reviews of notifications and reports by DPW Environmental personnel.

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



Emission Standard/Limit or Operational Limitation:

COMAR 26.11.19.16C

"A person subject to this regulation shall comply with all of the following requirements:

- (i) Visually inspect all components on the premises for leaks at least once each calendar month.
- (2) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date the leak was discovered, and the name of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.
- (3) Take immediate action to repair all observed VOC leaks that can be repaired within 48 hours.
- (4) Repair all other leaking components not later than 5 days after the leak is discovered. If a replacement part is needed, the part shall be ordered within 3 days after discovery of the leak, and the leak shall be repaired within 48 hours after receiving the part.
- (5) Maintain a supply of components or component parts that are recognized by the source to wear or corrode, or that otherwise need to be routinely replaced, such as seals, gaskets, packing, and pipe fittings.
- (6) Maintain a log that includes the name of the person conducting the inspection and the date on which leak inspections are made, the findings of the inspection, and a list of leaks by tag identification number. The log shall be made available to the Department upon request. Leak records shall be maintained for a period of not less than 2 years from the date of their occurrence."

COMAR 26.11.19.16D Exceptions. "Components that cannot be repaired as required in this regulation because they are inaccessible, or that cannot be repaired during operation of the source, shall be identified in the log and included within the source's maintenance schedule for repair during the next source shutdown."



Emissions Unit No.: Facility-Wide Permit to Construct No. _____[illegible]

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: Facility-Wide

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

Not Applicable.



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

Scenario No.: _____

Emissions Unit No.: Facility-Wide **General Reference:** _____

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

Not Applicable.

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: Not Applicable.

Testing: Reference _____ Describe: Not Applicable.

Record Keeping: Reference _____ Describe: Not Applicable.

Reporting: Reference _____ Describe: Not Applicable.

Frequency of submittal of the compliance demonstration: _____



SECTION 4. CONTROL EQUIPMENT

1. <u>Associated Emissions Units No.</u> :	2. <u>Emissions Point No.</u> :
Facility-Wide	
3. <u>Type and Description of Control Equipment</u> :	
Not Applicable.	
4. Pollutants Controlled:	Control Efficiency:
Not Applicable.	Not Applicable.
5. Capture Efficiency: Not Applicable.	



SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

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

Pollutant	Not Applicable.				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					



SECTION 6.

**EXPLANATION OF PROPOSED EXEMPTIONS FROM
OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE
REQUIREMENTS**

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

1. Applicable Requirement:

Not Applicable.

2. Brief Description:

Not Applicable.

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

Not Applicable.



**SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS
UNITS**

1. Emissions Unit #	Anticipated Compliance Date
Facility-Wide	Not Applicable.
Applicable Federally Enforceable Requirement being Violated: Not Applicable.	

2. Description of Plan to Achieve Compliance: <u>Not Applicable.</u>

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



STATE-ONLY ENFORCEABLE REQUIREMENTS

Facility Information:

Name of Facility: Aberdeen Proving Ground	County Harford
Premises Number: 24-025-00082	
Street Address: 4304 Rodman Road, Aberdeen Proving Ground, Maryland, 21005-5001	
24-hour Emergency Telephone Number for Air Pollution Matters: (410) 306-2278 (Hazor Khan)	
Type of Equipment (List Significant Units): The Aberdeen Proving Ground (APG) Aberdeen Area is a military installation. The regulated activities which produce air emissions in the Aberdeen Area include space heating, process, and NSPS boilers; generators; paint spray booths, underground storage tanks; and stationary engines.	



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS**

Registration No.: Not Applicable

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.06.08 & 09

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

COMAR 26.11.06.08 and 26.11.06.09 generally prohibit the discharge of emissions beyond the property line in
such a manner that a nuisance or air pollution is created.

Methods used to demonstrate compliance:

APG shall maintain compliance with standards and limits applicable to individual emissions units.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE- ONLY
ENFORCEABLE REQUIREMENTS**

Registration No.: Not Applicable

Emissions Unit No.: emissions sources requiring a PTC **General Reference:** COMAR 26.11.15.05
unless exempt

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

COMAR 26.11.15.05 requires that Best Available Control Technology for Toxics (T-BACT) be implemented
to control emissions of toxic air pollutants.

Methods used to demonstrate compliance:

T-BACT control options used at a facility also satisfy federally enforceable control requirements, therefore
periodic inspections will satisfy the above requirement.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS**

Registration No.: Not Applicable

Emissions Unit No.: emission sources requiring a PTC **General Reference:** COMAR 26.11.15.06
unless exempt

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

COMAR 26.11.15.06 prohibits the discharge of toxic air pollutants to the extent that such emissions will
unreasonably endanger human health.

Methods used to demonstrate compliance:

APG will maintain records of annual usage for each subject source. APG will submit certification of
compliance with COMAR 26.11.15 in the Annual Emission Certification Report. Periodic TAPs analysis is
conducted to ensure compliance.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS**

Registration No.: See Generators Table

Emissions Unit No.: See Generators Table **General Reference:** COMAR 26.11.36.03

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

The owner or operator of an emergency generator may not operate the generator except for emergencies, testing, and maintenance purposes. This regulation does not apply to any engine that is fueled with natural gas or propane, and any engine that operates as a redundant system for power without direct or indirect compensation located at a facility where operation of the engine is necessary to support critical national activities relating to security. The owner or operator may be subject to 40 CFR Parts 60 and 63; may not operate the engine for testing and maintenance between 12:01 am and 2:00 pm on any code orange, red, or purple air quality days; and shall install and operate a non-resettable hourly time meter on any engine used for any purpose other than for emergency purposes.

Methods used to demonstrate compliance:

APG will not operate the generators except for emergencies, testing, and maintenance purposes; will not operate the engine for testing and maintenance between 12:01 am and 2:00 pm on any code orange, red, or purple air quality days; and will install and operate a non-resettable hourly time meter on any engine used for any purpose other than for emergency purposes.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS**

Registration No.: Not Applicable

COMAR 26.11.03.06C(1)

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.15

COMAR 26.11.16

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

APG 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 APG's facility during the previous calendar year. The analysis shall include a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid, or a revised compliance demonstration, developed in accordance with requirements included in COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

Methods used to demonstrate compliance:

A toxic air pollutants (TAPs) emissions analysis is submitted to the Department by April 1 of each year during the term of the permit.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS**

Registration No.: Not Applicable

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.02.19C

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

APG will maintain records necessary to support the emissions certification for 5 years and will make them available to the Department upon request. If APG fails to maintain or provide data required by this section, which the Department requests in order to verify the emissions during the previous calendar year, the annual emission-based fee for that source shall be based on the estimated allowable emissions of that source.

Methods used to demonstrate compliance:

APG will maintain records necessary to support the emission certification for 5 years and will make them available to the Department upon request.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-
ONLY ENFORCEABLE REQUIREMENTS**

Registration No.: Not Applicable

Emissions Unit No.: Plant Wide **General Reference:** COMAR 26.11.02.19D

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

The responsible official designated by APG will certify the actual emissions of regulated air pollutants from all installations at the plant or facility. Certification will be on a form obtained from the Department and will be submitted to the Department not later than April 1 of the year following the year for which certification is required. An emission certification submitted pursuant to this section which contains all information required by COMAR 26.11.01.05-1, for NOx and VOC, satisfies the requirements of COMAR 26.11.01.05-1.

Methods used to demonstrate compliance:

The responsible official at APG will certify the actual emissions of regulated air pollutants from all installations at the plant or facility.



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

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

Insignificant Activities

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

- (1) No. 44 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; See Insignificant Boilers Table.

Note: Applicable Clean Air Act requirements are COMAR 26.11.09.05A(2), COMAR 26.11.09.07A(2)(b), and 40 CFR 63 Subpart JJJJJJ.

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

- (3) No. 87 Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts) of power output See Insignificant Generators Table.

Note: Applicable Clean Air Act requirements are COMAR 26.11.09.05E(2) and COMAR 26.11.09.05E(3).

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

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

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

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

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

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

- (10) ____ Die casting machines;

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

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



MARYLAND DEPARTMENT OF THE ENVIRONMENT
Title V Permit Renewal Application - Permit No. 24-025-00081
Aberdeen Proving Ground - Aberdeen Area
November 2023

Insignificant Boilers - Emissions Units Table

Building No.	Manufacturer	Size (MMBtu/hr)
300	Burnham	0.43
327	Weil-McLain	0.48
342	Burnham	0.76
398	Burnham	0.43
413	HB Smith	0.91
430	Burnham	0.29
434	Burnham	0.95
437	Burnham	0.98
439	Burnham	0.78
455	Burnham	0.29
600	Burnham	0.29
607	Weil-McLain	0.24
701	Columbia	0.14
714		0.5
1059	Burnham	0.49
1065	Burnham	0.959
1067	Precision Parts	0.102
1078	Burnham	0.23
1089	Burnham	0.43
1114	Burnham	0.43
1171	Greenheck	0.3
1185	Burnham	0.895

Building No.	Manufacturer	Size (MMBtu/hr)
1196	Burnham	0.4
2478	Burnham	0.13
3240	Burnham	0.78
3326	AO Smith	0.14
4125		0.5
4302	Burnham	0.78
4603	Rite	0.63
4603	Rite	0.63
4725	Burnham	0.48
5016-A01	Camus	0.75
5016-A02	Camus	0.75
5016-A03	Camus	0.75
5109	Smith	0.72
5650		0.76
1193 (1188A)	Smith	0.375
269 D	Burnham	0.98
280 A	Burnham	0.47
280 C	HB Smith	0.5
460 B	Burnham	0.59
737 B	Weil-McLain	0.2
744 M	Burnham	0.78
746 A	Excelsior	0.23



MARYLAND DEPARTMENT OF THE ENVIRONMENT
Title V Permit Renewal Application - Permit No. 24-025-00082
Aberdeen Proving Ground - Aberdeen Area
November 2023

Insignificant Generators - Emissions Units Table

Building No.	Size (HP)	Size (kW)	Engine Manufacturer	Year Manufactured
276	99	55	John Deere	2007
300	66	25	Cummins	1987
314	166	100	John Deere	unknown
325	(n/a)	30	Ida-Tech	2011
334	unknown	33	Onan	unknown
335	284	100	John Deere	2007
345	unknown	350	Detroit Diesel	unknown
348	284	130	John Deere	2003
350	180	100	John Deere	2012
367	132	80	Iveco	2011
394	131	80	Iveco	2010
400	unknown	200	John Deere	1996
400	380	250	Cummins	2001
434	unknown	25	Power Solutions Inc	2011
436	284	155	John Deere	2010
450	unknown	8	unknown	unknown
469	unknown	30	Perkins	unknown
469	unknown	60	Kohler	2004
606	145	80	Cummins	2007
646	132	80	Cummins	2010
669	96	57	John Deere	2009
670	80	60	John Deere	2009
770	99	55	John Deere	2007
860	49	27	John Deere	2012
861	284	125	John Deere	unknown
1043	288	N/A	Clarke	1982
1043	unknown	unknown	John Deere	unknown
1059	66	20	John Deere	unknown
1067	277	175	Cummins	1993
1134	158	100	John Deere	2014
2200	287	179	Cummins	1996
2502	277	150	Cummins	unknown
3000	99	55	John Deere	2007
3200	385	250	John Deere	2010
3070	284	150	John Deere	2009

Building No.	Size (HP)	Size (kW)	Engine Manufacturer	Year Manufactured
3330	unknown	300	Generac	2010
3400	unknown	250	Kubota	(Unknown - Tier 1)
3500	99	65	John Deere	2007
3660A	200	unknown	unknown	unknown
4402	unknown	25	Power Solutions Inc	2011
4603	180	83	John Deere	2010
5200	99	55	John Deere	2007
5402	99	55	John Deere	2007
5615	99	55	John Deere	2007
5701	unknown	300	Detroit Diesel	2008
6004	399	250	Cummins	2009
6008	399	250	Cummins	2009
6011	94	N/A	John Deere	2011
6280	unknown	150	Generac	2010
10306	unknown	125	GM	2012
038-C	20	15	Yanmar	2004
1060 BLK (1063)	unknown	75	Cummins	unknown
1099 A	180	100	John Deere	2012
1114 (1114A)	96	60	John Deere	2009
1193 C	377	250	Caterpillar	1995
2832 F	284	150	John Deere	2009
3323 A (3323)	99	55	John Deere	2007
3660 A	150	N/A	Detroit Diesel (Clark)	1994
383 A	unknown	35	GM	unknown
400 A	99	60	Cummins	2007
400 B	96	62	John Deere	2012
460 A	166	unknown	John Deere	unknown
714 A	unknown	26	Onan (Cummins)	unknown
714 E	99	55	John Deere	2007
737 B (714)	70	20	John Deere	2004
744 A	99	55	John Deere	2007
800 (C Tower)	80	50	John Deere	2012
CTA Commo	49	unknown	John Deere	2010
PTCMC	100	30	Perkins	unknown



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

- (13) ☒ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (14) ☒ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (15) ☐ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;
- (16) Containers, reservoirs, or tanks used exclusively for:
- (a) ☐ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;
 - (b) ☐ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;
 - (c) ☒ Storage of butane, propane, or liquefied petroleum, or natural gas;
 - (d) No. 365 Storage of lubricating oils;
 - (e) No. ☐ Unheated storage of VOC with an initial boiling point of 300 °F (
 - (f) No. 394 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,
 - (g) No. 14 Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
 - (h) No. ☐ The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

Note: Numbers of containers, reservoirs, or tanks were taken from the previous permit renewal application and are believed to be correct as estimates.

- (17) ☐ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;
- (18) Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride,



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

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

- (a) ____ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;
- (b) ____ Magnesium or any alloy containing over 50 percent magnesium;
- (c) ____ Lead or any alloy containing over 50 percent lead;
- (d) ____ Tin or any alloy containing over 50 percent tin;
- (e) ____ Zinc or any alloy containing over 50 percent zinc;
- (f) ____ Copper;
- (g) ____ Precious metals;
- (19) ☒ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (20) ☒ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (21) ☒ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (22) ____ Potable water treatment equipment, not including air stripping equipment;
- (23) ☒ Firing and testing of military weapons and explosives;
- (24) ____ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;
- (25) ☒ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (26) ____ Grain, metal, or mineral extrusion presses;
- (27) ____ Breweries with an annual beer production less than 60,000 barrels;



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

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

(29) ☒ Laboratory fume hoods and vents;

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

For the following, attach additional pages as necessary:

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

No. 4 No. 1 Bldg. 6004 - One Powder coat room with adequate ventilation used for miscellaneous metal coating

No. ____

No. ____

No. ____

No. ____

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

No. ____ See Exempt Emission Units List (attached).

No. ____

No. ____



MARYLAND DEPARTMENT OF THE ENVIRONMENT

Exempt Emission Units List

The following emission units are exempt from the Title V Part 70 permit application in accordance with the memo referenced below and the determination from Maryland Department of the Environment that the corresponding facilities are considered not to be support facilities to the primary military activities of a base and therefore are not considered as Title V emission units.

Reference: Memorandum dated August 2, 1996 from John S. Seitz, Director of Office of Air Quality Planning and Standards (MD-10), Subject: Major Source Determination for Military Installations under the Air Toxics, New Source Review, and Title V Operating Permit Programs of the Clean Air Act.

Emission Unit Number	MDE Registration Number	Emission Unit Description	Facility Description (Emission Unit Owner)
26-2379-A01	25-4-0619	Fuel Oil Boiler	Auto Craft Shop
26-2401-A01	25-0081-5-0152	Fuel Oil Boiler	PX
26-2502-A01 & A02	12-5-0152	Dual Fuel Boiler	Kirk Army Health Clinic
26-2522-A01	12-4-0619	Fuel Oil Boiler, 1.054 MMBtu/hr	Youth Center
3245-A01	25-0081-5-0152	Dual Fuel Boiler	NEC
26-3300-A02	12-4-0152	Natural Gas Boiler	Physical Fitness Center (DFMWR)
26-3326-A02	25-0081-5-0152	Natural Gas Boiler	Recreation Center (DFMWR)
26-3330-A01 & A02	12-4-0152	Natural Gas Boilers	Gym (DFMWR)
26-3400-A02	12-4-0152	Natural Gas Boiler	Commissary (DECA)
35-2514-A01 to A03	12-9-0151	UST	AAFES Gas Station
99-2379-A01	12-6-0202	Vehicle Refinishing PSB	Auto Craft Shop

Additionally, a letter requesting that the Atmospheric Burner at HESATF, MDE registration number 25-0081-4-0692 be removed from the Title V permit was submitted on January 17, 2023. This unit should have been considered exempt from the requirement for a permit to construct as a piece of bench scale lab equipment. It is also an experimental burner that is not subject to JJJJJ boiler MACT. No determination from the Maryland Department of the Environment has been received at the date of this application.





Maryland
Department of
the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary

Air and Radiation Administration • Air Quality Permits Program • 1800 Washington Blvd, Ste.720 • Baltimore, MD 21230

**Budget Reconciliation and Financing Act of 2003
(Commonly referred as Maryland House Bill 935)**

On July 1, 2003, House Bill 935, Chapter 203 amended § 1-203 of the Environment Article, Annotated Code of Maryland, as follows:

Section 1-203(b).

- (1) A license or permit is considered renewed for purposes of this subsection if the license or permit is issued by a unit of State government to a person for the period immediately following a period for which the person previously possessed the same or a substantially similar license.
- (2) Before any license or permit may be renewed under this article, **the issuing authority shall verify through the office of the Comptroller (emphasis added)** that the applicant has paid all undisputed taxes and the unemployment insurance contributions payable to the Comptroller or the Secretary of Labor Licensing, and Regulation or that the applicant has provided for payment in a manner satisfactory to the unit responsible for collection.

In order for the Maryland Department of the Environment (MDE) to verify this compliance, we would need you to provide the following information before we can process or issue your renewal license, permit, or certification:

Current MDE License/Permit No: 24-025-0081

Licensee Company Name/Permit Holder: U.S. Army Garrison Aberdeen Proving Ground

Address: 6504 Rodman Road, Building 4304

Aberdeen Proving Ground, MD 21005-5001

Contact Name: Sarah Kryston **Title:** Chief Environmental Compliance Branch

Contact Telephone Number: (410) 306 2270

Contact Email: sarah.l.kryston.civ@army.mil

Privacy Act Notice: This Notice is provided pursuant to the Federal Privacy Act of 1974, 5 U.S.C. § 552a. Disclosure of your Social Security or Federal Tax Identification on this form is mandatory pursuant to the provisions of § 1-203 (2003) of Environment Article, Annotated Code of Maryland, which requires MDE to verify that an applicant for a permit or license has paid all undisputed taxes and unemployment insurance. Social Security and Federal Tax Identification Nos. will not be used for any purposes other than those described in this Notice.

Federal Employer Identification Number (FEIN): 359990000

Certification: I certify that the above information is true and correct to the best of my knowledge.

Signature: _____ **Date:** 12/5/23

Complete and return this form to the above address. Call 410-537-3230 if you have questions.

Attachments

2022 Emissions Certification Report for Aberdeen Area of APG

2022 Compliance Certification Report for Aberdeen Area of APG



DEPARTMENT OF THE ARMY
U.S. ARMY INSTALLATION MANAGEMENT COMMAND
U.S. ARMY GARRISON ABERDEEN PROVING GROUND
DPW ENVIRONMENTAL DIVISION BUILDING 4304, 6504 RODMAN RD
ABERDEEN PROVING GROUND MARYLAND 21005-1946

March 22, 2023

Mr. Alexander Holt
Air Quality Compliance Program
Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Boulevard, Suite 715
Baltimore, Maryland 21230-1720

Dear Mr. Holt:

As required by Code of Maryland Regulation 26.11.01.05-1, enclosed is a digital file in '.pdf' format of the Annual Emissions Certification Report for the Aberdeen Area of Aberdeen Proving Ground, for calendar year 2022. The report includes the completed Maryland Department of the Environment emission reporting forms (Forms 1 through 6) and supporting calculations.

In accordance with the Title V Permit Section VI – State Only Enforceable Condition No. 2, Aberdeen Proving Ground performed a compliance demonstration for the emissions of toxic air pollutants in 2017. This demonstration showed that Aberdeen Proving Ground is compliant with respect to Maryland Air Toxic regulation COMAR 26.11.15 and is considered to be valid for calendar year 2022. There have been no significant changes at Aberdeen Proving Ground Aberdeen Area in 2022 that would invalidate this demonstration. In April 2021, Aberdeen Proving Ground completed an updated compliance demonstration for the emissions of toxic air pollutants in Aberdeen Area.

The point of contact for this matter in the Directorate of Public Works, Environmental Compliance Branch is Dr. Hazoor Khan at 410-306-2278, hazoor.b.khan.civ@army.mil.

Sincerely,

GRAINE.JANMICH
AEL.SHADD.10793
34860

Digitally signed by
GRAINE.JANMICHAEL.SHADD.1
079334860
Date: 2023.03.22 14:15:14 -04'00'

Janmichael Graine
Acting Chief Environmental Compliance Branch
Directorate of Public Works

Enclosure

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard, Suite 715 Baltimore Maryland 21230-1720

(410) 537-3000 1-800-633-6101 <http://www.mde.state.md.us>

Air and Radiation Administration

Air Quality Compliance Program

(410) 537-3220

FORM 1

GENERAL FACILITY INFORMATION EMISSIONS CERTIFICATION REPORT

Calendar Year: 2022

A. FACILITY IDENTIFICATION				Do Not Write in This Space	
Facility Name Aberdeen Proving Ground - Aberdeen Area				24-025-00081	
Address DPW Environmental Division Building 4304, 6504 Rodman Rd. ATTN: AMIM-APP-E				Date Received Regional	
City Aberdeen Proving Ground				Date Received State	
County Harford		Zip Code 21005-1946		AIRS Code	
B. Briefly describe the major function of the facility Research/Development (R&D)				FINDS Code	
				SIC Code	
				Facility Number:	
				TEMPO ID:	
C. SEASONAL PRODUCTION (% if applicable)				Reviewed by:	
<u>Winter</u> (Dec.-Feb)		<u>Spring</u> (Mar-May)		<u>Summer</u> (Jun-Aug)	
				<u>Fall</u> (Sept-Nov)	
				Name	
				Date	
D. Explain any increases or decreases in emissions from the previous calendar year for each registration at this facility.					
The Fire Test Lab and ECO Mobile Incinerator had no reportable emissions this year					
There are no other significant increases or decreases in emissions from the previous calendar year.					
E. CONTROL DEVICE INFORMATION (for NO _x and VOC sources only)					
Control Device		Capture Efficiency		Removal Efficiency	
All information regarding control devices are included in the calculations section					
I am familiar with the facility and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of 102 pages (including attachments), and certify that the information is correct to the best of my knowledge.					
Janmichael Graine		Acting Chief, Environmental Compliance Branch		03/22/2023	
Name (Print/type)		Title		Date	
GRAINE.JANMICH AEL.SHADD.10793 34860		Digitally signed by GRAINE.JANMICHAEL.SHADD.1 079334860 Date: 2023.03.22 14:17:52 -04'00'		(410) 306-2270	
Signature				Telephone Number	

FORM 2

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Nitrogen Oxides (NOx)

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method	
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Dys/yr	Hrs/dy	Start	End
Fuel Oil Boiler 4-0619	Various	10300503	No. 2 Oil	s	2.93E+00	3.22E+01	24.00	7	26	182	0.00	NA	C3
Fuel Oil Boiler 4-0689	26-0642-A01	10300503	No. 2 Oil	s	6.50E-02	7.14E-01	24.00	7	26	182	0.00	NA	C3
Atmospheric Burner 4-0692	Atmospheric Burner #1	40290012	F-24	f	0.00E+00	0.00E+00	0.00	0	0	0	0.00	NA	C3
Fuel Oil Boiler 4-0707	26-0445-A01	10300503	No. 2 Oil	s	5.06E-02	5.56E-01	24.00	7	26	182	0.00	NA	C3
Fuel Oil Boiler 4-0708	26-0394-A01	10300503	No. 2 Oil	s	5.74E-02	6.30E-01	24.00	7	26	182	0.00	NA	C3
Fuel Oil Boiler 4-0709	26-0392-A01	10300503	No. 2 Oil	s	2.62E-02	1.43E-01	24.00	7	52	365	0.14	NA	C3
Fuel Oil Boiler 5-0710	0339-A01	10300503	NG	s	6.75E-02	7.41E-01	24.00	7	26	182	0.00	NA	C3
Fuel Oil Boiler 4-0719	26-0670-A01	10300503	No. 2 Oil	s	5.16E-02	5.67E-01	24.00	7	26	182	0.00	NA	C3
Fuel Oil Boiler 4-0720	26-0688-A01	10300503	No. 2 Oil	s	2.58E-02	2.83E-01	24.00	7	26	182	0.00	NA	C3
Fuel Oil Boiler 4-0722	26-0449-A01	10300503	No. 2 Oil	s	7.39E-02	8.12E-01	24.00	7	26	182	0.00	NA	C3
Fuel Oil Boiler 4-0724	Bldg 906C - pending	10300503	No. 2 Oil	s	0.00E+00	0.00E+00	24.00	7	26	182	0.00	NA	C3
Dual Fuel Boiler 5-0079	26-0345-A01	10200603 10300503	NG	s	1.14E+00	6.22E+00	24.00	7	52	365	6.22	NA	C3
Dual Fuel Boiler 5-0080	26-0345-A02	10200603 10300503	NG	s	1.14E+00	6.22E+00	24.00	7	30	365	6.22	NA	C3
Dual Fuel Boiler 5-0081	26-0345-A03	10200603 10300503	NG	s	1.14E+00	6.22E+00	24.00	7	30	365	6.22	NA	C3
Dual Fuel Boiler 5-0085	26-4600-A06	10200603 10300503	NG	s	1.25E+00	6.84E+00	24.00	7	52	365	6.84	NA	C3
Dual Fuel Boiler 5-0087	26-4600-A08	10200603 10300503	NG	s	1.25E+00	6.84E+00	24.00	7	52	365	6.84	NA	C3
Dual Fuel Boiler 5-0152	Various	10200603 10300503	NG	s	1.96E+00	2.16E+01	24.00	7	26	182	0.00	NA	C3
Dual Fuel Boiler 5-0167	26-03062-A02	10200603 10300503	NG	s	1.65E-01	9.06E-01	24.00	7	52	365	0.91	NA	C3
Dual Fuel Boiler 5-0298	26-C2CNT West-A01 thru A04	10200603 10300503	NG	s	3.37E-01	3.70E+00	24.00	7	26	182	0.00	NA	C3
Dual Fuel Boiler 5-0299	26-GMS Tower-A01 thru A03	10200603 10300503	NG	s	8.08E-02	8.87E-01	24.00	7	26	182	0.00	NA	C3
Dual Fuel Boiler 5-0300	26-HQ Building-A01 thru A05	10200603 10300503	NG	s	3.20E-01	3.51E+00	24.00	7	26	182	0.00	NA	C3
Dual Fuel Boiler 5-0301	26-GMS Lab-A01 thru A03	10200603 10300503	NG	s	2.02E-01	2.22E+00	24.00	7	26	182	0.00	NA	C3

FORM 2

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Nitrogen Oxides (NOx)

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel		Actual Emissions Tons/yr lbs/dy	Operating Schedule (Actual) Hrs/dy Dys/wk Wk/yr	TOSD lbs/dy	Operating Schedule Hrs/dy Start End	Estimation Method
Dual Fuel Boiler 5-0308	26-04219-A03	10200603 10300503	NG	s f	1.05E-02 5.78E-02	24.00 7 52	0.06	24.00 NA NA	C3
Natural Gas Boiler 5-0309	26-5100-A02	10200603	NG	s f	3.11E-01 3.42E+00	24.00 7 26	0.00	0.00 NA NA	C3
Natural Gas Boiler 5-0310	26-5100-A01	10200603	NG	s f	3.11E-01 3.42E+00	24.00 7 26	0.00	0.00 NA NA	C3
Dual Fuel Boiler 5-0315	26-0525-A02	10200603 10300503	NG	s f	4.28E-02 4.71E-01	24.00 7 26	0.00	0.00 NA NA	C3
Natural Gas Boiler 5-0322	Various	10200603	NG	s f	2.60E-01 2.86E+00	24.00 7 26	0.00	0.00 NA NA	C3
Dual Fuel Boiler 5-0334	26-0525-A03	10200603 10300503	NG	s f	4.28E-02 4.71E-01	24.00 7 26	0.00	0.00 NA NA	C3
Dual Fuel Boiler 5-0335	26-0525-A01	10200603 10300503	NG	s f	4.28E-02 4.71E-01	24.00 7 26	0.00	0.00 NA NA	C3
Natural Gas Boiler 5-0336	26-04119-A03	10200603	NG	s f	7.51E-02 8.25E-01	24.00 7 26	0.00	0.00 NA NA	C3
Natural Gas Boiler 5-0337	26-0459-A02	10200603	NG	s f	9.69E-02 1.06E+00	24.00 7 26	0.00	0.00 NA NA	C3
Propane Boiler 5-0352	0367-A01	10301002	Propane	s f	8.75E-03 9.61E-02	24.00 7 26	0.00	0.00 NA NA	C3
Dual Fuel Boiler 5-0364	26-4312-A01	10200603 10300503	NG	s f	2.77E-01 1.52E+00	24.00 7 52	1.52	0.00 NA NA	C3
Dual Fuel Boiler 5-0364	26-4312-A02	10200603 10300503	NG	s f	2.77E-01 1.52E+00	24.00 7 52	1.52	0.00 NA NA	C3
Natural Gas Boiler 5-0367	26-2485-A01	10200603	NG	s f	6.77E-02 7.43E-01	24.00 7 26	0.00	0.00 NA NA	C3
Dual Fuel Boiler 5-0370	26-4600-A09	10200603 10300503	NG	s f	1.25E+00 6.84E+00	24.00 7 52	6.84	24.00 NA NA	C3
Natural Gas Boiler 5-0371	26-3660-A01	10200603	NG	s f	8.42E-02 9.26E-01	24.00 7 26	0.00	0.00 NA NA	C3
Natural Gas Boiler 5-0376	0383A-A01 & A02	10200603	NG	s f	2.30E-01 2.53E+00	24.00 7 26	0.00	0.00 NA NA	C3
Natural Gas Boiler 5-0384	26-0400-A02	10200603	NG	s f	6.64E-02 7.30E-01	24.00 7 26	0.00	0.00 NA NA	C3
Natural Gas Boiler 5-0384	26-0400-A03	10200603	NG	s f	6.64E-02 7.30E-01	24.00 7 26	0.00	0.00 NA NA	C3
Dual Fuel Boiler 5-0552	26-04219-A02	10200603 10300503	NG	s f	1.05E-02 5.78E-02	24.00 7 52	0.06	0.00 NA NA	C3
Natural Gas Boiler 5-0710	0339-A01	10200603	NG	s f	6.75E-02 7.41E-01	24.00 7 26	0.00	0.00 NA NA	C3
Paint Spray Booth 6-0159	07-00525-A06	40202501	NA	s f	0.00E+00 0.00E+00	1.00 1 12	0.00	4.00 NA NA	C2
Paint Spray Booth 6-0162	07-00525-A04	40202501	NA	s f	0.00E+00 0.00E+00	1.00 1 16	0.00	4.00 NA NA	C2

FORM 2

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Nitrogen Oxides (NOx)

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel		Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method
					Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Dys/yr	Hrs/dy	
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	40400340	NA	s	0.00E+00	0.00E+00	8.00	7	52	365	24.00	NA	C3
Fire Test Lab (IFEL) 9-0216	07-0525-A01	N/A	N/A	f									
				s	0.00E+00	0.00E+00	8.00	NA	0	8.00	NA	NA	C2
Emergency Generator 9-0227	03-0394-A01	20200401	No. 2 Oil	s	3.40E-01	5.66E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0228	03-0394-A02	20200401	No. 2 Oil	s	3.24E-01	5.41E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0229	03-0328-A01	20200401	No. 2 Oil	s	2.10E-01	3.50E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0276	03-4600-A04	20100101	No. 2 Oil	s	6.70E-01	1.12E+02	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0277	03-4600-A05	20100101	No. 2 Oil	s	6.51E-01	1.08E+02	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0386	03-0394-A03	20200401	No. 2 Oil	s	1.81E-01	3.02E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0387	03-0394-A04	20200401	No. 2 Oil	s	1.38E-01	2.30E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0388	03-0394-A05	20200401	No. 2 Oil	s	0.00E+00	0.00E+00	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0389	03-0394-A06	20200401	No. 2 Oil	s	1.90E-01	3.17E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0390	03-0394-A07	20200401	No. 2 Oil	s	0.00E+00	0.00E+00	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0393	26-GMS-Lab-A04	20200401	No. 2 Oil	s	2.18E-01	3.63E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0394	26-C2CNTWest-A05	20200401	No. 2 Oil	s	1.90E-01	3.17E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0395	26-GMS Tower-A04	20200401	No. 2 Oil	s	1.58E-02	2.64E+00	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0396	26-HQBuilding-A06	20200401	No. 2 Oil	s	3.93E-02	6.55E+00	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0408	0316-01	20200401	No. 2 Oil	s	6.23E-01	1.04E+02	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0409	0120-01	20200401	No. 2 Oil	s	5.05E-01	8.42E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0410	3090-01	20200401	No. 2 Oil	s	9.16E-01	1.53E+02	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0411	6010-01 & 6010-A02	20200401	No. 2 Oil	s	7.11E-01	1.18E+02	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0412	6009-01	20200401	No. 2 Oil	s	2.16E-01	3.60E+01	0.50	1	12	12	0.50	NA	C3
Emergency Generator 9-0414	03-0328-A02	20200401	No. 2 Oil	s	5.87E-02	9.78E+00	0.50	1	12	12	0.50	NA	C3

FORM 2

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Nitrogen Oxides (NOx)

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions Tons/yr	lbs/dy	Operating Schedule Hrs/dy	Dys/wk	Dys/yr	TOSD lbs/dy	Operating Schedule Hrs/dy	Start	End	Estimation Method
Emergency Generator 9-0418	03-0328-A03	20200401	No. 2 Oil	s 9.36E-02	1.56E+01	0.50	1	12	15.60	0.50	NA	NA	C3
Emergency Generator 9-0419	0311-01	20200401	No. 2 Oil	f 7.40E-02	1.23E+01	0.50	1	12	12.33	0.50	NA	NA	C3
Emergency Generator 9-0433	0120-02	20200401	No. 2 Oil	s 4.95E-01	8.25E+01	0.50	1	12	82.47	0.50	NA	NA	C3
Emergency Generator 9-0434	0120-03	20200401	No. 2 Oil	f 4.71E-01	7.85E+01	0.50	1	12	78.54	0.50	NA	NA	C3
Emergency Generator 9-0435	BSS-01	20200401	No. 2 Oil	s 1.72E+00	2.86E+02	0.50	1	12	286.27	0.00	NA	NA	C3
Emergency Generator 9-0436	LWE-01 thru 05	20200401	No. 2 Oil	f 3.66E+00	6.09E+02	0.50	1	12	609.31	0.50	NA	NA	C3
Emergency Generator 9-0437	UTF-01	20200401	No. 2 Oil	s 1.98E-01	3.31E+01	0.50	1	12	33.05	0.00	NA	NA	C3
Emergency Generator 9-0491	3147-A01	20200401	No. 2 Oil	f 0.00E+00	0.00E+00	0.50	1	12	0.00	0.50	NA	NA	C3
Emergency Generator 9-0499	2202-01	20200401	No. 2 Oil	s 1.71E-01	2.86E+01	0.50	1	12	28.56	0.50	NA	NA	C3
Emergency Generator 9-0500	3660-01	20200401	No. 2 Oil	f 2.81E-02	4.69E+00	0.50	1	12	4.69	0.50	NA	NA	C3
Emergency Generator 9-0503	Bldg 120 - Gen. #1	20200401	No. 2 Oil	s 4.68E-01	7.80E+01	0.50	1	12	77.98	0.50	NA	NA	C3
Emergency Generator 9-0504	Bldg 120 - Gen. #2	20200401	No. 2 Oil	f 4.91E-01	8.19E+01	0.50	1	12	81.91	0.50	NA	NA	C3
Emergency Generator 9-0510	Bldg 5016 - pending	20200401	No. 2 Oil	s 1.03E-01	1.71E+01	0.50	1	12	17.12	0.50	NA	NA	C3
Emergency Generator 9-0511	Bldg 5046 - pending	20200401	No. 2 Oil	f 1.07E-02	1.78E+00	0.50	1	12	1.78	0.50	NA	NA	C3
ECO Mobile Incinerator N/A	N/A	50100107	Diesel	s 0.00E+00	0.00E+00	0.00	0	0	0.00	0.00	NA	NA	C3
Total					30.09	2493.76			2405.85				

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This sections needs to be completed only for VOC and NOx source:

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel

Emission Estimation Method
A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance
C3 - User calculated based on engineering knowledge of the process
C4 - User calculated by best guess/engineering judgement
C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard judgement

Operating Days:
All NSPS boilers are assumed to be 365 days
All space heating boilers are assumed to be 182 days
All emergency generators are assumed to be 12 day:
SCC: Source Classification Code

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen AreaFacility ID #: 24-25-00081Calendar Year: 2022Pollutant: Sulfur Oxides (as SO₂)

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Hrs/dy	Start	End
Fuel Oil Boiler 4-0619	Various	10300503	No. 2 Oil	s 9.79E-01	1.08E+01	24.00	7	26	182			C3
Fuel Oil Boiler 4-0689	26-0642-A01	10300503	No. 2 Oil	f 2.34E-02	2.57E-01	24.00	7	26	182			C3
Atmospheric Burner 4-0692	Atmospheric Burner #1	40290012	F-24	s 0.00E+00	0.00E+00	0.00	0	0	0			C3
Fuel Oil Boiler 4-0707	26-0445-A01	10300503	No. 2 Oil	f 1.82E-02	2.00E-01	24.00	7	26	182			C3
Fuel Oil Boiler 4-0708	26-0394-A01	10300503	No. 2 Oil	s 2.07E-02	2.27E-01	24.00	7	26	182			C3
Fuel Oil Boiler 4-0709	26-0392-A01	10300503	No. 2 Oil	f 9.43E-03	5.17E-02	24.00	7	52	365			C3
Fuel Oil Boiler 5-0710	0339-A01	10300503	NG	s 4.05E-04	4.45E-03	24.00	7	26	182			C3
Fuel Oil Boiler 4-0719	26-0670-A01	10300503	No. 2 Oil	f 1.86E-02	2.04E-01	24.00	7	26	182			C3
Fuel Oil Boiler 4-0720	26-0688-A01	10300503	No. 2 Oil	s 9.28E-03	1.02E-01	24.00	7	26	182			C3
Fuel Oil Boiler 4-0722	26-0449-A01	10300503	No. 2 Oil	f 2.66E-02	2.92E-01	24.00	7	26	182			C3
Fuel Oil Boiler 4-0724	Bldg 906C - pending	10300503	No. 2 Oil	s 0.00E+00	0.00E+00	24.00	7	26	182			C3
Dual Fuel Boiler 5-0079	26-0345-A01	10200603 10300503	NG	s 6.81E-03	3.73E-02	24.00	7	52	365			C3
Dual Fuel Boiler 5-0080	26-0345-A02	10200603 10300503	NG	s 6.81E-03	3.73E-02	24.00	7	30	365			C3
Dual Fuel Boiler 5-0081	26-0345-A03	10200603 10300503	NG	s 6.81E-03	3.73E-02	24.00	7	30	365			C3
Dual Fuel Boiler 5-0085	26-4600-A06	10200603 10300503	NG	s 8.67E-03	4.75E-02	24.00	7	52	365			C3
Dual Fuel Boiler 5-0087	26-4600-A08	10200603 10300503	NG	s 8.67E-03	4.75E-02	24.00	7	52	365			C3
Dual Fuel Boiler 5-0152	Various	10200603 10300503	NG	s 1.11E-01	1.22E+00	24.00	7	26	182			C3
Dual Fuel Boiler 5-0167	26-03062-A02	10200603 10300503	NG	s 9.93E-04	5.44E-03	24.00	7	52	365			C3
Dual Fuel Boiler 5-0298	26-C2CNT West-A01 thru A04	10200603 10300503	NG	s 5.61E-03	6.17E-02	24.00	7	26	182			C3
Dual Fuel Boiler 5-0299	26-GMS Tower-A01 thru A03	10200603 10300503	NG	s 1.35E-03	1.48E-02	24.00	7	26	182			C3
Dual Fuel Boiler 5-0300	26-HQ Building-A01 thru A05	10200603 10300503	NG	s 5.33E-03	5.86E-02	24.00	7	26	182			C3
Dual Fuel Boiler 5-0301	26-GMS Lab-A01 thru A03	10200603 10300503	NG	s 3.36E-03	3.70E-02	24.00	7	26	182			C3
Dual Fuel Boiler 5-0308	26-04219-A03	10200603 10300503	NG	s 6.33E-05	3.47E-04	24.00	7	52	365			C3

FORM 2

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Sulfur Oxides (as SO₂)

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Hrs/dy	Start	End
Natural Gas Boiler 5-0309	26-5100-A02	10200603	NG	s 1.87E-03	2.05E-02	24.00	7	26	182			C3
Natural Gas Boiler 5-0310	26-5100-A01	10200603	NG	f								
Natural Gas Boiler 5-0315	26-5100-A01	10200603	NG	s 1.87E-03	2.05E-02	24.00	7	26	182			C3
Dual Fuel Boiler 5-0322	26-0525-A02	10200603	NG	f								
Natural Gas Boiler 5-0334	Various	10200603	NG	s 2.57E-04	2.82E-03	24.00	7	26	182			C3
Dual Fuel Boiler 5-0335	26-0525-A03	10200603	NG	f								
Dual Fuel Boiler 5-0336	26-0525-A01	10200603	NG	s 1.56E-03	1.72E-02	24.00	7	26	182			C3
Natural Gas Boiler 5-0337	26-04119-A03	10200603	NG	f								
Propane Boiler 5-0352	0367-A01	10301002	Propane	s 2.57E-04	2.82E-03	24.00	7	26	182			C3
Dual Fuel Boiler 5-0364	26-4312-A01	10200603	NG	f								
Dual Fuel Boiler 5-0364	26-4312-A02	10200603	NG	s 4.50E-04	4.95E-03	24.00	7	26	182			C3
Natural Gas Boiler 5-0367	26-2485-A01	10200603	NG	s 5.81E-04	6.39E-03	24.00	7	26	182			C3
Dual Fuel Boiler 5-0370	26-4600-A09	10200603	NG	s 3.63E-05	3.99E-04	24.00	7	26	182			C3
Natural Gas Boiler 5-0371	26-3660-A01	10200603	NG	f								
Natural Gas Boiler 5-0376	0383A-A01 & A02	10200603	NG	s 1.66E-03	9.11E-03	24.00	7	52	365			C3
Natural Gas Boiler 5-0384	26-0400-A02	10200603	NG	s 4.06E-04	4.46E-03	24.00	7	26	182			C3
Natural Gas Boiler 5-0384	26-0400-A03	10200603	NG	s 8.67E-03	4.75E-02	24.00	7	52	365			C3
Dual Fuel Boiler 5-0552	26-04219-A02	10200603	NG	f								
Natural Gas Boiler 5-0710	0339-A01	10200603	NG	s 5.05E-04	5.55E-03	24.00	7	26	182			C3
Paint Spray Booth 6-0159	07-00525-A06	40202501	NA	s 1.38E-03	1.52E-02	24.00	7	26	182			C3
Paint Spray Booth 6-0162	07-00525-A04	40202501	NA	f								
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	40400340	NA	s 3.98E-04	4.38E-03	24.00	7	26	182			C3
Fire Test Lab (IFEL) 9-0216	07-0525-A01	N/A	N/A	s 6.33E-05	3.47E-04	24.00	7	52	365			C3
Emergency Generator 9-0227	03-0394-A01	20200401	No. 2 Oil	f								
				s 1.61E-04	2.68E-02	0.50	1	12	12			C3

FORM 2

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Sulfur Oxides (as SO₂)

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method	
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Dys/yr	Start		End
Emergency Generator 9-0228	03-0394-A02	20200401	No. 2 Oil	s	1.54E-04	2.56E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0229	03-0328-A01	20200401	No. 2 Oil	s	9.94E-05	1.66E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0276	03-4600-A04	20100101	No. 2 Oil	s	3.17E-04	5.29E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0277	03-4600-A05	20100101	No. 2 Oil	s	3.08E-04	5.14E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0386	03-0394-A03	20200401	No. 2 Oil	s	8.59E-05	1.43E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0387	03-0394-A04	20200401	No. 2 Oil	s	6.54E-05	1.09E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0388	03-0394-A05	20200401	No. 2 Oil	s	0.00E+00	0.00E+00	f	1	0.50	1	12	12	C3
Emergency Generator 9-0389	03-0394-A06	20200401	No. 2 Oil	s	9.00E-05	1.50E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0390	03-0394-A07	20200401	No. 2 Oil	s	0.00E+00	0.00E+00	f	1	0.50	1	12	12	C3
Emergency Generator 9-0393	26-GMS-Lab-A04	20200401	No. 2 Oil	s	1.24E-04	2.06E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0394	26-C2CNTWest-A05	20200401	No. 2 Oil	s	1.44E-04	2.40E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0395	26-GMS Tower-A04	20200401	No. 2 Oil	s	1.20E-05	2.00E-03	f	1	0.50	1	12	12	C3
Emergency Generator 9-0396	26-HQBuilding-A06	20200401	No. 2 Oil	s	3.19E-05	5.31E-03	f	1	0.50	1	12	12	C3
Emergency Generator 9-0408	0316-01	20200401	No. 2 Oil	s	2.95E-04	4.91E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0409	0120-01	20200401	No. 2 Oil	s	2.39E-04	3.98E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0410	3090-01	20200401	No. 2 Oil	s	4.34E-04	7.23E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0411	6010-01 & 6010-A02	20200401	No. 2 Oil	s	3.36E-04	5.61E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0412	6009-01	20200401	No. 2 Oil	s	1.02E-04	1.71E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0414	03-0328-A02	20200401	No. 2 Oil	s	2.78E-05	4.63E-03	f	1	0.50	1	12	12	C3
Emergency Generator 9-0418	03-0328-A03	20200401	No. 2 Oil	s	4.43E-05	7.39E-03	f	1	0.50	1	12	12	C3
Emergency Generator 9-0419	0311-01	20200401	No. 2 Oil	s	3.50E-05	5.84E-03	f	1	0.50	1	12	12	C3
Emergency Generator 9-0433	0120-02	20200401	No. 2 Oil	s	2.34E-04	3.90E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0434	0120-03	20200401	No. 2 Oil	s	2.23E-04	3.72E-02	f	1	0.50	1	12	12	C3
Emergency Generator 9-0435	BSS-01	20200401	No. 2 Oil	s	8.13E-04	1.36E-01	f	1	0.50	1	12	12	C3

FORM 2

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Sulfur Oxides (as SO₂)

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD		Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Dys/yr	lbs/dy	Hrs/dy	Start	End	
Emergency Generator 9-0436	LWE-01 thru 05	20200401	No. 2 Oil	s 1.73E-03	2.88E-01	0.50	1	12	12				C3
Emergency Generator 9-0437	UTF-01	20200401	No. 2 Oil	s 9.39E-05	1.56E-02	0.50	1	12	12				C3
Emergency Generator 9-0491	3147-A01	20200401	No. 2 Oil	s 0.00E+00	0.00E+00	0.50	1	12	12				C3
Emergency Generator 9-0499	2202-01	20200401	No. 2 Oil	s 8.11E-05	1.35E-02	0.50	1	12	12				C3
Emergency Generator 9-0500	3660-01	20200401	No. 2 Oil	s 1.33E-05	2.22E-03	0.50	1	12	12				C3
Emergency Generator 9-0503	Bldg 120 - Gen. #1	20200401	No. 2 Oil	s 2.22E-04	3.69E-02	0.50	1	12	12				C3
Emergency Generator 9-0504	Bldg 120 - Gen. #2	20200401	No. 2 Oil	s 2.33E-04	3.88E-02	0.50	1	12	12				C3
Emergency Generator 9-0510	Bldg 5016 - pending	20200401	No. 2 Oil	s 4.86E-05	8.10E-03	0.50	1	12	12				C3
Emergency Generator 9-0511	Bldg 5046 - pending	20200401	No. 2 Oil	s 5.05E-06	8.41E-04	0.50	1	12	12				C3
ECO Mobile Incinerator N/A	N/A	50100107	Diesel	s 0.00E+00	0.00E+00	0.00	0	0	0				C3
Total				1.30	15.02								

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source.

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This sections needs to be completed only for VOC and NOx sources

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel

Emission Estimation Method

A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance
C3 - User calculated based on the process
C4 - User calculated by best guess/engineering judgement
C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

Operating Days:

All NSPS boilers are assumed to be 365 days
All space heating boilers are assumed to be 182 days
All emergency generators are assumed to be 12 days

SCC: Source Classification Code

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Volatile Organic Compounds (VOC) Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions			Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method
				Tons/yr	lbs/dy		Hrs/dy	Dys/wk	Wk/yr		Hrs/dy	Start	End
Fuel Oil Boiler 4-0619	Various	10300503	No. 2 Oil f	5.81E-02	6.38E-01		24.00	7	26	182	0.00	NA	NA
Fuel Oil Boiler 4-0689	26-0642-A01	10300503	No. 2 Oil f	1.10E-03	1.21E-02		24.00	7	26	182	0.00	NA	NA
Atmospheric Burner 4-0692	Atmospheric Burner #1	40290012	F-24 f	0.00E+00	0.00E+00		0.00	0	0	0	0.00	NA	NA
Fuel Oil Boiler 4-0707	26-0445-A01	10300503	No. 2 Oil f	8.61E-04	9.46E-03		24.00	7	26	182	0.00	NA	NA
Fuel Oil Boiler 4-0708	26-0394-A01	10300503	No. 2 Oil f	9.75E-04	1.07E-02		24.00	7	26	182	0.00	NA	NA
Fuel Oil Boiler 4-0709	26-0392-A01	10300503	No. 2 Oil f	4.45E-04	2.44E-03		24.00	7	52	365	0.00	NA	NA
Fuel Oil Boiler 5-0710	0339-A01	10300503	NG f	3.71E-03	4.08E-02		24.00	7	26	182	0.00	NA	NA
Fuel Oil Boiler 4-0719	26-0670-A01	10300503	No. 2 Oil f	8.77E-04	9.64E-03		24.00	7	26	182	0.00	NA	NA
Fuel Oil Boiler 4-0720	26-0688-A01	10300503	No. 2 Oil f	4.38E-04	4.82E-03		24.00	7	26	182	0.00	NA	NA
Fuel Oil Boiler 4-0722	26-0449-A01	10300503	No. 2 Oil f	1.26E-03	1.38E-02		24.00	7	26	182	0.00	NA	NA
Fuel Oil Boiler 4-0724	Bldg 906C - pending	10300503	No. 2 Oil f	0.00E+00	0.00E+00		24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0079	26-0345-A01	10200603 10300503	NG f	6.24E-02	3.42E-01		24.00	7	52	365	0.34	NA	NA
Dual Fuel Boiler 5-0080	26-0345-A02	10200603 10300503	NG f	6.24E-02	3.42E-01		24.00	7	30	365	0.34	NA	NA
Dual Fuel Boiler 5-0081	26-0345-A03	10200603 10300503	NG f	6.24E-02	3.42E-01		24.00	7	30	365	0.34	NA	NA
Dual Fuel Boiler 5-0085	26-4600-A06	10200603 10300503	NG f	6.86E-02	3.76E-01		24.00	7	52	365	0.38	NA	NA
Dual Fuel Boiler 5-0087	26-4600-A08	10200603 10300503	NG f	6.86E-02	3.76E-01		24.00	7	52	365	0.38	NA	NA
Dual Fuel Boiler 5-0152	Various	10200603 10300503	NG f	9.73E-02	1.07E+00		24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0167	26-03062-A02	10200603 10300503	NG f	9.10E-03	4.99E-02		24.00	7	52	365	0.05	NA	NA
Dual Fuel Boiler 5-0298	26-C2CNT West-A01 thru A04	10200603 10300503	NG f	5.15E-02	5.65E-01		24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0299	26-GMS Tower-A01 thru A03	10200603 10300503	NG f	1.23E-02	1.36E-01		24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0300	26-HQ Building-A01 thru A05	10200603 10300503	NG f	4.89E-02	5.37E-01		24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0301	26-GMS Lab-A01 thru A03	10200603 10300503	NG f	3.08E-02	3.39E-01		24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0308	26-04219-A03	10200603 10300503	NG f	5.80E-04	3.18E-03		24.00	7	52	365	0.00	NA	NA

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen AreaFacility ID #: 24-25-00081Pollutant:Volatile Organic Compounds (VOC) Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Hrs/dy	Start	End
Natural Gas Boiler 5-0309	26-5100-A02	10200603	NG	s f	1.71E-02 1.88E-01	24.00	7	26	182	0.00	NA	NA
Natural Gas Boiler 5-0310	26-5100-A01	10200603	NG	s f	1.71E-02 1.88E-01	24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0315	26-0525-A02	10200603 10300503	NG	s f	2.36E-03 2.59E-02	24.00	7	26	182	0.00	NA	NA
Natural Gas Boiler 5-0322	Various	10200603	NG	s f	1.43E-02 1.57E-01	24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0334	26-0525-A03	10200603 10300503	NG	s f	2.36E-03 2.59E-02	24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0335	26-0525-A01	10200603 10300503	NG	s f	2.36E-03 2.59E-02	24.00	7	26	182	0.00	NA	NA
Natural Gas Boiler 5-0336	26-04119-A03	10200603	NG	s f	4.13E-03 4.54E-02	24.00	7	26	182	0.00	NA	NA
Natural Gas Boiler 5-0337	26-0459-A02	10200603	NG	s f	5.33E-03 5.86E-02	24.00	7	26	182	0.00	NA	NA
Propane Boiler 5-0352	0367-A01	10301002	Propane	s f	5.38E-04 5.92E-03	24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0364	26-4312-A01	10200603 10300503	NG	s f	1.52E-02 8.35E-02	24.00	7	52	365	0.08	NA	NA
Dual Fuel Boiler 5-0364	26-4312-A02	10200603 10300503	NG	s f	1.52E-02 8.35E-02	24.00	7	52	365	0.08	NA	NA
Natural Gas Boiler 5-0367	26-2485-A01	10200603	NG	s f	3.72E-03 4.09E-02	24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0370	26-4600-A09	10200603 10300503	NG	s f	6.86E-02 3.76E-01	24.00	7	52	365	0.38	NA	NA
Natural Gas Boiler 5-0371	26-3660-A01	10200603	NG	s f	4.63E-03 5.09E-02	24.00	7	26	182	0.00	NA	NA
Natural Gas Boiler 5-0376	0383A-A01 & A02	10200603	NG	s f	1.27E-02 1.39E-01	24.00	7	26	182	0.00	NA	NA
Natural Gas Boiler 5-0384	26-0400-A02	10200603	NG	s f	3.65E-03 4.01E-02	24.00	7	26	182	0.00	NA	NA
Natural Gas Boiler 5-0384	26-0400-A03	10200603	NG	s f	3.65E-03 4.01E-02	24.00	7	26	182	0.00	NA	NA
Dual Fuel Boiler 5-0552	26-04219-A02	10200603 10300503	NG	s f	5.80E-04 3.18E-03	24.00	7	52	365	0.00	NA	NA
Natural Gas Boiler 5-0710	0339-A01	10200603	NG	s f	3.71E-03 4.08E-02	24.00	7	26	182	0.00	NA	NA
Paint Spray Booth 6-0159	07-00525-A06	40202501	NA	s f	3.92E-02 1.17E+00	1.00	1	12	67	1.17	4.00	NA
Paint Spray Booth 6-0162	07-00525-A04	40202501	NA	s f	4.78E-02 7.72E-01	1.00	1	16	124	0.77	4.00	NA
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	40400340	NA	s f	1.00E+00 5.48E+00	8.00	7	52	365	5.48	24.00	NA
Fire Test Lab (IFEL) 9-0216	07-0525-A04	N/A	N/A	s f	0.00E+00 0.00E+00	8.00	NA	NA	0	0.00	8.00	NA

FORM 2

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Volatile Organic Compounds (VOC) **Calendar Year:** 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method			
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Dys/yr	Hrs/dy		Start	End	
Emergency Generator 9-0227	03-0394-A01	20200401	No. 2 Oil	s	8.70E-03	1.45E+00	0.50	1	12	12	1.45	0.50	NA	NA	C3
Emergency Generator 9-0228	03-0394-A02	20200401	No. 2 Oil	s	8.30E-03	1.38E+00	0.50	1	12	12	1.38	0.50	NA	NA	C3
Emergency Generator 9-0229	03-0328-A01	20200401	No. 2 Oil	f	5.37E-03	8.96E-01	0.50	1	12	12	0.90	0.50	NA	NA	C3
Emergency Generator 9-0276	03-4600-A04	20100101	No. 2 Oil	s	1.72E-02	2.86E+00	0.50	1	12	12	2.86	0.50	NA	NA	C3
Emergency Generator 9-0277	03-4600-A05	20100101	No. 2 Oil	s	1.67E-02	2.78E+00	0.50	1	12	12	2.78	0.50	NA	NA	C3
Emergency Generator 9-0386	03-0394-A03	20200401	No. 2 Oil	s	4.64E-03	7.74E-01	0.50	1	12	12	0.77	0.50	NA	NA	C3
Emergency Generator 9-0387	03-0394-A04	20200401	No. 2 Oil	s	3.54E-03	5.90E-01	0.50	1	12	12	0.59	0.50	NA	NA	C3
Emergency Generator 9-0388	03-0394-A05	20200401	No. 2 Oil	s	0.00E+00	0.00E+00	0.50	1	12	12	0.00	0.50	NA	NA	C3
Emergency Generator 9-0389	03-0394-A06	20200401	No. 2 Oil	s	4.86E-03	8.11E-01	0.50	1	12	12	0.81	0.50	NA	NA	C3
Emergency Generator 9-0390	03-0394-A07	20200401	No. 2 Oil	s	0.00E+00	0.00E+00	0.50	1	12	12	0.00	0.50	NA	NA	C3
Emergency Generator 9-0393	26-GMS-Lab-A04	20200401	No. 2 Oil	s	3.97E-03	6.62E-01	0.50	1	12	12	0.66	0.50	NA	NA	C3
Emergency Generator 9-0394	26-C2CNTWest-A05	20200401	No. 2 Oil	f	3.41E-03	5.69E-01	0.50	1	12	12	0.57	0.50	NA	NA	C3
Emergency Generator 9-0395	26-GMS Tower-A04	20200401	No. 2 Oil	s	2.84E-04	4.74E-02	0.50	1	12	12	0.05	0.50	NA	NA	C3
Emergency Generator 9-0396	26-HQBuilding-A06	20200401	No. 2 Oil	s	1.02E-03	1.71E-01	0.50	1	12	12	0.17	0.50	NA	NA	C3
Emergency Generator 9-0408	0316-01	20200401	No. 2 Oil	s	1.59E-02	2.66E+00	0.50	1	12	12	2.66	0.50	NA	NA	C3
Emergency Generator 9-0409	0120-01	20200401	No. 2 Oil	s	1.29E-02	2.15E+00	0.50	1	12	12	2.15	0.50	NA	NA	C3
Emergency Generator 9-0410	3090-01	20200401	No. 2 Oil	s	2.34E-02	3.91E+00	0.50	1	12	12	3.91	0.50	NA	NA	C3
Emergency Generator 9-0411	6010-01 & 6010-A02	20200401	No. 2 Oil	s	1.82E-02	3.03E+00	0.50	1	12	12	3.03	0.50	NA	NA	C3
Emergency Generator 9-0412	6009-01	20200401	No. 2 Oil	s	5.54E-03	9.23E-01	0.50	1	12	12	0.92	0.50	NA	NA	C3
Emergency Generator 9-0414	03-0328-A02	20200401	No. 2 Oil	s	1.50E-03	2.50E-01	0.50	1	12	12	0.25	0.50	NA	NA	C3
Emergency Generator 9-0418	03-0328-A03	20200401	No. 2 Oil	s	2.40E-03	3.99E-01	0.50	1	12	12	0.40	0.50	NA	NA	C3
Emergency Generator 9-0419	0311-01	20200401	No. 2 Oil	s	1.89E-03	3.15E-01	0.50	1	12	12	0.32	0.50	NA	NA	C3
Emergency Generator 9-0433	0120-02	20200401	No. 2 Oil	s	1.27E-02	2.11E+00	0.50	1	12	12	2.11	0.50	NA	NA	C3

FORM 2

**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Volatile Organic Compounds (VOC) **Calendar Year:** 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD		Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End
Emergency Generator 9-0434	0120-03	20200401	No. 2 Oil	s	1.21E-02	2.01E+00	0.50	1	12	12	0.50	NA	NA
Emergency Generator 9-0435	BSS-01	20200401	No. 2 Oil	f	4.40E-02	7.33E+00	0.50	1	12	12	0.00	NA	NA
Emergency Generator 9-0436	LWE-01 thru 05	20200401	No. 2 Oil	f	9.36E-02	1.56E+01	0.50	1	12	12	0.50	NA	NA
Emergency Generator 9-0437	UTF-01	20200401	No. 2 Oil	s	5.08E-03	8.46E-01	0.50	1	12	12	0.00	NA	NA
Emergency Generator 9-0491	3147-A01	20200401	No. 2 Oil	s	0.00E+00	0.00E+00	0.50	1	12	12	0.50	NA	NA
Emergency Generator 9-0499	2202-01	20200401	No. 2 Oil	s	4.39E-03	7.31E-01	0.50	1	12	12	0.50	NA	NA
Emergency Generator 9-0500	3660-01	20200401	No. 2 Oil	s	7.20E-04	1.20E-01	0.50	1	12	12	0.50	NA	NA
Emergency Generator 9-0503	Bldg 120 - Gen. #1	20200401	No. 2 Oil	s	1.20E-02	2.00E+00	0.50	1	12	12	0.50	NA	NA
Emergency Generator 9-0504	Bldg 120 - Gen. #2	20200401	No. 2 Oil	s	1.26E-02	2.10E+00	0.50	1	12	12	0.50	NA	NA
Emergency Generator 9-0510	Bldg 5016 - pending	20200401	No. 2 Oil	s	2.63E-03	4.38E-01	0.50	1	12	12	0.44	NA	NA
Emergency Generator 9-0511	Bldg 5046 - pending	20200401	No. 2 Oil	s	2.73E-04	4.55E-02	0.50	1	12	12	0.05	NA	NA
ECO Mobile Incinerator N/A	N/A	50100107	Diesel	s	0.00E+00	0.00E+00	0	0	0	0	0.00	NA	NA
Total				2.29	74.20						69.74		

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source.

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This sections needs to be completed only for VOC and NOx sources

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel.

Emission Estimation Method
A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance
C3 - User calculated based on engineering knowledge of the process
C4 - User calculated based on best guess/engineering judgement
C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

Operating Days:
All NSPS boilers are assumed to be 365 days
All space heating boilers are assumed to be 182 days.
All emergency generators are assumed to be 12 days

SCC: Source Classification Code

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Carbon Monoxide (CO)Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Hrs/dy	Start	End
Fuel Oil Boiler 4-0619	Various	10300503	No. 2 Oil	s	8.60E-01	9.46E+00	24.00	7	26	182		C3
				f								
Fuel Oil Boiler 4-0689	26-0642-A01	10300503	No. 2 Oil	s	1.62E-02	1.78E-01	24.00	7	26	182		C3
				f								
Atmospheric Burner 4-0692	Atmospheric Burner #1	40290012	F-24	s	0.00E+00	0.00E+00	0.00	0	0	0		C3
				f								
Fuel Oil Boiler 4-0707	26-0445-A01	10300503	No. 2 Oil	s	1.27E-02	1.39E-01	24.00	7	26	182		C3
				f								
Fuel Oil Boiler 4-0708	26-0394-A01	10300503	No. 2 Oil	s	1.43E-02	1.58E-01	24.00	7	26	182		C3
				f								
Fuel Oil Boiler 4-0709	26-0392-A01	10300503	No. 2 Oil	s	6.55E-03	3.59E-02	24.00	7	52	365		C3
				f								
Fuel Oil Boiler 5-0710	0339-A01	10300503	NG	s	5.67E-02	6.23E-01	24.00	7	26	182		C3
				f								
Fuel Oil Boiler 4-0719	26-0670-A01	10300503	No. 2 Oil	s	1.29E-02	1.42E-01	24.00	7	26	182		C3
				f								
Fuel Oil Boiler 4-0720	26-0688-A01	10300503	No. 2 Oil	s	6.44E-03	7.08E-02	24.00	7	26	182		C3
				f								
Fuel Oil Boiler 4-0722	26-0449-A01	10300503	No. 2 Oil	s	1.85E-02	2.03E-01	24.00	7	26	182		C3
				f								
Fuel Oil Boiler 4-0724	Bldg 906C - pending	10300503	No. 2 Oil	s	0.00E+00	0.00E+00	24.00	7	26	182		C3
				f								
Dual Fuel Boiler 5-0079	26-0345-A01	10200603	NG	s	9.54E-01	5.23E+00	24.00	7	52	365		C3
		10300503		f								
Dual Fuel Boiler 5-0080	26-0345-A02	10200603	NG	s	9.54E-01	5.23E+00	24.00	7	30	365		C3
		10300503		f								
Dual Fuel Boiler 5-0081	26-0345-A03	10200603	NG	s	9.54E-01	5.23E+00	24.00	7	30	365		C3
		10300503		f								
Dual Fuel Boiler 5-0085	26-4600-A06	10200603	NG	s	1.05E+00	5.74E+00	24.00	7	52	365		C3
		10300503		f								
Dual Fuel Boiler 5-0087	26-4600-A08	10200603	NG	s	1.05E+00	5.74E+00	24.00	7	52	365		C3
		10300503		f								
Dual Fuel Boiler 5-0152	Various	10200603	NG	s	1.48E+00	1.63E+01	24.00	7	26	182		C3
		10300503		f								
Dual Fuel Boiler 5-0167	26-03062-A02	10200603	NG	s	1.39E-01	7.61E-01	24.00	7	52	365		C3
		10300503		f								
Dual Fuel Boiler 5-0298	26-C2CNT West-A01 thru A04	10200603	NG	s	7.86E-01	8.64E+00	24.00	7	26	182		C3
		10300503		f								
Dual Fuel Boiler 5-0299	26-GMS Tower-A01 thru A03	10200603	NG	s	1.88E-01	2.07E+00	24.00	7	26	182		C3
		10300503		f								
Dual Fuel Boiler 5-0300	26-HQ Building-A01 thru A05	10200603	NG	s	7.46E-01	8.20E+00	24.00	7	26	182		C3
		10300503		f								
Dual Fuel Boiler 5-0301	26-GMS Lab-A01 thru A03	10200603	NG	s	4.71E-01	5.17E+00	24.00	7	26	182		C3
		10300503		f								
Dual Fuel Boiler 5-0308	26-04219-A03	10200603	NG	s	8.86E-03	4.85E-02	24.00	7	52	365		C3
		10300503		f								

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Carbon Monoxide (CO)Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Hrs/dy	Start	End
Natural Gas Boiler 5-0309	26-5100-A02	10200603	NG	s	2.61E-01	2.87E+00	24.00	7	26	182		C3
			f	f								
Natural Gas Boiler 5-0310	26-5100-A01	10200603	NG	s	2.61E-01	2.87E+00	24.00	7	26	182		C3
			f	f								
Dual Fuel Boiler 5-0315	26-0525-A02	10200603	NG	s	3.60E-02	3.95E-01	24.00	7	26	182		C3
		10300503	f	f								
Natural Gas Boiler 5-0322	Various	10200603	NG	s	2.19E-01	2.40E+00	24.00	7	26	182		C3
			f	f								
Dual Fuel Boiler 5-0334	26-0525-A03	10200603	NG	s	3.60E-02	3.95E-01	24.00	7	26	182		C3
		10300503	f	f								
Dual Fuel Boiler 5-0335	26-0525-A01	10200603	NG	s	3.60E-02	3.95E-01	24.00	7	26	182		C3
		10300503	f	f								
Natural Gas Boiler 5-0336	26-041119-A03	10200603	NG	s	6.31E-02	6.93E-01	24.00	7	26	182		C3
			f	f								
Natural Gas Boiler 5-0337	26-0459-A02	10200603	NG	s	8.14E-02	8.94E-01	24.00	7	26	182		C3
			f	f								
Propane Boiler 5-0352	0367-A01	10301002	Propane	s	5.05E-03	5.55E-02	24.00	7	26	182		C3
			f	f								
Dual Fuel Boiler 5-0364	26-4312-A01	10200603	NG	s	2.33E-01	1.28E+00	24.00	7	52	365		C3
		10300503	f	f								
Dual Fuel Boiler 5-0364	26-4312-A02	10200603	NG	s	2.33E-01	1.28E+00	24.00	7	52	365		C3
		10300503	f	f								
Natural Gas Boiler 5-0367	26-2485-A01	10200603	NG	s	5.68E-02	6.24E-01	24.00	7	26	182		C3
			f	f								
Dual Fuel Boiler 5-0370	26-4600-A09	10200603	NG	s	1.05E+00	5.74E+00	24.00	7	52	365		C3
		10300503	f	f								
Natural Gas Boiler 5-0371	26-3660-A01	10200603	NG	s	7.08E-02	7.78E-01	24.00	7	26	182		C3
			f	f								
Natural Gas Boiler 5-0376	0383A-A01 & A02	10200603	NG	s	1.94E-01	2.13E+00	24.00	7	26	182		C3
			f	f								
Natural Gas Boiler 5-0384	26-0400-A02	10200603	NG	s	5.58E-02	6.13E-01	24.00	7	26	182		C3
			f	f								
Natural Gas Boiler 5-0384	26-0400-A03	10200603	NG	s	5.58E-02	6.13E-01	24.00	7	26	182		C3
			f	f								
Dual Fuel Boiler 5-0552	26-04219-A02	10200603	NG	s	8.86E-03	4.85E-02	24.00	7	52	365		C3
		10300503	f	f								
Natural Gas Boiler 5-0710	0339-A01	10200603	NG	s	5.67E-02	6.23E-01	24.00	7	26	182		C3
			f	f								
Paint Spray Booth 6-0159	07-00525-A06	40202501	NA	s	0.00E+00	0.00E+00	1.00	1	16	124		C2
			f	f								
Paint Spray Booth 6-0162	07-00525-A04	40202501	NA	s	0.00E+00	0.00E+00	8.00	7	52	365		C3
			f	f								
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	40400340	NA	s	0.00E+00	0.00E+00	8.00	NA	NA	0		C3
			f	f								
Fire Test Lab (IFEL) 9-0216	07-0525-A01	N/A	N/A	s	0.00E+00	0.00E+00	8.00	NA	NA	0		C3
			f	f								

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: Carbon Monoxide (CO)Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr		Hrs/dy	Start	End
Emergency Generator 9-0227	03-0394-A01	20200401	No. 2 Oil	s	9.03E-02	1.50E+01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0228	03-0394-A02	20200401	No. 2 Oil	s	8.62E-02	1.44E+01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0229	03-0328-A01	20200401	No. 2 Oil	s	5.58E-02	9.29E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0276	03-4600-A04	20100101	No. 2 Oil	s	1.78E-01	2.97E+01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0277	03-4600-A05	20100101	No. 2 Oil	s	1.73E-01	2.88E+01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0386	03-0394-A03	20200401	No. 2 Oil	s	4.82E-02	8.03E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0387	03-0394-A04	20200401	No. 2 Oil	s	3.67E-02	6.12E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0388	03-0394-A05	20200401	No. 2 Oil	s	0.00E+00	0.00E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0389	03-0394-A06	20200401	No. 2 Oil	s	5.05E-02	8.42E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0390	03-0394-A07	20200401	No. 2 Oil	s	0.00E+00	0.00E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0393	26-GMS-Lab-A04	20200401	No. 2 Oil	s	2.26E-02	3.76E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0394	26-C2CNTWest-A05	20200401	No. 2 Oil	s	7.77E-03	1.29E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0395	26-GMS Tower-A04	20200401	No. 2 Oil	s	6.47E-04	1.08E-01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0396	26-HQBuilding-A06	20200401	No. 2 Oil	s	2.58E-03	4.30E-01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0408	0316-01	20200401	No. 2 Oil	s	1.65E-01	2.76E+01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0409	0120-01	20200401	No. 2 Oil	s	1.34E-01	2.24E+01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0410	3090-01	20200401	No. 2 Oil	s	2.43E-01	4.05E+01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0411	6010-01 & 6010-A02	20200401	No. 2 Oil	s	1.89E-01	3.15E+01	0.50	1	12	12		C3
				f								
Emergency Generator 9-0412	6009-01	20200401	No. 2 Oil	s	5.75E-02	9.58E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0414	03-0328-A02	20200401	No. 2 Oil	s	1.56E-02	2.60E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0418	03-0328-A03	20200401	No. 2 Oil	s	2.49E-02	4.14E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0419	0311-01	20200401	No. 2 Oil	s	1.96E-02	3.27E+00	0.50	1	12	12		C3
				f								
Emergency Generator 9-0433	0120-02	20200401	No. 2 Oil	s	1.31E-01	2.19E+01	0.50	1	12	12		C3
				f								

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Carbon Monoxide (CO)Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)			TOSD lbs/dy	Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Dys/yr		Hrs/dy	Start	End
Emergency Generator 9-0434	0120-03	20200401	No. 2 Oil s	1.25E-01	2.09E+01	0.50	1	12				C3
Emergency Generator 9-0435	BSS-01	20200401	No. 2 Oil f	4.56E-01	7.60E+01	0.50	1	12				C3
Emergency Generator 9-0436	LWE-01 thru 05	20200401	No. 2 Oil f	9.71E-01	1.62E+02	0.50	1	12				C3
Emergency Generator 9-0437	UTF-01	20200401	No. 2 Oil f	5.27E-02	8.78E+00	0.50	1	12				C3
Emergency Generator 9-0491	3147-A01	20200401	No. 2 Oil f	0.00E+00	0.00E+00	0.50	1	12				C3
Emergency Generator 9-0499	2202-01	20200401	No. 2 Oil f	4.55E-02	7.59E+00	0.50	1	12				C3
Emergency Generator 9-0500	3660-01	20200401	No. 2 Oil f	7.48E-03	1.25E+00	0.50	1	12				C3
Emergency Generator 9-0503	Bldg 120 - Gen. #1	20200401	No. 2 Oil f	1.24E-01	2.07E+01	0.50	1	12				C3
Emergency Generator 9-0504	Bldg 120 - Gen. #2	20200401	No. 2 Oil f	1.31E-01	2.18E+01	0.50	1	12				C3
Emergency Generator 9-0510	Bldg 5016 - pending	20200401	No. 2 Oil f	2.73E-02	4.55E+00	0.50	1	12				C3
Emergency Generator 9-0511	Bldg 5046 - pending	20200401	No. 2 Oil f	2.83E-03	4.72E-01	0.50	1	12				C3
ECO Mobile Incinerator N/A	N/A	50100107	Diesel s	0.00E+00	0.00E+00	0	0	0				C3
Total				16.47	716.67							

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source.

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This sections needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel.

Emission Estimation Method
A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out TechniqueC1 - User calculated based on source test or other measurements
C2 - User calculated based on material balar C6 - New construction, not operational using engineering knowledge of the proc C7 - Source closed, operation ceased
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement
C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standardOperation Days:
All NSPS boilers are assumed to be 365 days
All space heating boilers are assumed to be 182 days.
All emergency generators are assumed to be 12 days
SCC: Source Classification Code

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Particulate Matter (PM) Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	PM - Filterable Tons/yr	PM 10 - Filterable Tons/yr	PM 2.5 - Filterable Tons/yr	Filterable lbs/day	PM Condensable Tons/yr	Operation Days/yr	Estimation Method
Fuel Oil Boiler 4-0619	Various	10300503	No. 2 Oil	s f	1.88E-02 3.44E-01	1.54E-02 1.54E-02	1.69E-01 1.69E-01	3.00E-02 3.29E-01	182	C3
Fuel Oil Boiler 4-0689	26-0642-A01	10300503	No. 2 Oil	s f	3.51E-04 7.14E-03	2.70E-04 2.70E-04	2.96E-03 2.96E-03	4.22E-04 4.64E-03	182	C3
Atmospheric Burner 4-0692	Atmospheric Burner #1	40290012	F-24	f	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	C3
Fuel Oil Boiler 4-0707	26-0445-A01	10300503	No. 2 Oil	s f	5.06E-04 5.56E-03	2.10E-04 2.10E-04	2.31E-03 2.31E-03	3.29E-04 3.62E-03	182	C3
Fuel Oil Boiler 4-0708	26-0394-A01	10300503	No. 2 Oil	s f	5.74E-04 6.30E-03	2.38E-04 2.38E-04	2.62E-03 2.62E-03	3.73E-04 4.10E-03	182	C3
Fuel Oil Boiler 4-0709	26-0392-A01	10300503	No. 2 Oil	s f	2.62E-04 1.43E-03	1.09E-04 1.09E-04	5.95E-04 5.95E-04	1.70E-04 9.33E-04	365	C3
Fuel Oil Boiler 5-0710	0339-A01	10300503	NG	s f	1.28E-03 1.41E-02	1.28E-03 1.28E-03	1.41E-02 1.41E-02	3.84E-03 4.22E-02	182	C3
Fuel Oil Boiler 4-0719	26-0670-A01	10300503	No. 2 Oil	s f	5.16E-04 5.67E-03	2.14E-04 2.14E-04	2.35E-03 2.35E-03	3.35E-04 3.69E-03	182	C3
Fuel Oil Boiler 4-0720	26-0688-A01	10300503	No. 2 Oil	s f	2.58E-04 2.83E-03	1.07E-04 1.07E-04	1.18E-03 1.18E-03	1.68E-04 1.84E-03	182	C3
Fuel Oil Boiler 4-0722	26-0449-A01	10300503	No. 2 Oil	s f	7.39E-04 8.12E-03	3.07E-04 3.07E-04	3.37E-03 3.37E-03	4.80E-04 5.28E-03	182	C3
Fuel Oil Boiler 4-0724	Bldg 906C - pending	10300503	No. 2 Oil	s f	0.00E+00	0.00E+00	0.00E+00	0.00E+00	182	C3
Dual Fuel Boiler 5-0079	26-0345-A01	10200603 10300503	NG	s f	2.16E-02 1.18E-01	2.16E-02 2.16E-02	1.18E-01 1.18E-01	6.47E-02 3.55E-01	365	C3
Dual Fuel Boiler 5-0080	26-0345-A02	10200603 10300503	NG	s f	2.16E-02 1.18E-01	2.16E-02 2.16E-02	1.18E-01 1.18E-01	6.47E-02 3.55E-01	365	C3
Dual Fuel Boiler 5-0081	26-0345-A03	10200603 10300503	NG	s f	2.16E-02 1.18E-01	2.16E-02 2.16E-02	1.18E-01 1.18E-01	6.47E-02 3.55E-01	365	C3
Dual Fuel Boiler 5-0085	26-4600-A06	10200603 10300503	NG	s f	2.40E-02 1.31E-01	2.38E-02 2.38E-02	1.30E-01 1.30E-01	7.12E-02 3.90E-01	365	C3
Dual Fuel Boiler 5-0087	26-4600-A08	10200603 10300503	NG	s f	2.40E-02 1.31E-01	2.38E-02 2.38E-02	1.30E-01 1.30E-01	7.12E-02 3.90E-01	365	C3
Dual Fuel Boiler 5-0152	Various	10200603 10300503	NG	s f	6.01E-02 6.60E-01	4.71E-02 5.18E-01	4.79E-01 4.79E-01	1.25E+00 1.14E-01	182	C3
Dual Fuel Boiler 5-0167	26-03062-A02	10200603 10300503	NG	s f	3.14E-03 1.72E-02	3.14E-03 3.14E-03	1.72E-02 1.72E-02	9.43E-03 5.17E-02	365	C3
Dual Fuel Boiler 5-0298	26-C2CNT West-A01 thru A04	10200603 10300503	NG	s f	1.78E-02 1.95E-01	1.78E-02 1.78E-02	1.95E-01 1.95E-01	5.33E-02 5.86E-01	182	C3
Dual Fuel Boiler 5-0299	26-GMS Tower-A01 thru A03	10200603 10300503	NG	s f	4.26E-03 4.68E-02	4.26E-03 4.26E-03	4.68E-02 4.68E-02	1.28E-02 1.41E-01	182	C3
Dual Fuel Boiler 5-0300	26-HQ Building-A01 thru A05	10200603 10300503	NG	s f	1.69E-02 1.85E-01	1.69E-02 1.69E-02	1.85E-01 1.85E-01	5.06E-02 5.56E-01	182	C3
Dual Fuel Boiler 5-0301	26-GMS Lab-A01 thru A03	10200603 10300503	NG	s f	1.06E-02 1.17E-01	1.06E-02 1.17E-01	1.17E-01 1.17E-01	3.19E-02 3.51E-01	182	C3
Dual Fuel Boiler 5-0308	26-04219-A03	10200603 10300503	NG	s f	2.00E-04 1.10E-03	2.00E-04 1.10E-03	1.10E-03 1.10E-03	6.01E-04 3.29E-03	365	C3

CRITERIA AIR POLLUTANTS

Facility ID #: 24-25-00081 Pollutant: Particulate Matter (PM) Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	PM - Filterable		PM 10 - Filterable		PM 2.5 - Filterable		PM Condensable		Operation		Estimation Method
				Tons/yr	lbs/day	Tons/yr	lbs/day	Tons/yr	lbs/day	Tons/yr	lbs/day	Days/yr		
Natural Gas Boiler 5-0309	26-5100-A02	10200603	NG	s	5.91E-03	6.50E-02	5.91E-03	6.50E-02	5.91E-03	6.50E-02	1.77E-02	1.95E-01	182	C3
Natural Gas Boiler 5-0310	26-5100-A01	10200603	NG	s	5.91E-03	6.50E-02	5.91E-03	6.50E-02	5.91E-03	6.50E-02	1.77E-02	1.95E-01	182	C3
Dual Fuel Boiler 5-0315	26-0525-A02	10200603 10300503	NG	s	8.14E-04	8.94E-03	8.14E-04	8.94E-03	8.14E-04	8.94E-03	2.44E-03	2.68E-02	182	C3
Natural Gas Boiler 5-0322	Various	10200603	NG	s	4.95E-03	5.44E-02	4.95E-03	5.44E-02	4.95E-03	5.44E-02	1.48E-02	1.63E-01	182	C3
Dual Fuel Boiler 5-0334	26-0525-A03	10200603 10300503	NG	s	8.14E-04	8.94E-03	8.14E-04	8.94E-03	8.14E-04	8.94E-03	2.44E-03	2.68E-02	182	C3
Dual Fuel Boiler 5-0335	26-0525-A01	10200603 10300503	NG	s	8.14E-04	8.94E-03	8.14E-04	8.94E-03	8.14E-04	8.94E-03	2.44E-03	2.68E-02	182	C3
Natural Gas Boiler 5-0336	26-04119-A03	10200603	NG	s	1.43E-03	1.57E-02	1.43E-03	1.57E-02	1.43E-03	1.57E-02	4.28E-03	4.70E-02	182	C3
Natural Gas Boiler 5-0337	26-0459-A02	10200603	NG	s	1.84E-03	2.02E-02	1.84E-03	2.02E-02	1.84E-03	2.02E-02	5.52E-03	6.07E-02	182	C3
Propane Boiler 5-0352	0367-A01	10301002	Propane	s	1.35E-04	1.48E-03	7.27E-05	7.99E-04	5.58E-05	6.14E-04	8.75E-05	9.61E-04	182	C3
Dual Fuel Boiler 5-0364	26-4312-A01	10200603 10300503	NG	s	5.26E-03	2.88E-02	5.26E-03	2.88E-02	5.26E-03	2.88E-02	1.58E-02	8.65E-02	365	C3
Dual Fuel Boiler 5-0364	26-4312-A02	10200603 10300503	NG	s	5.26E-03	2.88E-02	5.26E-03	2.88E-02	5.26E-03	2.88E-02	1.58E-02	8.65E-02	365	C3
Natural Gas Boiler 5-0367	26-2485-A01	10200603	NG	s	1.29E-03	1.41E-02	1.29E-03	1.41E-02	1.29E-03	1.41E-02	3.86E-03	4.24E-02	182	C3
Dual Fuel Boiler 5-0370	26-4600-A09	10200603 10300503	NG	s	2.40E-02	1.31E-01	2.38E-02	1.31E-01	2.38E-02	1.30E-01	7.12E-02	3.90E-01	365	C3
Natural Gas Boiler 5-0371	26-3660-A01	10200603	NG	s	1.60E-03	1.76E-02	1.60E-03	1.76E-02	1.60E-03	1.76E-02	4.80E-03	5.28E-02	182	C2
Natural Gas Boiler 5-0376	0383A-A01 & A02	10200603	NG	s	4.38E-03	4.81E-02	4.38E-03	4.81E-02	4.38E-03	4.81E-02	1.31E-02	1.44E-01	182	C2
Natural Gas Boiler 5-0384	26-0400-A02	10200603	NG	s	1.26E-03	1.39E-02	1.26E-03	1.39E-02	1.26E-03	1.39E-02	3.78E-03	4.16E-02	182	C2
Natural Gas Boiler 5-0384	26-0400-A03	10200603	NG	s	1.26E-03	1.39E-02	1.26E-03	1.39E-02	1.26E-03	1.39E-02	3.78E-03	4.16E-02	182	C2
Dual Fuel Boiler 5-0552	26-04219-A02	10200603 10300503	NG	s	2.00E-04	1.10E-03	2.00E-04	1.10E-03	2.00E-04	1.10E-03	6.01E-04	3.29E-03	365	C2
Natural Gas Boiler 5-0710	0339-A01	10200603	NG	s	1.28E-03	1.41E-02	1.28E-03	1.41E-02	1.28E-03	1.41E-02	3.84E-03	4.22E-02	182	C3
Paint Spray Booth 6-0159	07-00525-A06	40202501	NA	s	1.33E-02	3.96E-01	NA	NA	NA	NA	NA	NA	67	C3
Paint Spray Booth 6-0162	07-00525-A04	40202501	NA	s	1.76E-02	2.84E-01	NA	NA	NA	NA	NA	NA	124	C3
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	40400340	NA	s	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA	0	C3
Fire Test Lab (FEL) 9-0216	07-0525-A04	N/A	N/A	s	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	C3

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Particulate Matter (PM) Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	PM - Filterable Tons/yr	PM 10 - Filterable Tons/yr	PM 2.5 - Filterable Tons/yr	PM Condensable Tons/yr	Operation Days/yr	Estimation Method
Emergency Generator 9-0227	03-0394-A01	20200401	No. 2 Oil	s 6.58E-03	5.27E+00	5.09E-03	8.18E-04	12	C3
Emergency Generator 9-0228	03-0394-A02	20200401	No. 2 Oil	f 6.29E-03	5.03E-03	4.86E-03	7.81E-04	12	C3
Emergency Generator 9-0229	03-0328-A01	20200401	No. 2 Oil	f 4.07E-03	3.25E-03	3.14E-03	5.05E-04	12	C3
Emergency Generator 9-0276	03-4600-A04	20100101	No. 2 Oil	s 1.30E-02	1.73E+00	1.00E-02	1.61E-03	12	C3
Emergency Generator 9-0277	03-4600-A05	20100101	No. 2 Oil	f 1.26E-02	1.68E+00	9.74E-03	1.57E-03	12	C3
Emergency Generator 9-0386	03-0394-A03	20200401	No. 2 Oil	f 3.52E-03	4.69E-01	2.72E-03	4.37E-04	12	C3
Emergency Generator 9-0387	03-0394-A04	20200401	No. 2 Oil	s 2.68E-03	2.14E-03	2.07E-03	3.33E-04	12	C3
Emergency Generator 9-0388	03-0394-A05	20200401	No. 2 Oil	f 0.00E+00	0.00E+00	0.00E+00	0.00E+00	12	C3
Emergency Generator 9-0389	03-0394-A06	20200401	No. 2 Oil	s 3.68E-03	4.91E-01	2.85E-03	4.57E-04	12	C3
Emergency Generator 9-0390	03-0394-A07	20200401	No. 2 Oil	f 0.00E+00	0.00E+00	0.00E+00	0.00E+00	12	C3
Emergency Generator 9-0393	26-GMS-Lab-A04	20200401	No. 2 Oil	s 5.06E-03	6.75E-01	3.91E-03	6.51E-01	12	C3
Emergency Generator 9-0394	26-C2CNTWest-A05	20200401	No. 2 Oil	s 5.89E-03	4.71E-03	4.55E-03	7.32E-04	12	C3
Emergency Generator 9-0395	26-GMS Tower-A04	20200401	No. 2 Oil	f 4.91E-04	6.55E-02	3.79E-04	6.10E-05	12	C3
Emergency Generator 9-0396	26-HQBuiding-A06	20200401	No. 2 Oil	f 1.30E-03	1.74E-01	1.01E-03	1.62E-04	12	C3
Emergency Generator 9-0408	0316-01	20200401	No. 2 Oil	s 1.21E-02	1.61E+00	9.32E-03	1.50E-03	12	C3
Emergency Generator 9-0409	0120-01	20200401	No. 2 Oil	f 9.78E-03	1.63E+00	7.56E-03	1.21E-03	12	C3
Emergency Generator 9-0410	3090-01	20200401	No. 2 Oil	s 1.77E-02	2.37E+00	1.37E-02	2.20E-03	12	C3
Emergency Generator 9-0411	6010-01 & 6010-A02	20200401	No. 2 Oil	f 1.38E-02	1.84E+00	1.06E-02	1.71E-03	12	C3
Emergency Generator 9-0412	6009-01	20200401	No. 2 Oil	s 4.19E-03	3.35E-03	3.24E-03	5.20E-04	12	C3
Emergency Generator 9-0414	03-0328-A02	20200401	No. 2 Oil	f 1.14E-03	9.10E-04	8.79E-04	1.41E-04	12	C3
Emergency Generator 9-0418	03-0328-A03	20200401	No. 2 Oil	s 1.81E-03	2.42E-01	1.40E-03	2.25E-04	12	C3
Emergency Generator 9-0419	0311-01	20200401	No. 2 Oil	f 1.43E-03	2.39E-01	1.11E-03	1.85E-01	12	C3
Emergency Generator 9-0433	0120-02	20200401	No. 2 Oil	s 9.59E-03	1.60E+00	7.41E-03	1.19E-03	12	C3

FORM 3: PM

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORTFacility Name: Aberdeen Proving Ground
Aberdeen Area

Facility ID #: 24-25-00081

Pollutant: Particulate Matter (PM) Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	SCC No.	Fuel	PM - Filterable Tons/yr	PM 10 - Filterable Tons/yr	PM 2.5 - Filterable lbs/day	PM Condensable Tons/yr	Operation Days/yr	Estimation Method
Emergency Generator 9-0434	0120-03	20200401	No. 2 Oil s	9.13E-03 f	7.30E-03 f	1.22E+00 f	7.05E-03 f	1.18E+00 f	1.89E-01 f
Emergency Generator 9-0435	BSS-01	20200401	No. 2 Oil s	3.33E-02 f	2.66E-02 f	4.44E+00 f	2.57E-02 f	4.29E+00 f	6.89E-01 f
Emergency Generator 9-0436	LWE-01 thru 05	20200401	No. 2 Oil f	7.08E-02 f	5.67E-02 f	9.44E+00 f	5.47E-02 f	9.12E+00 f	8.80E-03 f
Emergency Generator 9-0437	UTF-01	20200401	No. 2 Oil f	3.84E-03 f	3.07E-03 f	5.12E-01 f	2.97E-03 f	4.95E-01 f	7.95E-02 f
Emergency Generator 9-0499	2202-01	20200401	No. 2 Oil f	3.32E-03 f	2.66E-03 f	4.43E-01 f	2.56E-03 f	4.27E-01 f	6.87E-02 f
Emergency Generator 9-0500	3660-01	20200401	No. 2 Oil f	5.45E-04 f	4.36E-04 f	7.27E-02 f	4.21E-04 f	7.02E-02 f	6.77E-05 f
Emergency Generator 9-0503	Bldg 120 - Gen. #1	20200401	No. 2 Oil f	9.07E-03 f	7.25E-03 f	1.21E+00 f	7.00E-03 f	1.17E+00 f	1.13E-03 f
Emergency Generator 9-0504	Bldg 120 - Gen. #2	20200401	No. 2 Oil f	9.52E-03 f	7.62E-03 f	1.27E+00 f	7.36E-03 f	1.23E+00 f	1.18E-03 f
Emergency Generator 9-0510	Bldg 5016 - pending	20200401	No. 2 Oil f	1.99E-03 f	1.59E-03 f	2.65E-01 f	1.54E-03 f	2.56E-01 f	2.47E-04 f
Emergency Generator 9-0511	Bldg 5046 - pending	20200401	No. 2 Oil f	2.07E-04 f	1.65E-04 f	2.75E-02 f	1.60E-04 f	2.66E-02 f	2.57E-05 f
ECO Mobile Incinerator N/A	N/A	50100107	Diesel s	0.00E+00 f	0.00E+00 f	0.00E+00 f	0.00E+00 f	0.00E+00 f	0.00E+00 f
Total				0.64	49.88	39.62	0.51	38.26	0.88
								12.62	

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This sections needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel.

Emission Estimation Method
A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling
Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out TechniqueC1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering knowledge of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement
C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standardOperating Days:
All NSPS boilers are assumed to be 365 days
All space heating boilers are assumed to be 182 days.
All emergency generators are assumed to be 12 days

SCC: Source Classification Code

FORM 4**TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Cadmium Compounds

Calendar Year: 2022

Equipment Description/ Registration No.	Actual Emissions		
	Tons/year	Lbs/day	Lbs/hr
ECO Mobile Incinerator	0.00E+00	0.00E+00	0.00E+00
N/A			

Pollutant: Chromium Metal & Cr III Compounds

Calendar Year: 2022

Equipment Description/ Registration No.	Actual Emissions		
	Tons/year	Lbs/day	Lbs/hr
Paint Spray Booth 6-0159	1.71E-03	5.11E-02	5.11E-02
Paint Spray Booth 6-0162			
ECO Mobile Incinerator	0.00E+00	0.00E+00	0.00E+00
N/A			
Total	4.83E-03	1.01E-01	1.01E-01

Pollutant: Hexamethylene Diisocyanate Monomer

Calendar Year: 2022

Equipment Description/ Registration No.	Actual Emissions		
	Tons/year	Lbs/day	Lbs/hr
Paint Spray Booth 6-0159	3.09E-02	5.57E+00	5.05E+00
Paint Spray Booth 6-0162			
Total	9.99E-02	8.94E+00	1.15E+01

Pollutant: Lead Compounds

Calendar Year: 2022

Equipment Description/ Registration No.	Actual Emissions		
	Tons/year	Lbs/day	Lbs/hr
ECO Mobile Incinerator	0.00E+00	0.00E+00	0.00E+00
N/A			

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcetaldehydeCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	4.71E-02	5.17E-01	2.15E-02
Fuel Oil Boiler 4-0689	26-0642-A01	1.14E-03	1.25E-02	5.21E-04
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	8.87E-04	9.75E-03	4.06E-04
Fuel Oil Boiler 4-0708	26-0394-A01	1.01E-03	1.11E-02	4.61E-04
Fuel Oil Boiler 4-0709	26-0392-A01	4.59E-04	2.52E-03	1.05E-04
Fuel Oil Boiler 5-0710	0339-A01	2.84E-06	3.12E-05	1.30E-06
Fuel Oil Boiler 4-0719	26-0670-A01	9.05E-04	9.94E-03	4.14E-04
Fuel Oil Boiler 4-0720	26-0688-A01	4.52E-04	4.97E-03	2.07E-04
Fuel Oil Boiler 4-0722	26-0449-A01	1.30E-03	1.42E-02	5.93E-04
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	4.79E-05	2.62E-04	1.09E-05
Dual Fuel Boiler 5-0080	26-0345-A02	4.79E-05	2.62E-04	1.09E-05
Dual Fuel Boiler 5-0081	26-0345-A03	4.79E-05	2.62E-04	1.09E-05
Dual Fuel Boiler 5-0085	26-4600-A06	1.11E-04	6.08E-04	2.53E-05
Dual Fuel Boiler 5-0087	26-4600-A08	4.33E-03	2.37E-02	9.89E-04
Dual Fuel Boiler 5-0152	26-3326-A02	4.99E-03	5.49E-02	2.29E-03
Dual Fuel Boiler 5-0167	26-03062-A02	6.97E-06	3.82E-05	1.59E-06
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	3.94E-05	4.33E-04	1.81E-05
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	9.46E-06	1.04E-04	4.33E-06
Dual Fuel Boiler 5-0300	26-HQ Building-A01	3.75E-05	4.12E-04	1.71E-05
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	2.36E-05	2.60E-04	1.08E-05
Dual Fuel Boiler 5-0308	26-04219-A03	4.45E-07	2.44E-06	1.02E-07
Natural Gas Boiler 5-0309	26-5100-A02	1.31E-05	1.44E-04	6.01E-06
Natural Gas Boiler 5-0310	26-5100-A01	1.31E-05	1.44E-04	6.01E-06
Dual Fuel Boiler 5-0315	26-0525-A02	1.81E-06	1.98E-05	8.27E-07
Natural Gas Boiler 5-0322	26-2202-A01	1.10E-05	1.21E-04	5.03E-06

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcetaldehydeCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Dual Fuel Boiler 5-0334	26-0525-A03	1.81E-06	1.98E-05	8.27E-07
Dual Fuel Boiler 5-0335	26-0525-A01	1.81E-06	1.98E-05	8.27E-07
Natural Gas Boiler 5-0336	26-04119-A03	3.16E-06	3.48E-05	1.45E-06
Natural Gas Boiler 5-0337	26-0459-A02	4.08E-06	4.49E-05	1.87E-06
Propane Boiler 5-0352	0367-A01	2.36E-04	2.59E-03	1.08E-04
Dual Fuel Boiler 5-0364	26-4312-A01	1.17E-05	6.40E-05	2.67E-06
Dual Fuel Boiler 5-0364	26-4312-A02	1.17E-05	6.40E-05	2.67E-06
Natural Gas Boiler 5-0367	26-2485-A01	2.85E-06	3.13E-05	1.31E-06
Dual Fuel Boiler 5-0370	26-4600-A09	1.11E-04	6.08E-04	2.53E-05
Natural Gas Boiler 5-0371	26-3660-A01	3.55E-06	3.90E-05	1.63E-06
Natural Gas Boiler 5-0376	0383A-A01 & A02	9.71E-06	1.07E-04	4.45E-06
Dual Fuel Boiler 5-0552	26-04219-A02	4.45E-07	2.44E-06	1.02E-07
Natural Gas Boiler 5-0710	0339-A01	2.84E-06	3.12E-05	1.30E-06
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	8.15E-05	1.36E-02	2.72E-02
Emergency Generator 9-0228	03-0394-A02	7.78E-05	1.30E-02	2.59E-02
Emergency Generator 9-0229	03-0328-A01	5.03E-05	8.39E-03	1.68E-02
Emergency Generator 9-0276	03-4600-A04	1.61E-04	2.68E-02	5.36E-02
Emergency Generator 9-0277	03-4600-A05	1.56E-04	2.60E-02	5.20E-02
Emergency Generator 9-0386	03-0394-A03	4.35E-05	6.21E-03	7.77E-04
Emergency Generator 9-0387	03-0394-A04	3.31E-05	5.52E-03	6.90E-04
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	4.56E-05	7.59E-03	3.80E-03

FORM 4

HAZARDOUS AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcetaldehydeCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	6.26E-05	1.04E-02	1.04E-02
Emergency Generator 9-0394	26-C2CNTWest-A05	7.29E-05	1.21E-02	1.21E-02
Emergency Generator 9-0395	26-GMS Tower-A04	6.07E-06	1.01E-03	5.06E-04
Emergency Generator 9-0396	26-HQBuilding-A06	1.61E-05	2.69E-03	2.69E-03
Emergency Generator 9-0408	0316-01	1.49E-04	2.49E-02	4.98E-02
Emergency Generator 9-0409	0120-01	1.21E-04	2.02E-02	4.03E-02
Emergency Generator 9-0410	3090-01	2.20E-04	3.66E-02	7.32E-02
Emergency Generator 9-0411	6010-01	1.70E-04	2.84E-02	5.68E-02
Emergency Generator 9-0412	6009-01	5.18E-05	8.64E-03	1.73E-02
Emergency Generator 9-0414	03-0328-A02	1.41E-05	2.35E-03	4.69E-03
Emergency Generator 9-0418	03-0328-A03	2.24E-05	3.74E-03	7.48E-03
Emergency Generator 9-0419	0311-01	1.77E-05	2.95E-03	5.91E-03
Emergency Generator 9-0433	0120-02	1.19E-04	1.98E-02	3.95E-02
Emergency Generator 9-0434	0120-03	1.13E-04	1.88E-02	3.77E-02
Emergency Generator 9-0435	BSS-01	4.12E-04	6.86E-02	1.37E-01
Emergency Generator 9-0436	LWE-01	8.76E-04	1.46E-01	2.92E-01
Emergency Generator 9-0437	UTF-01	4.75E-05	7.92E-03	1.58E-02
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	4.11E-05	6.84E-03	1.37E-02
Emergency Generator 9-0500	3660-01	6.75E-06	1.12E-03	2.25E-03
Emergency Generator 9-0503	Bldg 120 - Gen. #1	1.12E-04	1.87E-02	3.74E-02
Emergency Generator 9-0504	Bldg 120 - Gen. #2	1.18E-04	1.96E-02	3.93E-02
Emergency Generator 9-0510	Bldg 5016 - pending	2.46E-05	4.10E-03	8.21E-03
Emergency Generator 9-0511	Bldg 5046 - pending	2.56E-06	4.26E-04	8.52E-04
Total		6.68E-02	1.24E+00	1.11E+00

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4

HAZARDOUS AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcenaphtheneCalendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	2.84E-06	3.12E-05	1.30E-06
Fuel Oil Boiler 4-0689	26-0642-A01	6.85E-08	7.53E-07	3.14E-08
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	5.34E-08	5.87E-07	2.45E-08
Fuel Oil Boiler 4-0708	26-0394-A01	6.05E-08	6.65E-07	2.77E-08
Fuel Oil Boiler 4-0709	26-0392-A01	2.76E-08	1.51E-07	6.31E-09
Fuel Oil Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Fuel Oil Boiler 4-0719	26-0670-A01	5.44E-08	5.98E-07	2.49E-08
Fuel Oil Boiler 4-0720	26-0688-A01	2.72E-08	2.99E-07	1.25E-08
Fuel Oil Boiler 4-0722	26-0449-A01	7.80E-08	8.57E-07	3.57E-08
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0080	26-0345-A02	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0081	26-0345-A03	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0085	26-4600-A06	2.55E-08	1.40E-07	5.82E-09
Dual Fuel Boiler 5-0087	26-4600-A08	2.80E-07	1.53E-06	6.38E-08
Dual Fuel Boiler 5-0152	26-3326-A02	3.26E-07	3.58E-06	1.49E-07
Dual Fuel Boiler 5-0167	26-03062-A02	2.92E-09	1.60E-08	6.67E-10
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.65E-08	1.81E-07	7.56E-09
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	3.96E-09	4.35E-08	1.81E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.57E-08	1.72E-07	7.18E-09
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	9.89E-09	1.09E-07	4.53E-09
Dual Fuel Boiler 5-0308	26-04219-A03	1.86E-10	1.02E-09	4.25E-11
Natural Gas Boiler 5-0309	26-5100-A02	5.49E-09	6.04E-08	2.51E-09
Natural Gas Boiler 5-0310	26-5100-A01	5.49E-09	6.04E-08	2.51E-09
Dual Fuel Boiler 5-0315	26-0525-A02	7.56E-10	8.31E-09	3.46E-10

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcenaphtheneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0322	26-2202-A01	4.60E-09	5.05E-08	2.10E-09
Dual Fuel Boiler 5-0334	26-0525-A03	7.56E-10	8.31E-09	3.46E-10
Dual Fuel Boiler 5-0335	26-0525-A01	7.56E-10	8.31E-09	3.46E-10
Natural Gas Boiler 5-0336	26-04119-A03	1.32E-09	1.46E-08	6.07E-10
Natural Gas Boiler 5-0337	26-0459-A02	1.71E-09	1.88E-08	7.83E-10
Propane Boiler 5-0352	0367-A01	1.42E-08	1.56E-07	6.50E-09
Dual Fuel Boiler 5-0364	26-4312-A01	4.89E-09	2.68E-08	1.12E-09
Dual Fuel Boiler 5-0364	26-4312-A02	4.89E-09	2.68E-08	1.12E-09
Natural Gas Boiler 5-0367	26-2485-A01	1.19E-09	1.31E-08	5.47E-10
Dual Fuel Boiler 5-0370	26-4600-A09	2.55E-08	1.40E-07	5.82E-09
Natural Gas Boiler 5-0371	26-3660-A01	1.49E-09	1.63E-08	6.81E-10
Natural Gas Boiler 5-0376	0383A-A01 & A02	4.07E-09	4.47E-08	1.86E-09
Dual Fuel Boiler 5-0552	26-04219-A02	1.86E-10	1.02E-09	4.25E-11
Natural Gas Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	1.51E-07	2.51E-05	5.03E-05
Emergency Generator 9-0228	03-0394-A02	1.44E-07	2.40E-05	4.80E-05
Emergency Generator 9-0229	03-0328-A01	9.32E-08	1.55E-05	3.11E-05
Emergency Generator 9-0276	03-4600-A04	2.97E-07	4.96E-05	9.92E-05
Emergency Generator 9-0277	03-4600-A05	2.89E-07	4.81E-05	9.63E-05
Emergency Generator 9-0386	03-0394-A03	8.05E-08	1.15E-05	1.44E-06
Emergency Generator 9-0387	03-0394-A04	6.13E-08	1.02E-05	1.28E-06
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcenaphtheneCalendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0389	03-0394-A06	8.43E-08	1.41E-05	7.03E-06
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	1.16E-07	1.93E-05	1.93E-05
Emergency Generator 9-0394	26-C2CNTWest-A05	1.35E-07	2.25E-05	2.25E-05
Emergency Generator 9-0395	26-GMS Tower-A04	1.12E-08	1.87E-06	9.37E-07
Emergency Generator 9-0396	26-HQBuilding-A06	2.99E-08	4.98E-06	4.98E-06
Emergency Generator 9-0408	0316-01	2.76E-07	4.61E-05	9.21E-05
Emergency Generator 9-0409	0120-01	2.24E-07	3.73E-05	7.47E-05
Emergency Generator 9-0410	3090-01	4.06E-07	6.77E-05	1.35E-04
Emergency Generator 9-0411	6010-01	3.15E-07	5.25E-05	1.05E-04
Emergency Generator 9-0412	6009-01	9.60E-08	1.60E-05	3.20E-05
Emergency Generator 9-0414	03-0328-A02	2.60E-08	4.34E-06	8.68E-06
Emergency Generator 9-0418	03-0328-A03	4.15E-08	6.92E-06	1.38E-05
Emergency Generator 9-0419	0311-01	3.28E-08	5.47E-06	1.09E-05
Emergency Generator 9-0433	0120-02	2.20E-07	3.66E-05	7.32E-05
Emergency Generator 9-0434	0120-03	2.09E-07	3.49E-05	6.97E-05
Emergency Generator 9-0435	BSS-01	7.62E-07	1.27E-04	2.54E-04
Emergency Generator 9-0436	LWE-01	1.62E-06	2.70E-04	5.41E-04
Emergency Generator 9-0437	UTF-01	8.80E-08	1.47E-05	2.93E-05
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	7.60E-08	1.27E-05	2.53E-05
Emergency Generator 9-0500	3660-01	1.25E-08	2.08E-06	4.16E-06
Emergency Generator 9-0503	Bldg 120 - Gen. #1	2.08E-07	3.46E-05	6.92E-05
Emergency Generator 9-0504	Bldg 120 - Gen. #2	2.18E-07	3.63E-05	7.27E-05
Emergency Generator 9-0510	Bldg 5016 - pending	4.56E-08	7.60E-06	1.52E-05
Emergency Generator 9-0511	Bldg 5046 - pending	4.73E-09	7.89E-07	1.58E-06
Total		1.04E-05	1.10E-03	2.01E-03

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcenaphthyleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	3.78E-08	4.15E-07	1.73E-08
Fuel Oil Boiler 4-0689	26-0642-A01	8.22E-10	9.03E-09	3.76E-10
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	6.40E-10	7.04E-09	2.93E-10
Fuel Oil Boiler 4-0708	26-0394-A01	7.26E-10	7.98E-09	3.32E-10
Fuel Oil Boiler 4-0709	26-0392-A01	3.31E-10	1.82E-09	7.56E-11
Fuel Oil Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Fuel Oil Boiler 4-0719	26-0670-A01	6.53E-10	7.17E-09	2.99E-10
Fuel Oil Boiler 4-0720	26-0688-A01	3.26E-10	3.58E-09	1.49E-10
Fuel Oil Boiler 4-0722	26-0449-A01	9.35E-10	1.03E-08	4.28E-10
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0080	26-0345-A02	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0081	26-0345-A03	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0085	26-4600-A06	2.20E-08	1.21E-07	5.03E-09
Dual Fuel Boiler 5-0087	26-4600-A08	2.51E-08	1.37E-07	5.72E-09
Dual Fuel Boiler 5-0152	26-3326-A02	3.32E-08	3.65E-07	1.52E-08
Dual Fuel Boiler 5-0167	26-03062-A02	2.92E-09	1.60E-08	6.67E-10
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.65E-08	1.81E-07	7.56E-09
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	3.96E-09	4.35E-08	1.81E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.57E-08	1.72E-07	7.18E-09
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	9.89E-09	1.09E-07	4.53E-09
Dual Fuel Boiler 5-0308	26-04219-A03	1.86E-10	1.02E-09	4.25E-11
Natural Gas Boiler 5-0309	26-5100-A02	5.49E-09	6.04E-08	2.51E-09

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcenaphthyleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0310	26-5100-A01	5.49E-09	6.04E-08	2.51E-09
Dual Fuel Boiler 5-0315	26-0525-A02	7.56E-10	8.31E-09	3.46E-10
Natural Gas Boiler 5-0322	26-2202-A01	4.60E-09	5.05E-08	2.10E-09
Dual Fuel Boiler 5-0334	26-0525-A03	7.56E-10	8.31E-09	3.46E-10
Dual Fuel Boiler 5-0335	26-0525-A01	7.56E-10	8.31E-09	3.46E-10
Natural Gas Boiler 5-0336	26-04119-A03	1.32E-09	1.46E-08	6.07E-10
Natural Gas Boiler 5-0337	26-0459-A02	1.71E-09	1.88E-08	7.83E-10
Propane Boiler 5-0352	0367-A01	1.70E-10	1.87E-09	7.79E-11
Dual Fuel Boiler 5-0364	26-4312-A01	4.89E-09	2.68E-08	1.12E-09
Dual Fuel Boiler 5-0364	26-4312-A02	4.89E-09	2.68E-08	1.12E-09
Natural Gas Boiler 5-0367	26-2485-A01	1.19E-09	1.31E-08	5.47E-10
Dual Fuel Boiler 5-0370	26-4600-A09	2.20E-08	1.21E-07	5.03E-09
Natural Gas Boiler 5-0371	26-3660-A01	1.49E-09	1.63E-08	6.81E-10
Natural Gas Boiler 5-0376	0383A-A01 & A02	4.07E-09	4.47E-08	1.86E-09
Dual Fuel Boiler 5-0552	26-04219-A02	1.86E-10	1.02E-09	4.25E-11
Natural Gas Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	5.37E-07	8.96E-05	1.79E-04
Emergency Generator 9-0228	03-0394-A02	5.13E-07	8.55E-05	1.71E-04
Emergency Generator 9-0229	03-0328-A01	3.32E-07	5.53E-05	1.11E-04
Emergency Generator 9-0276	03-4600-A04	1.06E-06	1.77E-04	3.53E-04
Emergency Generator 9-0277	03-4600-A05	1.03E-06	1.72E-04	3.43E-04

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcenaphthyleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0386	03-0394-A03	2.87E-07	4.10E-05	5.12E-06
Emergency Generator 9-0387	03-0394-A04	2.19E-07	3.64E-05	4.55E-06
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	3.01E-07	5.01E-05	2.50E-05
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	4.13E-07	6.88E-05	6.88E-05
Emergency Generator 9-0394	26-C2CNTWest-A05	4.81E-07	8.02E-05	8.02E-05
Emergency Generator 9-0395	26-GMS Tower-A04	4.01E-08	6.68E-06	3.34E-06
Emergency Generator 9-0396	26-HQBuilding-A06	1.06E-07	1.77E-05	1.77E-05
Emergency Generator 9-0408	0316-01	9.85E-07	1.64E-04	3.28E-04
Emergency Generator 9-0409	0120-01	7.98E-07	1.33E-04	2.66E-04
Emergency Generator 9-0410	3090-01	1.45E-06	2.41E-04	4.83E-04
Emergency Generator 9-0411	6010-01	1.12E-06	1.87E-04	3.75E-04
Emergency Generator 9-0412	6009-01	3.42E-07	5.70E-05	1.14E-04
Emergency Generator 9-0414	03-0328-A02	9.28E-08	1.55E-05	3.09E-05
Emergency Generator 9-0418	03-0328-A03	1.48E-07	2.47E-05	4.93E-05
Emergency Generator 9-0419	0311-01	1.17E-07	1.95E-05	3.90E-05
Emergency Generator 9-0433	0120-02	7.82E-07	1.30E-04	2.61E-04
Emergency Generator 9-0434	0120-03	7.45E-07	1.24E-04	2.48E-04
Emergency Generator 9-0435	BSS-01	2.72E-06	4.53E-04	9.05E-04
Emergency Generator 9-0436	LWE-01	5.78E-06	9.63E-04	1.93E-03
Emergency Generator 9-0437	UTF-01	3.14E-07	5.23E-05	1.05E-04
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	2.71E-07	4.52E-05	9.03E-05
Emergency Generator 9-0500	3660-01	4.45E-08	7.42E-06	1.48E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcenaphthyleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0503	Bldg 120 - Gen. #1	7.40E-07	1.23E-04	2.47E-04
Emergency Generator 9-0504	Bldg 120 - Gen. #2	7.77E-07	1.30E-04	2.59E-04
Emergency Generator 9-0510	Bldg 5016 - pending	1.62E-07	2.71E-05	5.41E-05
Emergency Generator 9-0511	Bldg 5046 - pending	1.69E-08	2.81E-06	5.62E-06
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		2.30E-05	3.78E-03	7.16E-03

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4

HAZARDOUS AIR POLLUTANTS EMISSIONS CERTIFICATION REPORT

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcroleinCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	4.71E-02	5.17E-01	2.15E-02
Fuel Oil Boiler 4-0689	26-0642-A01	1.14E-03	1.25E-02	5.21E-04
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	8.87E-04	9.75E-03	4.06E-04
Fuel Oil Boiler 4-0708	26-0394-A01	1.01E-03	1.11E-02	4.61E-04
Fuel Oil Boiler 4-0709	26-0392-A01	4.59E-04	2.52E-03	1.05E-04
Fuel Oil Boiler 5-0710	0339-A01	1.79E-06	1.96E-05	8.18E-07
Fuel Oil Boiler 4-0719	26-0670-A01	9.05E-04	9.94E-03	4.14E-04
Fuel Oil Boiler 4-0720	26-0688-A01	4.52E-04	4.97E-03	2.07E-04
Fuel Oil Boiler 4-0722	26-0449-A01	1.30E-03	1.42E-02	5.93E-04
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	3.01E-05	1.65E-04	6.86E-06
Dual Fuel Boiler 5-0080	26-0345-A02	3.01E-05	1.65E-04	6.86E-06
Dual Fuel Boiler 5-0081	26-0345-A03	3.01E-05	1.65E-04	6.86E-06
Dual Fuel Boiler 5-0085	26-4600-A06	9.15E-05	5.01E-04	2.09E-05
Dual Fuel Boiler 5-0087	26-4600-A08	4.31E-03	2.36E-02	9.85E-04
Dual Fuel Boiler 5-0152	26-3326-A02	4.97E-03	5.46E-02	2.27E-03
Dual Fuel Boiler 5-0167	26-03062-A02	4.38E-06	2.40E-05	1.00E-06
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	2.48E-05	2.72E-04	1.13E-05
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	5.94E-06	6.53E-05	2.72E-06
Dual Fuel Boiler 5-0300	26-HQ Building-A01	2.35E-05	2.58E-04	1.08E-05
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	1.48E-05	1.63E-04	6.79E-06
Dual Fuel Boiler 5-0308	26-04219-A03	2.79E-07	1.53E-06	6.37E-08
Natural Gas Boiler 5-0309	26-5100-A02	8.24E-06	9.05E-05	3.77E-06
Natural Gas Boiler 5-0310	26-5100-A01	8.24E-06	9.05E-05	3.77E-06

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcroleinCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Dual Fuel Boiler 5-0315	26-0525-A02	1.13E-06	1.25E-05	5.19E-07
Natural Gas Boiler 5-0322	26-2202-A01	6.89E-06	7.58E-05	3.16E-06
Dual Fuel Boiler 5-0334	26-0525-A03	1.13E-06	1.25E-05	5.19E-07
Dual Fuel Boiler 5-0335	26-0525-A01	1.13E-06	1.25E-05	5.19E-07
Natural Gas Boiler 5-0336	26-04119-A03	1.99E-06	2.18E-05	9.10E-07
Natural Gas Boiler 5-0337	26-0459-A02	2.56E-06	2.82E-05	1.17E-06
Propane Boiler 5-0352	0367-A01	2.36E-04	2.59E-03	1.08E-04
Dual Fuel Boiler 5-0364	26-4312-A01	7.33E-06	4.02E-05	1.67E-06
Dual Fuel Boiler 5-0364	26-4312-A02	7.33E-06	4.02E-05	1.67E-06
Natural Gas Boiler 5-0367	26-2485-A01	1.79E-06	1.97E-05	8.20E-07
Dual Fuel Boiler 5-0370	26-4600-A09	9.15E-05	5.01E-04	2.09E-05
Natural Gas Boiler 5-0371	26-3660-A01	2.23E-06	2.45E-05	1.02E-06
Natural Gas Boiler 5-0376	0383A-A01 & A02	6.10E-06	6.70E-05	2.79E-06
Dual Fuel Boiler 5-0552	26-04219-A02	2.79E-07	1.53E-06	6.37E-08
Natural Gas Boiler 5-0710	0339-A01	1.79E-06	1.96E-05	8.18E-07
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	9.82E-06	1.64E-03	3.27E-03
Emergency Generator 9-0228	03-0394-A02	9.38E-06	1.56E-03	3.13E-03
Emergency Generator 9-0229	03-0328-A01	6.07E-06	1.01E-03	2.02E-03
Emergency Generator 9-0276	03-4600-A04	1.94E-05	3.23E-03	6.46E-03
Emergency Generator 9-0277	03-4600-A05	1.88E-05	3.14E-03	6.27E-03

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcroleinCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0386	03-0394-A03	5.24E-06	7.49E-04	9.37E-05
Emergency Generator 9-0387	03-0394-A04	4.00E-06	6.66E-04	8.33E-05
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	5.49E-06	9.16E-04	4.58E-04
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	7.55E-06	1.26E-03	1.26E-03
Emergency Generator 9-0394	26-C2CNTWest-A05	8.79E-06	1.47E-03	1.47E-03
Emergency Generator 9-0395	26-GMS Tower-A04	7.33E-07	1.22E-04	6.11E-05
Emergency Generator 9-0396	26-HQBuilding-A06	1.95E-06	3.24E-04	3.24E-04
Emergency Generator 9-0408	0316-01	1.80E-05	3.00E-03	6.00E-03
Emergency Generator 9-0409	0120-01	1.46E-05	2.43E-03	4.87E-03
Emergency Generator 9-0410	3090-01	2.65E-05	4.41E-03	8.83E-03
Emergency Generator 9-0411	6010-01	2.05E-05	3.42E-03	6.85E-03
Emergency Generator 9-0412	6009-01	6.25E-06	1.04E-03	2.08E-03
Emergency Generator 9-0414	03-0328-A02	1.70E-06	2.83E-04	5.66E-04
Emergency Generator 9-0418	03-0328-A03	2.71E-06	4.51E-04	9.02E-04
Emergency Generator 9-0419	0311-01	2.14E-06	3.56E-04	7.13E-04
Emergency Generator 9-0433	0120-02	1.43E-05	2.38E-03	4.77E-03
Emergency Generator 9-0434	0120-03	1.36E-05	2.27E-03	4.54E-03
Emergency Generator 9-0436	LWE-01	1.06E-04	1.76E-02	3.52E-02
Emergency Generator 9-0437	UTF-01	5.73E-06	9.55E-04	1.91E-03
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	4.95E-06	8.25E-04	1.65E-03
Emergency Generator 9-0500	3660-01	8.14E-07	1.36E-04	2.71E-04

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AcroleinCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0503	Bldg 120 - Gen. #1	1.35E-05	2.25E-03	4.51E-03
Emergency Generator 9-0504	Bldg 120 - Gen. #2	1.42E-05	2.37E-03	4.74E-03
Emergency Generator 9-0510	Bldg 5016 - pending	2.97E-06	4.95E-04	9.90E-04
Emergency Generator 9-0511	Bldg 5046 - pending	3.08E-07	5.14E-05	1.03E-04
Total		6.35E-02	7.27E-01	1.42E-01

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AnthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	1.69E-07	1.86E-06	7.73E-08
Fuel Oil Boiler 4-0689	26-0642-A01	3.96E-09	4.35E-08	1.81E-09
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	3.09E-09	3.39E-08	1.41E-09
Fuel Oil Boiler 4-0708	26-0394-A01	3.50E-09	3.85E-08	1.60E-09
Fuel Oil Boiler 4-0709	26-0392-A01	1.60E-09	8.75E-09	3.65E-10
Fuel Oil Boiler 5-0710	0339-A01	1.59E-09	1.74E-08	7.27E-10
Fuel Oil Boiler 4-0719	26-0670-A01	3.15E-09	3.46E-08	1.44E-09
Fuel Oil Boiler 4-0720	26-0688-A01	1.57E-09	1.73E-08	7.20E-10
Fuel Oil Boiler 4-0722	26-0449-A01	4.51E-09	4.95E-08	2.06E-09
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.67E-08	1.46E-07	6.10E-09
Dual Fuel Boiler 5-0080	26-0345-A02	2.67E-08	1.46E-07	6.10E-09
Dual Fuel Boiler 5-0081	26-0345-A03	2.67E-08	1.46E-07	6.10E-09
Dual Fuel Boiler 5-0085	26-4600-A06	2.95E-08	1.62E-07	6.74E-09
Dual Fuel Boiler 5-0087	26-4600-A08	4.42E-08	2.42E-07	1.01E-08
Dual Fuel Boiler 5-0152	26-3326-A02	5.67E-08	6.23E-07	2.60E-08
Dual Fuel Boiler 5-0167	26-03062-A02	3.89E-09	2.13E-08	8.89E-10
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	2.20E-08	2.42E-07	1.01E-08
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	5.28E-09	5.80E-08	2.42E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	2.09E-08	2.30E-07	9.57E-09
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	1.32E-08	1.45E-07	6.04E-09
Dual Fuel Boiler 5-0308	26-04219-A03	2.48E-10	1.36E-09	5.67E-11
Natural Gas Boiler 5-0309	26-5100-A02	7.32E-09	8.05E-08	3.35E-09
Natural Gas Boiler 5-0310	26-5100-A01	7.32E-09	8.05E-08	3.35E-09

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AnthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Dual Fuel Boiler 5-0315	26-0525-A02	1.01E-09	1.11E-08	4.61E-10
Natural Gas Boiler 5-0322	26-2202-A01	6.13E-09	6.73E-08	2.81E-09
Dual Fuel Boiler 5-0334	26-0525-A03	1.01E-09	1.11E-08	4.61E-10
Dual Fuel Boiler 5-0335	26-0525-A01	1.01E-09	1.11E-08	4.61E-10
Natural Gas Boiler 5-0336	26-04119-A03	1.77E-09	1.94E-08	8.09E-10
Natural Gas Boiler 5-0337	26-0459-A02	2.28E-09	2.50E-08	1.04E-09
Propane Boiler 5-0352	0367-A01	8.21E-10	9.02E-09	3.76E-10
Dual Fuel Boiler 5-0364	26-4312-A01	6.52E-09	3.57E-08	1.49E-09
Dual Fuel Boiler 5-0364	26-4312-A02	6.52E-09	3.57E-08	1.49E-09
Natural Gas Boiler 5-0367	26-2485-A01	1.59E-09	1.75E-08	7.29E-10
Dual Fuel Boiler 5-0370	26-4600-A09	2.95E-08	1.62E-07	6.74E-09
Natural Gas Boiler 5-0371	26-3660-A01	1.98E-09	2.18E-08	9.08E-10
Natural Gas Boiler 5-0376	0383A-A01 & A02	5.42E-09	5.96E-08	2.48E-09
Dual Fuel Boiler 5-0552	26-04219-A02	2.48E-10	1.36E-09	5.67E-11
Natural Gas Boiler 5-0710	0339-A01	1.59E-09	1.74E-08	7.27E-10
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	1.99E-07	3.31E-05	6.62E-05
Emergency Generator 9-0228	03-0394-A02	1.90E-07	3.16E-05	6.32E-05
Emergency Generator 9-0229	03-0328-A01	1.23E-07	2.04E-05	4.09E-05
Emergency Generator 9-0276	03-4600-A04	3.92E-07	6.53E-05	1.31E-04
Emergency Generator 9-0277	03-4600-A05	3.80E-07	6.34E-05	1.27E-04

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AnthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0386	03-0394-A03	1.06E-07	1.51E-05	1.89E-06
Emergency Generator 9-0387	03-0394-A04	8.08E-08	1.35E-05	1.68E-06
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	1.11E-07	1.85E-05	9.26E-06
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	1.53E-07	2.54E-05	2.54E-05
Emergency Generator 9-0394	26-C2CNTWest-A05	1.78E-07	2.96E-05	2.96E-05
Emergency Generator 9-0395	26-GMS Tower-A04	1.48E-08	2.47E-06	1.23E-06
Emergency Generator 9-0396	26-HQBuilding-A06	3.93E-08	6.56E-06	6.56E-06
Emergency Generator 9-0408	0316-01	3.64E-07	6.07E-05	1.21E-04
Emergency Generator 9-0409	0120-01	2.95E-07	4.92E-05	9.84E-05
Emergency Generator 9-0410	3090-01	5.35E-07	8.92E-05	1.78E-04
Emergency Generator 9-0411	6010-01	4.15E-07	6.92E-05	1.38E-04
Emergency Generator 9-0412	6009-01	1.26E-07	2.11E-05	4.21E-05
Emergency Generator 9-0414	03-0328-A02	3.43E-08	5.72E-06	1.14E-05
Emergency Generator 9-0418	03-0328-A03	5.47E-08	9.12E-06	1.82E-05
Emergency Generator 9-0419	0311-01	4.32E-08	7.20E-06	1.44E-05
Emergency Generator 9-0433	0120-02	2.89E-07	4.82E-05	9.64E-05
Emergency Generator 9-0434	0120-03	2.75E-07	4.59E-05	9.18E-05
Emergency Generator 9-0435	BSS-01	1.00E-06	1.67E-04	3.35E-04
Emergency Generator 9-0436	LWE-01	2.14E-06	3.56E-04	7.12E-04
Emergency Generator 9-0437	UTF-01	1.16E-07	1.93E-05	3.86E-05
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	1.00E-07	1.67E-05	3.34E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: AnthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0500	3660-01	1.64E-08	2.74E-06	5.48E-06
Emergency Generator 9-0503	Bldg 120 - Gen. #1	2.73E-07	4.56E-05	9.11E-05
Emergency Generator 9-0504	Bldg 120 - Gen. #2	2.87E-07	4.79E-05	9.57E-05
Emergency Generator 9-0510	Bldg 5016 - pending	6.00E-08	1.00E-05	2.00E-05
Emergency Generator 9-0511	Bldg 5046 - pending	6.23E-09	1.04E-06	2.08E-06
Total		8.95E-06	1.40E-03	2.65E-03

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benz(a)anthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	5.42E-07	5.96E-06	2.48E-07
Fuel Oil Boiler 4-0689	26-0642-A01	1.30E-08	1.43E-07	5.96E-09
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	1.02E-08	1.12E-07	4.65E-09
Fuel Oil Boiler 4-0708	26-0394-A01	1.15E-08	1.26E-07	5.27E-09
Fuel Oil Boiler 4-0709	26-0392-A01	5.25E-09	2.88E-08	1.20E-09
Fuel Oil Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Fuel Oil Boiler 4-0719	26-0670-A01	1.03E-08	1.14E-07	4.74E-09
Fuel Oil Boiler 4-0720	26-0688-A01	5.17E-09	5.68E-08	2.37E-09
Fuel Oil Boiler 4-0722	26-0449-A01	1.48E-08	1.63E-07	6.78E-09
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0080	26-0345-A02	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0081	26-0345-A03	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0085	26-4600-A06	2.26E-08	1.24E-07	5.17E-09
Dual Fuel Boiler 5-0087	26-4600-A08	7.09E-08	3.89E-07	1.62E-08
Dual Fuel Boiler 5-0152	26-3326-A02	8.60E-08	9.45E-07	3.94E-08
Dual Fuel Boiler 5-0167	26-03062-A02	2.92E-09	1.60E-08	6.67E-10
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.65E-08	1.81E-07	7.56E-09
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	3.96E-09	4.35E-08	1.81E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.57E-08	1.72E-07	7.18E-09
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	9.89E-09	1.09E-07	4.53E-09
Dual Fuel Boiler 5-0308	26-04219-A03	1.86E-10	1.02E-09	4.25E-11
Natural Gas Boiler 5-0309	26-5100-A02	5.49E-09	6.04E-08	2.51E-09
Natural Gas Boiler 5-0310	26-5100-A01	5.49E-09	6.04E-08	2.51E-09

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benz(a)anthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Dual Fuel Boiler 5-0315	26-0525-A02	7.56E-10	8.31E-09	3.46E-10
Natural Gas Boiler 5-0322	26-2202-A01	4.60E-09	5.05E-08	2.10E-09
Dual Fuel Boiler 5-0334	26-0525-A03	7.56E-10	8.31E-09	3.46E-10
Dual Fuel Boiler 5-0335	26-0525-A01	7.56E-10	8.31E-09	3.46E-10
Natural Gas Boiler 5-0336	26-04119-A03	1.32E-09	1.46E-08	6.07E-10
Natural Gas Boiler 5-0337	26-0459-A02	1.71E-09	1.88E-08	7.83E-10
Propane Boiler 5-0352	0367-A01	2.70E-09	2.96E-08	1.24E-09
Dual Fuel Boiler 5-0364	26-4312-A01	4.89E-09	2.68E-08	1.12E-09
Dual Fuel Boiler 5-0364	26-4312-A02	4.89E-09	2.68E-08	1.12E-09
Natural Gas Boiler 5-0367	26-2485-A01	1.19E-09	1.31E-08	5.47E-10
Dual Fuel Boiler 5-0370	26-4600-A09	2.26E-08	1.24E-07	5.17E-09
Natural Gas Boiler 5-0371	26-3660-A01	1.49E-09	1.63E-08	6.81E-10
Natural Gas Boiler 5-0376	0383A-A01 & A02	4.07E-09	4.47E-08	1.86E-09
Dual Fuel Boiler 5-0552	26-04219-A02	1.86E-10	1.02E-09	4.25E-11
Natural Gas Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	1.78E-07	2.97E-05	5.95E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benz(a)anthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0228	03-0394-A02	1.70E-07	2.84E-05	5.68E-05
Emergency Generator 9-0229	03-0328-A01	1.10E-07	1.84E-05	3.67E-05
Emergency Generator 9-0276	03-4600-A04	3.52E-07	5.87E-05	1.17E-04
Emergency Generator 9-0277	03-4600-A05	3.42E-07	5.69E-05	1.14E-04
Emergency Generator 9-0386	03-0394-A03	9.53E-08	1.36E-05	1.70E-06
Emergency Generator 9-0387	03-0394-A04	7.26E-08	1.21E-05	1.51E-06
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	9.98E-08	1.66E-05	8.32E-06
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	1.37E-07	2.28E-05	2.28E-05
Emergency Generator 9-0394	26-C2CNTWest-A05	1.60E-07	2.66E-05	2.66E-05
Emergency Generator 9-0395	26-GMS Tower-A04	1.33E-08	2.22E-06	1.11E-06
Emergency Generator 9-0396	26-HQBuilding-A06	3.53E-08	5.89E-06	5.89E-06
Emergency Generator 9-0408	0316-01	3.27E-07	5.45E-05	1.09E-04
Emergency Generator 9-0409	0120-01	2.65E-07	4.42E-05	8.84E-05
Emergency Generator 9-0410	3090-01	4.81E-07	8.01E-05	1.60E-04
Emergency Generator 9-0411	6010-01	3.73E-07	6.22E-05	1.24E-04
Emergency Generator 9-0412	6009-01	1.14E-07	1.89E-05	3.79E-05
Emergency Generator 9-0414	03-0328-A02	3.08E-08	5.14E-06	1.03E-05
Emergency Generator 9-0418	03-0328-A03	4.91E-08	8.19E-06	1.64E-05
Emergency Generator 9-0419	0311-01	3.88E-08	6.47E-06	1.29E-05
Emergency Generator 9-0433	0120-02	2.60E-07	4.33E-05	8.66E-05
Emergency Generator 9-0434	0120-03	2.47E-07	4.12E-05	8.25E-05
Emergency Generator 9-0435	BSS-01	9.02E-07	1.50E-04	3.01E-04
Emergency Generator 9-0436	LWE-01	1.92E-06	3.20E-04	6.40E-04

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benz(a)anthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0437	UTF-01	1.04E-07	1.74E-05	3.47E-05
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	9.00E-08	1.50E-05	3.00E-05
Emergency Generator 9-0500	3660-01	1.48E-08	2.46E-06	4.93E-06
Emergency Generator 9-0503	Bldg 120 - Gen. #1	2.46E-07	4.09E-05	8.19E-05
Emergency Generator 9-0504	Bldg 120 - Gen. #2	2.58E-07	4.30E-05	8.60E-05
Emergency Generator 9-0510	Bldg 5016 - pending	5.39E-08	8.99E-06	1.80E-05
Emergency Generator 9-0511	Bldg 5046 - pending	5.60E-09	9.33E-07	1.87E-06
Total		8.51E-06	1.26E-03	2.38E-03

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benzene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	3.32E-05	3.65E-04	1.52E-05
Fuel Oil Boiler 4-0689	26-0642-A01	6.95E-07	7.64E-06	3.18E-07
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	5.42E-07	5.95E-06	2.48E-07
Fuel Oil Boiler 4-0708	26-0394-A01	6.14E-07	6.75E-06	2.81E-07
Fuel Oil Boiler 4-0709	26-0392-A01	2.80E-07	1.54E-06	6.40E-08
Fuel Oil Boiler 5-0710	0339-A01	1.39E-06	1.53E-05	6.36E-07
Fuel Oil Boiler 4-0719	26-0670-A01	5.52E-07	6.07E-06	2.53E-07
Fuel Oil Boiler 4-0720	26-0688-A01	2.76E-07	3.03E-06	1.26E-07
Fuel Oil Boiler 4-0722	26-0449-A01	7.91E-07	8.69E-06	3.62E-07
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.34E-05	1.28E-04	5.34E-06
Dual Fuel Boiler 5-0080	26-0345-A02	2.34E-05	1.28E-04	5.34E-06
Dual Fuel Boiler 5-0081	26-0345-A03	2.34E-05	1.28E-04	5.34E-06
Dual Fuel Boiler 5-0085	26-4600-A06	2.57E-05	1.41E-04	5.86E-06
Dual Fuel Boiler 5-0087	26-4600-A08	2.83E-05	1.55E-04	6.45E-06
Dual Fuel Boiler 5-0152	26-3326-A02	3.76E-05	4.14E-04	1.72E-05
Dual Fuel Boiler 5-0167	26-03062-A02	3.41E-06	1.87E-05	7.78E-07
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.93E-05	2.12E-04	8.82E-06
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	4.62E-06	5.08E-05	2.11E-06
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.83E-05	2.01E-04	8.37E-06
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	1.15E-05	1.27E-04	5.28E-06
Dual Fuel Boiler 5-0308	26-04219-A03	2.17E-07	1.19E-06	4.96E-08
Natural Gas Boiler 5-0309	26-5100-A02	6.41E-06	7.04E-05	2.93E-06
Natural Gas Boiler 5-0310	26-5100-A01	6.41E-06	7.04E-05	2.93E-06

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: BenzeneCalendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Dual Fuel Boiler 5-0315	26-0525-A02	8.82E-07	9.69E-06	4.04E-07
Natural Gas Boiler 5-0322	26-2202-A01	5.36E-06	5.89E-05	2.46E-06
Dual Fuel Boiler 5-0334	26-0525-A03	8.82E-07	9.69E-06	4.04E-07
Dual Fuel Boiler 5-0335	26-0525-A01	8.82E-07	9.69E-06	4.04E-07
Natural Gas Boiler 5-0336	26-04119-A03	1.55E-06	1.70E-05	7.08E-07
Natural Gas Boiler 5-0337	26-0459-A02	1.99E-06	2.19E-05	9.13E-07
Propane Boiler 5-0352	0367-A01	1.44E-07	1.58E-06	6.59E-08
Dual Fuel Boiler 5-0364	26-4312-A01	5.70E-06	3.13E-05	1.30E-06
Dual Fuel Boiler 5-0364	26-4312-A02	5.70E-06	3.13E-05	1.30E-06
Natural Gas Boiler 5-0367	26-2485-A01	1.39E-06	1.53E-05	6.38E-07
Dual Fuel Boiler 5-0370	26-4600-A09	2.57E-05	1.41E-04	5.86E-06
Natural Gas Boiler 5-0371	26-3660-A01	1.73E-06	1.91E-05	7.94E-07
Natural Gas Boiler 5-0376	0383A-A01 & A02	4.74E-06	5.21E-05	2.17E-06
Dual Fuel Boiler 5-0552	26-04219-A02	2.17E-07	1.19E-06	4.96E-08
Natural Gas Boiler 5-0710	0339-A01	1.39E-06	1.53E-05	6.36E-07
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	4.00E-02	2.19E-01	2.74E-02
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	9.91E-05	1.65E-02	3.30E-02

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: BenzeneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0228	03-0394-A02	9.46E-05	1.58E-02	3.15E-02
Emergency Generator 9-0229	03-0328-A01	6.12E-05	1.02E-02	2.04E-02
Emergency Generator 9-0276	03-4600-A04	1.95E-04	3.26E-02	6.51E-02
Emergency Generator 9-0277	03-4600-A05	1.90E-04	3.16E-02	6.33E-02
Emergency Generator 9-0386	03-0394-A03	5.29E-05	7.56E-03	9.45E-04
Emergency Generator 9-0387	03-0394-A04	4.03E-05	6.72E-03	8.40E-04
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	5.54E-05	9.24E-03	4.62E-03
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	7.61E-05	1.27E-02	1.27E-02
Emergency Generator 9-0394	26-C2CNTWest-A05	8.87E-05	1.48E-02	1.48E-02
Emergency Generator 9-0395	26-GMS Tower-A04	7.39E-06	1.23E-03	6.16E-04
Emergency Generator 9-0396	26-HQBuilding-A06	1.96E-05	3.27E-03	3.27E-03
Emergency Generator 9-0408	0316-01	1.82E-04	3.03E-02	6.05E-02
Emergency Generator 9-0409	0120-01	1.47E-04	2.45E-02	4.91E-02
Emergency Generator 9-0410	3090-01	2.67E-04	4.45E-02	8.90E-02
Emergency Generator 9-0411	6010-01	2.07E-04	3.45E-02	6.91E-02
Emergency Generator 9-0412	6009-01	6.31E-05	1.05E-02	2.10E-02
Emergency Generator 9-0414	03-0328-A02	1.71E-05	2.85E-03	5.71E-03
Emergency Generator 9-0418	03-0328-A03	2.73E-05	4.55E-03	9.10E-03
Emergency Generator 9-0419	0311-01	2.16E-05	3.59E-03	7.19E-03
Emergency Generator 9-0433	0120-02	1.44E-04	2.40E-02	4.81E-02
Emergency Generator 9-0434	0120-03	1.37E-04	2.29E-02	4.58E-02
Emergency Generator 9-0435	BSS-01	5.01E-04	8.35E-02	1.67E-01
Emergency Generator 9-0436	LWE-01	1.07E-03	1.78E-01	3.55E-01

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benzene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0437	UTF-01	5.78E-05	9.64E-03	1.93E-02
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	5.00E-05	8.33E-03	1.67E-02
Emergency Generator 9-0500	3660-01	8.21E-06	1.37E-03	2.74E-03
Emergency Generator 9-0503	Bldg 120 - Gen. #1	1.36E-04	2.27E-02	4.55E-02
Emergency Generator 9-0504	Bldg 120 - Gen. #2	1.43E-04	2.39E-02	4.78E-02
Emergency Generator 9-0510	Bldg 5016 - pending	2.99E-05	4.99E-03	9.98E-03
Emergency Generator 9-0511	Bldg 5046 - pending	3.11E-06	5.18E-04	1.04E-03
Total		4.45E-02	9.19E-01	1.35E+00

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benzo(ghi)peryleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	2.98E-07	3.27E-06	1.36E-07
Fuel Oil Boiler 4-0689	26-0642-A01	7.15E-09	7.85E-08	3.27E-09
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	5.57E-09	6.12E-08	2.55E-09
Fuel Oil Boiler 4-0708	26-0394-A01	6.31E-09	6.94E-08	2.89E-09
Fuel Oil Boiler 4-0709	26-0392-A01	2.88E-09	1.58E-08	6.58E-10
Fuel Oil Boiler 5-0710	0339-A01	7.94E-10	8.72E-09	3.63E-10
Fuel Oil Boiler 4-0719	26-0670-A01	5.68E-09	6.24E-08	2.60E-09
Fuel Oil Boiler 4-0720	26-0688-A01	2.84E-09	3.12E-08	1.30E-09
Fuel Oil Boiler 4-0722	26-0449-A01	8.13E-09	8.93E-08	3.72E-09
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	1.34E-08	7.32E-08	3.05E-09
Dual Fuel Boiler 5-0080	26-0345-A02	1.34E-08	7.32E-08	3.05E-09
Dual Fuel Boiler 5-0081	26-0345-A03	1.34E-08	7.32E-08	3.05E-09
Dual Fuel Boiler 5-0085	26-4600-A06	1.50E-08	8.23E-08	3.43E-09
Dual Fuel Boiler 5-0087	26-4600-A08	4.15E-08	2.27E-07	9.48E-09
Dual Fuel Boiler 5-0152	26-3326-A02	5.07E-08	5.57E-07	2.32E-08
Dual Fuel Boiler 5-0167	26-03062-A02	1.95E-09	1.07E-08	4.44E-10
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.10E-08	1.21E-07	5.04E-09
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	2.64E-09	2.90E-08	1.21E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.05E-08	1.15E-07	4.79E-09
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	6.59E-09	7.25E-08	3.02E-09
Dual Fuel Boiler 5-0308	26-04219-A03	1.24E-10	6.80E-10	2.83E-11

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benzo(ghi)peryleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0309	26-5100-A02	3.66E-09	4.02E-08	1.68E-09
Natural Gas Boiler 5-0310	26-5100-A01	3.66E-09	4.02E-08	1.68E-09
Dual Fuel Boiler 5-0315	26-0525-A02	5.04E-10	5.54E-09	2.31E-10
Natural Gas Boiler 5-0322	26-2202-A01	3.06E-09	3.37E-08	1.40E-09
Dual Fuel Boiler 5-0334	26-0525-A03	5.04E-10	5.54E-09	2.31E-10
Dual Fuel Boiler 5-0335	26-0525-A01	5.04E-10	5.54E-09	2.31E-10
Natural Gas Boiler 5-0336	26-04119-A03	8.83E-10	9.71E-09	4.04E-10
Natural Gas Boiler 5-0337	26-0459-A02	1.14E-09	1.25E-08	5.22E-10
Propane Boiler 5-0352	0367-A01	1.48E-09	1.63E-08	6.78E-10
Dual Fuel Boiler 5-0364	26-4312-A01	3.26E-09	1.79E-08	7.44E-10
Dual Fuel Boiler 5-0364	26-4312-A02	3.26E-09	1.79E-08	7.44E-10
Natural Gas Boiler 5-0367	26-2485-A01	7.96E-10	8.75E-09	3.64E-10
Dual Fuel Boiler 5-0370	26-4600-A09	1.50E-08	8.23E-08	3.43E-09
Natural Gas Boiler 5-0371	26-3660-A01	9.91E-10	1.09E-08	4.54E-10
Natural Gas Boiler 5-0376	0383A-A01 & A02	2.71E-09	2.98E-08	1.24E-09
Dual Fuel Boiler 5-0552	26-04219-A02	1.24E-10	6.80E-10	2.83E-11
Natural Gas Boiler 5-0710	0339-A01	7.94E-10	8.72E-09	3.63E-10
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	5.19E-08	8.66E-06	1.73E-05
Emergency Generator 9-0228	03-0394-A02	4.96E-08	8.26E-06	1.65E-05
Emergency Generator 9-0229	03-0328-A01	3.21E-08	5.35E-06	1.07E-05
Emergency Generator 9-0276	03-4600-A04	1.02E-07	1.71E-05	3.41E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benzo(ghi)peryleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0277	03-4600-A05	9.95E-08	1.66E-05	3.32E-05
Emergency Generator 9-0386	03-0394-A03	2.77E-08	3.96E-06	4.95E-07
Emergency Generator 9-0387	03-0394-A04	2.11E-08	3.52E-06	4.40E-07
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	2.90E-08	4.84E-06	2.42E-06
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	3.99E-08	6.65E-06	6.65E-06
Emergency Generator 9-0394	26-C2CNTWest-A05	4.65E-08	7.75E-06	7.75E-06
Emergency Generator 9-0395	26-GMS Tower-A04	3.87E-09	6.45E-07	3.23E-07
Emergency Generator 9-0396	26-HQBuilding-A06	1.03E-08	1.71E-06	1.71E-06
Emergency Generator 9-0408	0316-01	9.52E-08	1.59E-05	3.17E-05
Emergency Generator 9-0409	0120-01	7.72E-08	1.29E-05	2.57E-05
Emergency Generator 9-0410	3090-01	1.40E-07	2.33E-05	4.67E-05
Emergency Generator 9-0411	6010-01	1.09E-07	1.81E-05	3.62E-05
Emergency Generator 9-0412	6009-01	3.31E-08	5.51E-06	1.10E-05
Emergency Generator 9-0414	03-0328-A02	8.97E-09	1.50E-06	2.99E-06
Emergency Generator 9-0418	03-0328-A03	1.43E-08	2.38E-06	4.77E-06
Emergency Generator 9-0419	0311-01	1.13E-08	1.88E-06	3.77E-06
Emergency Generator 9-0433	0120-02	7.56E-08	1.26E-05	2.52E-05
Emergency Generator 9-0434	0120-03	7.20E-08	1.20E-05	2.40E-05
Emergency Generator 9-0435	BSS-01	2.62E-07	4.37E-05	8.75E-05
Emergency Generator 9-0436	LWE-01	5.59E-07	9.31E-05	1.86E-04
Emergency Generator 9-0437	UTF-01	3.03E-08	5.05E-06	1.01E-05
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	2.62E-08	4.36E-06	8.73E-06

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Benzo(ghi)peryleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0500	3660-01	4.30E-09	7.17E-07	1.43E-06
Emergency Generator 9-0503	Bldg 120 - Gen. #1	7.15E-08	1.19E-05	2.38E-05
Emergency Generator 9-0504	Bldg 120 - Gen. #2	7.51E-08	1.25E-05	2.50E-05
Emergency Generator 9-0510	Bldg 5016 - pending	1.57E-08	2.62E-06	5.23E-06
Emergency Generator 9-0511	Bldg 5046 - pending	1.63E-09	2.72E-07	5.43E-07
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		2.76E-06	3.71E-04	6.93E-04

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Chrysene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	3.23E-07	3.55E-06	1.48E-07
Fuel Oil Boiler 4-0689	26-0642-A01	7.73E-09	8.49E-08	3.54E-09
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	6.02E-09	6.62E-08	2.76E-09
Fuel Oil Boiler 4-0708	26-0394-A01	6.83E-09	7.50E-08	3.13E-09
Fuel Oil Boiler 4-0709	26-0392-A01	3.12E-09	1.71E-08	7.11E-10
Fuel Oil Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Fuel Oil Boiler 4-0719	26-0670-A01	6.14E-09	6.75E-08	2.81E-09
Fuel Oil Boiler 4-0720	26-0688-A01	3.07E-09	3.37E-08	1.40E-09
Fuel Oil Boiler 4-0722	26-0449-A01	8.79E-09	9.66E-08	4.03E-09
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0080	26-0345-A02	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0081	26-0345-A03	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0085	26-4600-A06	2.24E-08	1.23E-07	5.11E-09
Dual Fuel Boiler 5-0087	26-4600-A08	5.10E-08	2.80E-07	1.17E-08
Dual Fuel Boiler 5-0152	26-3326-A02	6.31E-08	6.94E-07	2.89E-08
Dual Fuel Boiler 5-0167	26-03062-A02	2.92E-09	1.60E-08	6.67E-10
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.65E-08	1.81E-07	7.56E-09
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	3.96E-09	4.35E-08	1.81E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.57E-08	1.72E-07	7.18E-09
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	9.89E-09	1.09E-07	4.53E-09
Dual Fuel Boiler 5-0308	26-04219-A03	1.86E-10	1.02E-09	4.25E-11

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Chrysene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0309	26-5100-A02	5.49E-09	6.04E-08	2.51E-09
Natural Gas Boiler 5-0310	26-5100-A01	5.49E-09	6.04E-08	2.51E-09
Dual Fuel Boiler 5-0315	26-0525-A02	7.56E-10	8.31E-09	3.46E-10
Natural Gas Boiler 5-0322	26-2202-A01	4.60E-09	5.05E-08	2.10E-09
Dual Fuel Boiler 5-0334	26-0525-A03	7.56E-10	8.31E-09	3.46E-10
Dual Fuel Boiler 5-0335	26-0525-A01	7.56E-10	8.31E-09	3.46E-10
Natural Gas Boiler 5-0336	26-04119-A03	1.32E-09	1.46E-08	6.07E-10
Natural Gas Boiler 5-0337	26-0459-A02	1.71E-09	1.88E-08	7.83E-10
Propane Boiler 5-0352	0367-A01	1.60E-09	1.76E-08	7.33E-10
Dual Fuel Boiler 5-0364	26-4312-A01	4.89E-09	2.68E-08	1.12E-09
Dual Fuel Boiler 5-0364	26-4312-A02	4.89E-09	2.68E-08	1.12E-09
Natural Gas Boiler 5-0367	26-2485-A01	1.19E-09	1.31E-08	5.47E-10
Dual Fuel Boiler 5-0370	26-4600-A09	2.24E-08	1.23E-07	5.11E-09
Natural Gas Boiler 5-0371	26-3660-A01	1.49E-09	1.63E-08	6.81E-10
Natural Gas Boiler 5-0376	0383A-A01 & A02	4.07E-09	4.47E-08	1.86E-09
Dual Fuel Boiler 5-0552	26-04219-A02	1.86E-10	1.02E-09	4.25E-11
Natural Gas Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	3.75E-08	6.25E-06	1.25E-05
Emergency Generator 9-0228	03-0394-A02	3.58E-08	5.96E-06	1.19E-05
Emergency Generator 9-0229	03-0328-A01	2.32E-08	3.86E-06	7.72E-06
Emergency Generator 9-0276	03-4600-A04	7.39E-08	1.23E-05	2.46E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Chrysene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0277	03-4600-A05	7.18E-08	1.20E-05	2.39E-05
Emergency Generator 9-0386	03-0394-A03	2.00E-08	2.86E-06	3.57E-07
Emergency Generator 9-0387	03-0394-A04	1.52E-08	2.54E-06	3.18E-07
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	2.10E-08	3.49E-06	1.75E-06
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	2.88E-08	4.80E-06	4.80E-06
Emergency Generator 9-0394	26-C2CNTWest-A05	3.35E-08	5.59E-06	5.59E-06
Emergency Generator 9-0395	26-GMS Tower-A04	2.80E-09	4.66E-07	2.33E-07
Emergency Generator 9-0396	26-HQBuilding-A06	7.43E-09	1.24E-06	1.24E-06
Emergency Generator 9-0408	0316-01	6.87E-08	1.14E-05	2.29E-05
Emergency Generator 9-0409	0120-01	5.57E-08	9.28E-06	1.86E-05
Emergency Generator 9-0410	3090-01	1.01E-07	1.68E-05	3.37E-05
Emergency Generator 9-0411	6010-01	7.84E-08	1.31E-05	2.61E-05
Emergency Generator 9-0412	6009-01	2.39E-08	3.98E-06	7.95E-06
Emergency Generator 9-0414	03-0328-A02	6.48E-09	1.08E-06	2.16E-06
Emergency Generator 9-0418	03-0328-A03	1.03E-08	1.72E-06	3.44E-06
Emergency Generator 9-0419	0311-01	8.16E-09	1.36E-06	2.72E-06
Emergency Generator 9-0433	0120-02	5.46E-08	9.10E-06	1.82E-05
Emergency Generator 9-0434	0120-03	5.20E-08	8.66E-06	1.73E-05
Emergency Generator 9-0435	BSS-01	1.89E-07	3.16E-05	6.32E-05
Emergency Generator 9-0436	LWE-01	4.03E-07	6.72E-05	1.34E-04
Emergency Generator 9-0437	UTF-01	2.19E-08	3.65E-06	7.29E-06
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	1.89E-08	3.15E-06	6.30E-06

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: ChryseneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0500	3660-01	3.11E-09	5.18E-07	1.04E-06
Emergency Generator 9-0503	Bldg 120 - Gen. #1	5.16E-08	8.60E-06	1.72E-05
Emergency Generator 9-0504	Bldg 120 - Gen. #2	5.42E-08	9.04E-06	1.81E-05
Emergency Generator 9-0510	Bldg 5016 - pending	1.13E-08	1.89E-06	3.78E-06
Emergency Generator 9-0511	Bldg 5046 - pending	1.18E-09	1.96E-07	3.92E-07
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		2.26E-06	2.70E-04	5.00E-04

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration number correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Dibenzo(a,h)anthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	2.27E-07	2.49E-06	1.04E-07
Fuel Oil Boiler 4-0689	26-0642-A01	5.42E-09	5.96E-08	2.48E-09
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	4.23E-09	4.65E-08	1.94E-09
Fuel Oil Boiler 4-0708	26-0394-A01	4.79E-09	5.26E-08	2.19E-09
Fuel Oil Boiler 4-0709	26-0392-A01	2.19E-09	1.20E-08	4.99E-10
Fuel Oil Boiler 5-0710	0339-A01	7.94E-10	8.72E-09	3.63E-10
Fuel Oil Boiler 4-0719	26-0670-A01	4.31E-09	4.74E-08	1.97E-09
Fuel Oil Boiler 4-0720	26-0688-A01	2.15E-09	2.37E-08	9.86E-10
Fuel Oil Boiler 4-0722	26-0449-A01	6.17E-09	6.78E-08	2.82E-09
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	1.34E-08	7.32E-08	3.05E-09
Dual Fuel Boiler 5-0080	26-0345-A02	1.34E-08	7.32E-08	3.05E-09
Dual Fuel Boiler 5-0081	26-0345-A03	1.34E-08	7.32E-08	3.05E-09
Dual Fuel Boiler 5-0085	26-4600-A06	1.49E-08	8.18E-08	3.41E-09
Dual Fuel Boiler 5-0087	26-4600-A08	3.50E-08	1.92E-07	8.00E-09
Dual Fuel Boiler 5-0152	26-3326-A02	4.32E-08	4.75E-07	1.98E-08
Dual Fuel Boiler 5-0167	26-03062-A02	1.95E-09	1.07E-08	4.44E-10
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.10E-08	1.21E-07	5.04E-09
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	2.64E-09	2.90E-08	1.21E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.05E-08	1.15E-07	4.79E-09
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	6.59E-09	7.25E-08	3.02E-09
Dual Fuel Boiler 5-0308	26-04219-A03	1.24E-10	6.80E-10	2.83E-11
Natural Gas Boiler 5-0309	26-5100-A02	3.66E-09	4.02E-08	1.68E-09
Natural Gas Boiler 5-0310	26-5100-A01	3.66E-09	4.02E-08	1.68E-09

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Dibenzo(a,h)anthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Dual Fuel Boiler 5-0315	26-0525-A02	5.04E-10	5.54E-09	2.31E-10
Natural Gas Boiler 5-0322	26-2202-A01	3.06E-09	3.37E-08	1.40E-09
Dual Fuel Boiler 5-0334	26-0525-A03	5.04E-10	5.54E-09	2.31E-10
Dual Fuel Boiler 5-0335	26-0525-A01	5.04E-10	5.54E-09	2.31E-10
Natural Gas Boiler 5-0336	26-04119-A03	8.83E-10	9.71E-09	4.04E-10
Natural Gas Boiler 5-0337	26-0459-A02	1.14E-09	1.25E-08	5.22E-10
Propane Boiler 5-0352	0367-A01	1.12E-09	1.23E-08	5.14E-10
Dual Fuel Boiler 5-0364	26-4312-A01	3.26E-09	1.79E-08	7.44E-10
Dual Fuel Boiler 5-0364	26-4312-A02	3.26E-09	1.79E-08	7.44E-10
Natural Gas Boiler 5-0367	26-2485-A01	7.96E-10	8.75E-09	3.64E-10
Dual Fuel Boiler 5-0370	26-4600-A09	1.49E-08	8.18E-08	3.41E-09
Natural Gas Boiler 5-0371	26-3660-A01	9.91E-10	1.09E-08	4.54E-10
Natural Gas Boiler 5-0376	0383A-A01 & A02	2.71E-09	2.98E-08	1.24E-09
Dual Fuel Boiler 5-0552	26-04219-A02	1.24E-10	6.80E-10	2.83E-11
Natural Gas Boiler 5-0710	0339-A01	7.94E-10	8.72E-09	3.63E-10
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	6.19E-08	1.03E-05	2.06E-05
Emergency Generator 9-0228	03-0394-A02	5.91E-08	9.85E-06	1.97E-05
Emergency Generator 9-0229	03-0328-A01	3.82E-08	6.37E-06	1.27E-05
Emergency Generator 9-0276	03-4600-A04	1.22E-07	2.04E-05	4.07E-05
Emergency Generator 9-0277	03-4600-A05	1.19E-07	1.98E-05	3.95E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Dibenzo(a,h)anthraceneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0386	03-0394-A03	3.31E-08	4.72E-06	5.90E-07
Emergency Generator 9-0387	03-0394-A04	2.52E-08	4.20E-06	5.25E-07
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	3.46E-08	5.77E-06	2.89E-06
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	4.76E-08	7.93E-06	7.93E-06
Emergency Generator 9-0394	26-C2CNTWest-A05	5.54E-08	9.23E-06	9.23E-06
Emergency Generator 9-0395	26-GMS Tower-A04	4.62E-09	7.70E-07	3.85E-07
Emergency Generator 9-0396	26-HQBuilding-A06	1.23E-08	2.04E-06	2.04E-06
Emergency Generator 9-0408	0316-01	1.13E-07	1.89E-05	3.78E-05
Emergency Generator 9-0409	0120-01	9.20E-08	1.53E-05	3.07E-05
Emergency Generator 9-0410	3090-01	1.67E-07	2.78E-05	5.56E-05
Emergency Generator 9-0411	6010-01	1.29E-07	2.16E-05	4.31E-05
Emergency Generator 9-0412	6009-01	3.94E-08	6.57E-06	1.31E-05
Emergency Generator 9-0414	03-0328-A02	1.07E-08	1.78E-06	3.57E-06
Emergency Generator 9-0418	03-0328-A03	1.71E-08	2.84E-06	5.69E-06
Emergency Generator 9-0419	0311-01	1.35E-08	2.25E-06	4.49E-06
Emergency Generator 9-0433	0120-02	9.02E-08	1.50E-05	3.01E-05
Emergency Generator 9-0434	0120-03	8.59E-08	1.43E-05	2.86E-05
Emergency Generator 9-0435	BSS-01	3.13E-07	5.22E-05	1.04E-04
Emergency Generator 9-0436	LWE-01	6.66E-07	1.11E-04	2.22E-04
Emergency Generator 9-0437	UTF-01	3.61E-08	6.02E-06	1.20E-05
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Dibenzo(a,h)anthracene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0499	2202-01	3.12E-08	5.20E-06	1.04E-05
Emergency Generator 9-0500	3660-01	5.13E-09	8.55E-07	1.71E-06
Emergency Generator 9-0503	Bldg 120 - Gen. #1	8.52E-08	1.42E-05	2.84E-05
Emergency Generator 9-0504	Bldg 120 - Gen. #2	8.95E-08	1.49E-05	2.98E-05
Emergency Generator 9-0510	Bldg 5016 - pending	1.87E-08	3.12E-06	6.24E-06
Emergency Generator 9-0511	Bldg 5046 - pending	1.94E-09	3.24E-07	6.47E-07
Total		3.08E-06	4.40E-04	8.26E-04

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Ethyl Benzene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	2.87E-05	3.15E-04	1.31E-05
Fuel Oil Boiler 4-0689	26-0642-A01	2.07E-07	2.27E-06	9.46E-08
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	1.61E-07	1.77E-06	7.37E-08
Fuel Oil Boiler 4-0708	26-0394-A01	1.82E-07	2.00E-06	8.35E-08
Fuel Oil Boiler 4-0709	26-0392-A01	8.33E-08	4.56E-07	1.90E-08
Fuel Oil Boiler 5-0710	0339-A01	6.28E-06	6.90E-05	2.88E-06
Fuel Oil Boiler 4-0719	26-0670-A01	1.64E-07	1.80E-06	7.51E-08
Fuel Oil Boiler 4-0720	26-0688-A01	8.20E-08	9.01E-07	3.75E-08
Fuel Oil Boiler 4-0722	26-0449-A01	2.35E-07	2.58E-06	1.08E-07
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	1.06E-04	5.79E-04	2.41E-05
Dual Fuel Boiler 5-0080	26-0345-A02	1.06E-04	5.79E-04	2.41E-05
Dual Fuel Boiler 5-0081	26-0345-A03	1.06E-04	5.79E-04	2.41E-05
Dual Fuel Boiler 5-0085	26-4600-A06	1.16E-04	6.36E-04	2.65E-05
Dual Fuel Boiler 5-0087	26-4600-A08	1.17E-04	6.40E-04	2.67E-05
Dual Fuel Boiler 5-0152	26-3326-A02	1.58E-04	1.73E-03	7.22E-05
Dual Fuel Boiler 5-0167	26-03062-A02	1.54E-05	8.44E-05	3.52E-06
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	8.71E-05	9.57E-04	3.99E-05
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	2.09E-05	2.30E-04	9.57E-06
Dual Fuel Boiler 5-0300	26-HQ Building-A01	8.27E-05	9.09E-04	3.79E-05
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	5.22E-05	5.74E-04	2.39E-05
Dual Fuel Boiler 5-0308	26-04219-A03	9.82E-07	5.38E-06	2.24E-07
Natural Gas Boiler 5-0309	26-5100-A02	2.90E-05	3.19E-04	1.33E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Ethyl Benzene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0310	26-5100-A01	2.90E-05	3.19E-04	1.33E-05
Dual Fuel Boiler 5-0315	26-0525-A02	3.99E-06	4.38E-05	1.83E-06
Natural Gas Boiler 5-0322	26-2202-A01	2.43E-05	2.67E-04	1.11E-05
Dual Fuel Boiler 5-0334	26-0525-A03	3.99E-06	4.38E-05	1.83E-06
Dual Fuel Boiler 5-0335	26-0525-A01	3.99E-06	4.38E-05	1.83E-06
Natural Gas Boiler 5-0336	26-04119-A03	6.99E-06	7.68E-05	3.20E-06
Natural Gas Boiler 5-0337	26-0459-A02	9.02E-06	9.92E-05	4.13E-06
Propane Boiler 5-0352	0367-A01	4.28E-08	4.70E-07	1.96E-08
Dual Fuel Boiler 5-0364	26-4312-A01	2.58E-05	1.41E-04	5.89E-06
Dual Fuel Boiler 5-0364	26-4312-A02	2.58E-05	1.41E-04	5.89E-06
Natural Gas Boiler 5-0367	26-2485-A01	6.30E-06	6.92E-05	2.88E-06
Dual Fuel Boiler 5-0370	26-4600-A09	1.16E-04	6.36E-04	2.65E-05
Natural Gas Boiler 5-0371	26-3660-A01	7.85E-06	8.62E-05	3.59E-06
Natural Gas Boiler 5-0376	0383A-A01 & A02	2.15E-05	2.36E-04	9.82E-06
Dual Fuel Boiler 5-0552	26-04219-A02	9.82E-07	5.38E-06	2.24E-07
Natural Gas Boiler 5-0710	0339-A01	6.28E-06	6.90E-05	2.88E-06
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	1.19E-04	1.91E-03	1.91E-03
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	2.00E-02	1.10E-01	1.37E-02
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	1.16E-03	1.93E-01	3.86E-01
Emergency Generator 9-0228	03-0394-A02	1.11E-03	1.84E-01	3.68E-01
Emergency Generator 9-0229	03-0328-A01	7.15E-04	1.19E-01	2.38E-01
Emergency Generator 9-0276	03-4600-A04	2.28E-03	3.81E-01	7.61E-01
Emergency Generator 9-0277	03-4600-A05	2.22E-03	3.69E-01	7.39E-01

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Ethyl Benzene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0386	03-0394-A03	6.18E-04	8.83E-02	1.10E-02
Emergency Generator 9-0387	03-0394-A04	4.71E-04	7.85E-02	9.81E-03
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	6.47E-04	1.08E-01	5.40E-02
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	8.89E-04	1.48E-01	1.48E-01
Emergency Generator 9-0394	26-C2CNTWest-A05	1.04E-03	1.73E-01	1.73E-01
Emergency Generator 9-0395	26-GMS Tower-A04	8.63E-05	1.44E-02	7.19E-03
Emergency Generator 9-0396	26-HQBuilding-A06	2.29E-04	3.82E-02	3.82E-02
Emergency Generator 9-0408	0316-01	2.12E-03	3.54E-01	7.07E-01
Emergency Generator 9-0409	0120-01	1.72E-03	2.87E-01	5.73E-01
Emergency Generator 9-0410	3090-01	3.12E-03	5.20E-01	1.04E+00
Emergency Generator 9-0411	6010-01	2.42E-03	4.03E-01	8.07E-01
Emergency Generator 9-0412	6009-01	7.37E-04	1.23E-01	2.46E-01
Emergency Generator 9-0414	03-0328-A02	2.00E-04	3.33E-02	6.67E-02
Emergency Generator 9-0418	03-0328-A03	3.19E-04	5.31E-02	1.06E-01
Emergency Generator 9-0419	0311-01	2.52E-04	4.20E-02	8.40E-02
Emergency Generator 9-0433	0120-02	1.69E-03	2.81E-01	5.62E-01
Emergency Generator 9-0434	0120-03	1.61E-03	2.68E-01	5.35E-01
Emergency Generator 9-0435	BSS-01	5.85E-03	9.75E-01	1.95E+00
Emergency Generator 9-0436	LWE-01	1.25E-02	2.08E+00	4.15E+00
Emergency Generator 9-0437	UTF-01	6.76E-04	1.13E-01	2.25E-01
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	5.84E-04	9.73E-02	1.95E-01
Emergency Generator 9-0500	3660-01	9.59E-05	1.60E-02	3.20E-02

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Ethyl Benzene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0503	Bldg 120 - Gen. #1	1.59E-03	2.66E-01	5.31E-01
Emergency Generator 9-0504	Bldg 120 - Gen. #2	1.67E-03	2.79E-01	5.58E-01
Emergency Generator 9-0510	Bldg 5016 - pending	3.50E-04	5.83E-02	1.17E-01
Emergency Generator 9-0511	Bldg 5046 - pending	3.63E-05	6.05E-03	1.21E-02
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		7.04E-02	8.27E+00	1.54E+01

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Fluorene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	6.06E-07	6.66E-06	2.77E-07
Fuel Oil Boiler 4-0689	26-0642-A01	1.45E-08	1.60E-07	6.65E-09
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	1.13E-08	1.24E-07	5.18E-09
Fuel Oil Boiler 4-0708	26-0394-A01	1.28E-08	1.41E-07	5.87E-09
Fuel Oil Boiler 4-0709	26-0392-A01	5.85E-09	3.21E-08	1.34E-09
Fuel Oil Boiler 5-0710	0339-A01	1.85E-09	2.03E-08	8.48E-10
Fuel Oil Boiler 4-0719	26-0670-A01	1.15E-08	1.27E-07	5.28E-09
Fuel Oil Boiler 4-0720	26-0688-A01	5.76E-09	6.33E-08	2.64E-09
Fuel Oil Boiler 4-0722	26-0449-A01	1.65E-08	1.81E-07	7.56E-09
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	3.12E-08	1.71E-07	7.12E-09
Dual Fuel Boiler 5-0080	26-0345-A02	3.12E-08	1.71E-07	7.12E-09
Dual Fuel Boiler 5-0081	26-0345-A03	3.12E-08	1.71E-07	7.12E-09
Dual Fuel Boiler 5-0085	26-4600-A06	3.49E-08	1.91E-07	7.98E-09
Dual Fuel Boiler 5-0087	26-4600-A08	8.88E-08	4.86E-07	2.03E-08
Dual Fuel Boiler 5-0152	26-3326-A02	1.09E-07	1.20E-06	4.99E-08
Dual Fuel Boiler 5-0167	26-03062-A02	4.54E-09	2.49E-08	1.04E-09
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	2.57E-08	2.82E-07	1.18E-08
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	6.16E-09	6.77E-08	2.82E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	2.44E-08	2.68E-07	1.12E-08
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	1.54E-08	1.69E-07	7.04E-09
Dual Fuel Boiler 5-0308	26-04219-A03	2.90E-10	1.59E-09	6.61E-11

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: FluoreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0309	26-5100-A02	8.54E-09	9.39E-08	3.91E-09
Natural Gas Boiler 5-0310	26-5100-A01	8.54E-09	9.39E-08	3.91E-09
Dual Fuel Boiler 5-0315	26-0525-A02	1.18E-09	1.29E-08	5.38E-10
Natural Gas Boiler 5-0322	26-2202-A01	7.15E-09	7.86E-08	3.27E-09
Dual Fuel Boiler 5-0334	26-0525-A03	1.18E-09	1.29E-08	5.38E-10
Dual Fuel Boiler 5-0335	26-0525-A01	1.18E-09	1.29E-08	5.38E-10
Natural Gas Boiler 5-0336	26-04119-A03	2.06E-09	2.26E-08	9.44E-10
Natural Gas Boiler 5-0337	26-0459-A02	2.66E-09	2.92E-08	1.22E-09
Propane Boiler 5-0352	0367-A01	3.01E-09	3.31E-08	1.38E-09
Dual Fuel Boiler 5-0364	26-4312-A01	7.61E-09	4.17E-08	1.74E-09
Dual Fuel Boiler 5-0364	26-4312-A02	7.61E-09	4.17E-08	1.74E-09
Natural Gas Boiler 5-0367	26-2485-A01	1.86E-09	2.04E-08	8.50E-10
Dual Fuel Boiler 5-0370	26-4600-A09	3.49E-08	1.91E-07	7.98E-09
Natural Gas Boiler 5-0371	26-3660-A01	2.31E-09	2.54E-08	1.06E-09
Natural Gas Boiler 5-0376	0383A-A01 & A02	6.32E-09	6.95E-08	2.90E-09
Dual Fuel Boiler 5-0552	26-04219-A02	2.90E-10	1.59E-09	6.61E-11
Natural Gas Boiler 5-0710	0339-A01	1.85E-09	2.03E-08	8.48E-10
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	3.10E-06	5.17E-04	1.03E-03
Emergency Generator 9-0228	03-0394-A02	2.96E-06	4.93E-04	9.87E-04
Emergency Generator 9-0229	03-0328-A01	1.92E-06	3.19E-04	6.39E-04

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: FluoreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0276	03-4600-A04	6.12E-06	1.02E-03	2.04E-03
Emergency Generator 9-0277	03-4600-A05	5.94E-06	9.90E-04	1.98E-03
Emergency Generator 9-0386	03-0394-A03	1.66E-06	2.37E-04	2.96E-05
Emergency Generator 9-0387	03-0394-A04	1.26E-06	2.10E-04	2.63E-05
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	1.73E-06	2.89E-04	1.45E-04
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	2.38E-06	3.97E-04	3.97E-04
Emergency Generator 9-0394	26-C2CNTWest-A05	2.78E-06	4.63E-04	4.63E-04
Emergency Generator 9-0395	26-GMS Tower-A04	2.31E-07	3.85E-05	1.93E-05
Emergency Generator 9-0396	26-HQBuilding-A06	6.14E-07	1.02E-04	1.02E-04
Emergency Generator 9-0408	0316-01	5.68E-06	9.47E-04	1.89E-03
Emergency Generator 9-0409	0120-01	4.61E-06	7.68E-04	1.54E-03
Emergency Generator 9-0410	3090-01	8.36E-06	1.39E-03	2.79E-03
Emergency Generator 9-0411	6010-01	6.48E-06	1.08E-03	2.16E-03
Emergency Generator 9-0412	6009-01	1.97E-06	3.29E-04	6.58E-04
Emergency Generator 9-0414	03-0328-A02	5.36E-07	8.93E-05	1.79E-04
Emergency Generator 9-0418	03-0328-A03	8.54E-07	1.42E-04	2.85E-04
Emergency Generator 9-0419	0311-01	6.75E-07	1.12E-04	2.25E-04
Emergency Generator 9-0433	0120-02	4.52E-06	7.53E-04	1.51E-03
Emergency Generator 9-0434	0120-03	4.30E-06	7.17E-04	1.43E-03
Emergency Generator 9-0435	BSS-01	1.57E-05	2.61E-03	5.22E-03
Emergency Generator 9-0436	LWE-01	3.34E-05	5.56E-03	1.11E-02
Emergency Generator 9-0437	UTF-01	1.81E-06	3.02E-04	6.03E-04
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: FluoreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0499	2202-01	1.56E-06	2.61E-04	5.21E-04
Emergency Generator 9-0500	3660-01	2.57E-07	4.28E-05	8.56E-05
Emergency Generator 9-0503	Bldg 120 - Gen. #1	4.27E-06	7.12E-04	1.42E-03
Emergency Generator 9-0504	Bldg 120 - Gen. #2	4.48E-06	7.47E-04	1.49E-03
Emergency Generator 9-0510	Bldg 5016 - pending	9.37E-07	1.56E-04	3.12E-04
Emergency Generator 9-0511	Bldg 5046 - pending	9.73E-08	1.62E-05	3.24E-05
Total		1.32E-04	2.18E-02	4.13E-02

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: FormaldehydeCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	4.59E-03	5.04E-02	2.10E-03
Fuel Oil Boiler 4-0689	26-0642-A01	1.07E-04	1.18E-03	4.91E-05
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	8.35E-05	9.18E-04	3.82E-05
Fuel Oil Boiler 4-0708	26-0394-A01	9.47E-05	1.04E-03	4.33E-05
Fuel Oil Boiler 4-0709	26-0392-A01	4.32E-05	2.37E-04	9.86E-06
Fuel Oil Boiler 5-0710	0339-A01	4.96E-05	5.45E-04	2.27E-05
Fuel Oil Boiler 4-0719	26-0670-A01	8.51E-05	9.36E-04	3.90E-05
Fuel Oil Boiler 4-0720	26-0688-A01	4.25E-05	4.67E-04	1.95E-05
Fuel Oil Boiler 4-0722	26-0449-A01	1.22E-04	1.34E-03	5.58E-05
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	8.35E-04	4.57E-03	1.91E-04
Dual Fuel Boiler 5-0080	26-0345-A02	8.35E-04	4.57E-03	1.91E-04
Dual Fuel Boiler 5-0081	26-0345-A03	8.35E-04	4.57E-03	1.91E-04
Dual Fuel Boiler 5-0085	26-4600-A06	9.21E-04	5.05E-03	2.10E-04
Dual Fuel Boiler 5-0087	26-4600-A08	1.32E-03	7.23E-03	3.01E-04
Dual Fuel Boiler 5-0152	26-3326-A02	1.70E-03	1.87E-02	7.79E-04
Dual Fuel Boiler 5-0167	26-03062-A02	1.22E-04	6.67E-04	2.78E-05
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	6.88E-04	7.56E-03	3.15E-04
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	1.65E-04	1.81E-03	7.55E-05
Dual Fuel Boiler 5-0300	26-HQ Building-A01	6.53E-04	7.18E-03	2.99E-04
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	4.12E-04	4.53E-03	1.89E-04
Dual Fuel Boiler 5-0308	26-04219-A03	7.76E-06	4.25E-05	1.77E-06
Natural Gas Boiler 5-0309	26-5100-A02	2.29E-04	2.51E-03	1.05E-04
Natural Gas Boiler 5-0310	26-5100-A01	2.29E-04	2.51E-03	1.05E-04

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: FormaldehydeCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Dual Fuel Boiler 5-0315	26-0525-A02	3.15E-05	3.46E-04	1.44E-05
Natural Gas Boiler 5-0322	26-2202-A01	1.92E-04	2.10E-03	8.77E-05
Dual Fuel Boiler 5-0334	26-0525-A03	3.15E-05	3.46E-04	1.44E-05
Dual Fuel Boiler 5-0335	26-0525-A01	3.15E-05	3.46E-04	1.44E-05
Natural Gas Boiler 5-0336	26-04119-A03	5.52E-05	6.07E-04	2.53E-05
Natural Gas Boiler 5-0337	26-0459-A02	7.12E-05	7.83E-04	3.26E-05
Propane Boiler 5-0352	0367-A01	2.22E-05	2.44E-04	1.02E-05
Dual Fuel Boiler 5-0364	26-4312-A01	2.04E-04	1.12E-03	4.65E-05
Dual Fuel Boiler 5-0364	26-4312-A02	2.04E-04	1.12E-03	4.65E-05
Natural Gas Boiler 5-0367	26-2485-A01	4.97E-05	5.47E-04	2.28E-05
Dual Fuel Boiler 5-0370	26-4600-A09	9.21E-04	5.05E-03	2.10E-04
Natural Gas Boiler 5-0371	26-3660-A01	6.19E-05	6.81E-04	2.84E-05
Natural Gas Boiler 5-0376	0383A-A01 & A02	1.69E-04	1.86E-03	7.76E-05
Dual Fuel Boiler 5-0552	26-04219-A02	7.76E-06	4.25E-05	1.77E-06
Natural Gas Boiler 5-0710	0339-A01	4.96E-05	5.45E-04	2.27E-05
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	1.25E-04	2.09E-02	4.18E-02
Emergency Generator 9-0228	03-0394-A02	1.20E-04	1.99E-02	3.99E-02
Emergency Generator 9-0229	03-0328-A01	7.74E-05	1.29E-02	2.58E-02

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: FormaldehydeCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0276	03-4600-A04	2.47E-04	4.12E-02	8.24E-02
Emergency Generator 9-0277	03-4600-A05	2.40E-04	4.00E-02	8.00E-02
Emergency Generator 9-0386	03-0394-A03	6.69E-05	9.56E-03	1.19E-03
Emergency Generator 9-0387	03-0394-A04	5.10E-05	8.50E-03	1.06E-03
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	7.01E-05	1.17E-02	5.84E-03
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	9.63E-05	1.60E-02	1.60E-02
Emergency Generator 9-0394	26-C2CNTWest-A05	1.12E-04	1.87E-02	1.87E-02
Emergency Generator 9-0395	26-GMS Tower-A04	9.35E-06	1.56E-03	7.79E-04
Emergency Generator 9-0396	26-HQBuilding-A06	2.48E-05	4.14E-03	4.14E-03
Emergency Generator 9-0408	0316-01	2.30E-04	3.83E-02	7.65E-02
Emergency Generator 9-0409	0120-01	1.86E-04	3.10E-02	6.21E-02
Emergency Generator 9-0410	3090-01	3.38E-04	5.63E-02	1.13E-01
Emergency Generator 9-0411	6010-01	2.62E-04	4.37E-02	8.73E-02
Emergency Generator 9-0412	6009-01	7.98E-05	1.33E-02	2.66E-02
Emergency Generator 9-0414	03-0328-A02	2.16E-05	3.61E-03	7.22E-03
Emergency Generator 9-0418	03-0328-A03	3.45E-05	5.75E-03	1.15E-02
Emergency Generator 9-0419	0311-01	2.73E-05	4.55E-03	9.09E-03
Emergency Generator 9-0433	0120-02	1.82E-04	3.04E-02	6.08E-02
Emergency Generator 9-0434	0120-03	1.74E-04	2.90E-02	5.79E-02
Emergency Generator 9-0435	BSS-01	6.33E-04	1.06E-01	2.11E-01
Emergency Generator 9-0436	LWE-01	1.35E-03	2.25E-01	4.49E-01
Emergency Generator 9-0437	UTF-01	7.31E-05	1.22E-02	2.44E-02
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: FormaldehydeCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0499	2202-01	6.32E-05	1.05E-02	2.11E-02
Emergency Generator 9-0500	3660-01	1.04E-05	1.73E-03	3.46E-03
Emergency Generator 9-0503	Bldg 120 - Gen. #1	1.73E-04	2.88E-02	5.75E-02
Emergency Generator 9-0504	Bldg 120 - Gen. #2	1.81E-04	3.02E-02	6.04E-02
Emergency Generator 9-0510	Bldg 5016 - pending	3.79E-05	6.31E-03	1.26E-02
Emergency Generator 9-0511	Bldg 5046 - pending	3.93E-06	6.55E-04	1.31E-03
Total		2.16E-02	1.03E+00	1.68E+00

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Indeno(1,2,3-cd)pyreneCalendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	2.91E-07	3.20E-06	1.33E-07
Fuel Oil Boiler 4-0689	26-0642-A01	6.95E-09	7.64E-08	3.18E-09
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	5.42E-09	5.95E-08	2.48E-09
Fuel Oil Boiler 4-0708	26-0394-A01	6.14E-09	6.75E-08	2.81E-09
Fuel Oil Boiler 4-0709	26-0392-A01	2.80E-09	1.54E-08	6.40E-10
Fuel Oil Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Fuel Oil Boiler 4-0719	26-0670-A01	5.52E-09	6.07E-08	2.53E-09
Fuel Oil Boiler 4-0720	26-0688-A01	2.76E-09	3.03E-08	1.26E-09
Fuel Oil Boiler 4-0722	26-0449-A01	7.91E-09	8.69E-08	3.62E-09
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0080	26-0345-A02	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0081	26-0345-A03	2.00E-08	1.10E-07	4.57E-09
Dual Fuel Boiler 5-0085	26-4600-A06	2.23E-08	1.22E-07	5.10E-09
Dual Fuel Boiler 5-0087	26-4600-A08	4.81E-08	2.64E-07	1.10E-08
Dual Fuel Boiler 5-0152	26-3326-A02	5.97E-08	6.57E-07	2.74E-08
Dual Fuel Boiler 5-0167	26-03062-A02	2.92E-09	1.60E-08	6.67E-10
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.65E-08	1.81E-07	7.56E-09
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	3.96E-09	4.35E-08	1.81E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.57E-08	1.72E-07	7.18E-09
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	9.89E-09	1.09E-07	4.53E-09
Dual Fuel Boiler 5-0308	26-04219-A03	1.86E-10	1.02E-09	4.25E-11

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Indeno(1,2,3-cd)pyreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0309	26-5100-A02	5.49E-09	6.04E-08	2.51E-09
Natural Gas Boiler 5-0310	26-5100-A01	5.49E-09	6.04E-08	2.51E-09
Dual Fuel Boiler 5-0315	26-0525-A02	7.56E-10	8.31E-09	3.46E-10
Natural Gas Boiler 5-0322	26-2202-A01	4.60E-09	5.05E-08	2.10E-09
Dual Fuel Boiler 5-0334	26-0525-A03	7.56E-10	8.31E-09	3.46E-10
Dual Fuel Boiler 5-0335	26-0525-A01	7.56E-10	8.31E-09	3.46E-10
Natural Gas Boiler 5-0336	26-04119-A03	1.32E-09	1.46E-08	6.07E-10
Natural Gas Boiler 5-0337	26-0459-A02	1.71E-09	1.88E-08	7.83E-10
Propane Boiler 5-0352	0367-A01	1.44E-09	1.58E-08	6.59E-10
Dual Fuel Boiler 5-0364	26-4312-A01	4.89E-09	2.68E-08	1.12E-09
Dual Fuel Boiler 5-0364	26-4312-A02	4.89E-09	2.68E-08	1.12E-09
Natural Gas Boiler 5-0367	26-2485-A01	1.19E-09	1.31E-08	5.47E-10
Dual Fuel Boiler 5-0370	26-4600-A09	2.23E-08	1.22E-07	5.10E-09
Natural Gas Boiler 5-0371	26-3660-A01	1.49E-09	1.63E-08	6.81E-10
Natural Gas Boiler 5-0376	0383A-A01 & A02	4.07E-09	4.47E-08	1.86E-09
Dual Fuel Boiler 5-0552	26-04219-A02	1.86E-10	1.02E-09	4.25E-11
Natural Gas Boiler 5-0710	0339-A01	1.19E-09	1.31E-08	5.45E-10
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	3.98E-08	6.64E-06	1.33E-05
Emergency Generator 9-0228	03-0394-A02	3.80E-08	6.34E-06	1.27E-05
Emergency Generator 9-0229	03-0328-A01	2.46E-08	4.10E-06	8.20E-06
Emergency Generator 9-0276	03-4600-A04	7.86E-08	1.31E-05	2.62E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Indeno(1,2,3-cd)pyreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0277	03-4600-A05	7.63E-08	1.27E-05	2.54E-05
Emergency Generator 9-0386	03-0394-A03	2.13E-08	3.04E-06	3.80E-07
Emergency Generator 9-0387	03-0394-A04	1.62E-08	2.70E-06	3.38E-07
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	2.23E-08	3.71E-06	1.86E-06
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	3.06E-08	5.10E-06	5.10E-06
Emergency Generator 9-0394	26-C2CNTWest-A05	3.56E-08	5.94E-06	5.94E-06
Emergency Generator 9-0395	26-GMS Tower-A04	2.97E-09	4.95E-07	2.48E-07
Emergency Generator 9-0396	26-HQBuilding-A06	7.89E-09	1.31E-06	1.31E-06
Emergency Generator 9-0408	0316-01	7.30E-08	1.22E-05	2.43E-05
Emergency Generator 9-0409	0120-01	5.92E-08	9.86E-06	1.97E-05
Emergency Generator 9-0410	3090-01	1.07E-07	1.79E-05	3.58E-05
Emergency Generator 9-0411	6010-01	8.33E-08	1.39E-05	2.78E-05
Emergency Generator 9-0412	6009-01	2.53E-08	4.22E-06	8.45E-06
Emergency Generator 9-0414	03-0328-A02	6.88E-09	1.15E-06	2.29E-06
Emergency Generator 9-0418	03-0328-A03	1.10E-08	1.83E-06	3.66E-06
Emergency Generator 9-0419	0311-01	8.67E-09	1.44E-06	2.89E-06
Emergency Generator 9-0433	0120-02	5.80E-08	9.66E-06	1.93E-05
Emergency Generator 9-0434	0120-03	5.52E-08	9.20E-06	1.84E-05
Emergency Generator 9-0435	BSS-01	2.01E-07	3.35E-05	6.71E-05
Emergency Generator 9-0436	LWE-01	4.28E-07	7.14E-05	1.43E-04
Emergency Generator 9-0437	UTF-01	2.32E-08	3.87E-06	7.75E-06
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	2.01E-08	3.35E-06	6.69E-06

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT****Facility Name:** Aberdeen Proving Ground - Aberdeen Area**Facility ID #:** 24-25-00081**Pollutant:** Indeno(1,2,3-cd)pyrene**Calendar Year:** 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0500	3660-01	3.30E-09	5.50E-07	1.10E-06
Emergency Generator 9-0503	Bldg 120 - Gen. #1	5.48E-08	9.14E-06	1.83E-05
Emergency Generator 9-0504	Bldg 120 - Gen. #2	5.76E-08	9.60E-06	1.92E-05
Emergency Generator 9-0510	Bldg 5016 - pending	1.20E-08	2.01E-06	4.01E-06
Emergency Generator 9-0511	Bldg 5046 - pending	1.25E-09	2.08E-07	4.16E-07
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		2.32E-06	2.86E-04	5.31E-04

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Naphthalene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	1.53E-04	1.68E-03	7.00E-05
Fuel Oil Boiler 4-0689	26-0642-A01	3.67E-06	4.03E-05	1.68E-06
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	2.86E-06	3.14E-05	1.31E-06
Fuel Oil Boiler 4-0708	26-0394-A01	3.24E-06	3.56E-05	1.48E-06
Fuel Oil Boiler 4-0709	26-0392-A01	1.48E-06	8.11E-06	3.38E-07
Fuel Oil Boiler 5-0710	0339-A01	4.03E-07	4.43E-06	1.85E-07
Fuel Oil Boiler 4-0719	26-0670-A01	2.92E-06	3.20E-05	1.33E-06
Fuel Oil Boiler 4-0720	26-0688-A01	1.46E-06	1.60E-05	6.67E-07
Fuel Oil Boiler 4-0722	26-0449-A01	4.17E-06	4.59E-05	1.91E-06
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	6.79E-06	3.72E-05	1.55E-06
Dual Fuel Boiler 5-0080	26-0345-A02	6.79E-06	3.72E-05	1.55E-06
Dual Fuel Boiler 5-0081	26-0345-A03	6.79E-06	3.72E-05	1.55E-06
Dual Fuel Boiler 5-0085	26-4600-A06	7.64E-06	4.18E-05	1.74E-06
Dual Fuel Boiler 5-0087	26-4600-A08	2.12E-05	1.16E-04	4.85E-06
Dual Fuel Boiler 5-0152	26-3326-A02	2.59E-05	2.85E-04	1.19E-05
Dual Fuel Boiler 5-0167	26-03062-A02	9.89E-07	5.42E-06	2.26E-07
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	5.59E-06	6.15E-05	2.56E-06
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	1.34E-06	1.47E-05	6.14E-07
Dual Fuel Boiler 5-0300	26-HQ Building-A01	5.31E-06	5.84E-05	2.43E-06
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	3.35E-06	3.68E-05	1.53E-06
Dual Fuel Boiler 5-0308	26-04219-A03	6.31E-08	3.46E-07	1.44E-08

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Naphthalene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0309	26-5100-A02	1.86E-06	2.05E-05	8.52E-07
Natural Gas Boiler 5-0310	26-5100-A01	1.86E-06	2.05E-05	8.52E-07
Dual Fuel Boiler 5-0315	26-0525-A02	2.56E-07	2.81E-06	1.17E-07
Natural Gas Boiler 5-0322	26-2202-A01	1.56E-06	1.71E-05	7.13E-07
Dual Fuel Boiler 5-0334	26-0525-A03	2.56E-07	2.81E-06	1.17E-07
Dual Fuel Boiler 5-0335	26-0525-A01	2.56E-07	2.81E-06	1.17E-07
Natural Gas Boiler 5-0336	26-04119-A03	4.49E-07	4.93E-06	2.06E-07
Natural Gas Boiler 5-0337	26-0459-A02	5.79E-07	6.37E-06	2.65E-07
Propane Boiler 5-0352	0367-A01	7.60E-07	8.36E-06	3.48E-07
Dual Fuel Boiler 5-0364	26-4312-A01	1.66E-06	9.08E-06	3.78E-07
Dual Fuel Boiler 5-0364	26-4312-A02	1.66E-06	9.08E-06	3.78E-07
Natural Gas Boiler 5-0367	26-2485-A01	4.05E-07	4.45E-06	1.85E-07
Dual Fuel Boiler 5-0370	26-4600-A09	7.64E-06	4.18E-05	1.74E-06
Natural Gas Boiler 5-0371	26-3660-A01	5.04E-07	5.54E-06	2.31E-07
Natural Gas Boiler 5-0376	0383A-A01 & A02	1.38E-06	1.51E-05	6.31E-07
Dual Fuel Boiler 5-0552	26-04219-A02	6.31E-08	3.46E-07	1.44E-08
Natural Gas Boiler 5-0710	0339-A01	4.03E-07	4.43E-06	1.85E-07
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	9.01E-06	1.50E-03	3.00E-03
Emergency Generator 9-0228	03-0394-A02	8.60E-06	1.43E-03	2.87E-03
Emergency Generator 9-0229	03-0328-A01	5.56E-06	9.27E-04	1.85E-03
Emergency Generator 9-0276	03-4600-A04	1.78E-05	2.96E-03	5.92E-03

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Naphthalene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0277	03-4600-A05	1.72E-05	2.87E-03	5.75E-03
Emergency Generator 9-0386	03-0394-A03	4.81E-06	6.87E-04	8.59E-05
Emergency Generator 9-0387	03-0394-A04	3.66E-06	6.11E-04	7.63E-05
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	5.04E-06	8.40E-04	4.20E-04
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	6.92E-06	1.15E-03	1.15E-03
Emergency Generator 9-0394	26-C2CNTWest-A05	8.06E-06	1.34E-03	1.34E-03
Emergency Generator 9-0395	26-GMS Tower-A04	6.72E-07	1.12E-04	5.60E-05
Emergency Generator 9-0396	26-HQBuilding-A06	1.78E-06	2.97E-04	2.97E-04
Emergency Generator 9-0408	0316-01	1.65E-05	2.75E-03	5.50E-03
Emergency Generator 9-0409	0120-01	1.34E-05	2.23E-03	4.46E-03
Emergency Generator 9-0410	3090-01	2.43E-05	4.05E-03	8.09E-03
Emergency Generator 9-0411	6010-01	1.88E-05	3.14E-03	6.28E-03
Emergency Generator 9-0412	6009-01	5.73E-06	9.55E-04	1.91E-03
Emergency Generator 9-0414	03-0328-A02	1.56E-06	2.59E-04	5.19E-04
Emergency Generator 9-0418	03-0328-A03	2.48E-06	4.13E-04	8.27E-04
Emergency Generator 9-0419	0311-01	1.96E-06	3.27E-04	6.53E-04
Emergency Generator 9-0433	0120-02	1.31E-05	2.19E-03	4.37E-03
Emergency Generator 9-0434	0120-03	1.25E-05	2.08E-03	4.16E-03
Emergency Generator 9-0435	BSS-01	4.55E-05	7.59E-03	1.52E-02
Emergency Generator 9-0436	LWE-01	9.69E-05	1.61E-02	3.23E-02
Emergency Generator 9-0437	UTF-01	5.26E-06	8.76E-04	1.75E-03
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	4.54E-06	7.57E-04	1.51E-03

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: NaphthaleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0500	3660-01	7.46E-07	1.24E-04	2.49E-04
Emergency Generator 9-0503	Bldg 120 - Gen. #1	1.24E-05	2.07E-03	4.13E-03
Emergency Generator 9-0504	Bldg 120 - Gen. #2	1.30E-05	2.17E-03	4.34E-03
Emergency Generator 9-0510	Bldg 5016 - pending	2.72E-06	4.54E-04	9.07E-04
Emergency Generator 9-0511	Bldg 5046 - pending	2.83E-07	4.71E-05	9.42E-05
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		6.67E-04	6.62E-02	1.20E-01

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: PhenanthreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	1.45E-06	1.59E-05	6.62E-07
Fuel Oil Boiler 4-0689	26-0642-A01	3.41E-08	3.75E-07	1.56E-08
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	2.66E-08	2.92E-07	1.22E-08
Fuel Oil Boiler 4-0708	26-0394-A01	3.01E-08	3.31E-07	1.38E-08
Fuel Oil Boiler 4-0709	26-0392-A01	1.37E-08	7.53E-08	3.14E-09
Fuel Oil Boiler 5-0710	0339-A01	1.12E-08	1.24E-07	5.15E-09
Fuel Oil Boiler 4-0719	26-0670-A01	2.71E-08	2.98E-07	1.24E-08
Fuel Oil Boiler 4-0720	26-0688-A01	1.35E-08	1.49E-07	6.20E-09
Fuel Oil Boiler 4-0722	26-0449-A01	3.88E-08	4.26E-07	1.78E-08
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	1.89E-07	1.04E-06	4.32E-08
Dual Fuel Boiler 5-0080	26-0345-A02	1.89E-07	1.04E-06	4.32E-08
Dual Fuel Boiler 5-0081	26-0345-A03	1.89E-07	1.04E-06	4.32E-08
Dual Fuel Boiler 5-0085	26-4600-A06	2.09E-07	1.15E-06	4.78E-08
Dual Fuel Boiler 5-0087	26-4600-A08	3.36E-07	1.84E-06	7.67E-08
Dual Fuel Boiler 5-0152	26-3326-A02	4.28E-07	4.70E-06	1.96E-07
Dual Fuel Boiler 5-0167	26-03062-A02	2.76E-08	1.51E-07	6.30E-09
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.56E-07	1.71E-06	7.14E-08
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	3.74E-08	4.11E-07	1.71E-08
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.48E-07	1.63E-06	6.78E-08
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	9.34E-08	1.03E-06	4.28E-08
Dual Fuel Boiler 5-0308	26-04219-A03	1.76E-09	9.63E-09	4.01E-10

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: PhenanthreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0309	26-5100-A02	5.19E-08	5.70E-07	2.38E-08
Natural Gas Boiler 5-0310	26-5100-A01	5.19E-08	5.70E-07	2.38E-08
Dual Fuel Boiler 5-0315	26-0525-A02	7.14E-09	7.84E-08	3.27E-09
Natural Gas Boiler 5-0322	26-2202-A01	4.34E-08	4.77E-07	1.99E-08
Dual Fuel Boiler 5-0334	26-0525-A03	7.14E-09	7.84E-08	3.27E-09
Dual Fuel Boiler 5-0335	26-0525-A01	7.14E-09	7.84E-08	3.27E-09
Natural Gas Boiler 5-0336	26-04119-A03	1.25E-08	1.37E-07	5.73E-09
Natural Gas Boiler 5-0337	26-0459-A02	1.61E-08	1.77E-07	7.39E-09
Propane Boiler 5-0352	0367-A01	7.06E-09	7.76E-08	3.23E-09
Dual Fuel Boiler 5-0364	26-4312-A01	4.62E-08	2.53E-07	1.05E-08
Dual Fuel Boiler 5-0364	26-4312-A02	4.62E-08	2.53E-07	1.05E-08
Natural Gas Boiler 5-0367	26-2485-A01	1.13E-08	1.24E-07	5.16E-09
Dual Fuel Boiler 5-0370	26-4600-A09	2.09E-07	1.15E-06	4.78E-08
Natural Gas Boiler 5-0371	26-3660-A01	1.40E-08	1.54E-07	6.43E-09
Natural Gas Boiler 5-0376	0383A-A01 & A02	3.84E-08	4.22E-07	1.76E-08
Dual Fuel Boiler 5-0552	26-04219-A02	1.76E-09	9.63E-09	4.01E-10
Natural Gas Boiler 5-0710	0339-A01	1.12E-08	1.24E-07	5.15E-09
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	3.12E-06	5.20E-04	1.04E-03
Emergency Generator 9-0228	03-0394-A02	2.98E-06	4.97E-04	9.94E-04
Emergency Generator 9-0229	03-0328-A01	1.93E-06	3.21E-04	6.43E-04
Emergency Generator 9-0276	03-4600-A04	6.16E-06	1.03E-03	2.05E-03

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: PhenanthreneCalendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0277	03-4600-A05	5.98E-06	9.97E-04	1.99E-03
Emergency Generator 9-0386	03-0394-A03	1.67E-06	2.38E-04	2.98E-05
Emergency Generator 9-0387	03-0394-A04	1.27E-06	2.12E-04	2.65E-05
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	1.75E-06	2.91E-04	1.46E-04
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	2.40E-06	4.00E-04	4.00E-04
Emergency Generator 9-0394	26-C2CNTWest-A05	2.79E-06	4.66E-04	4.66E-04
Emergency Generator 9-0395	26-GMS Tower-A04	2.33E-07	3.88E-05	1.94E-05
Emergency Generator 9-0396	26-HQBuilding-A06	6.19E-07	1.03E-04	1.03E-04
Emergency Generator 9-0408	0316-01	5.72E-06	9.54E-04	1.91E-03
Emergency Generator 9-0409	0120-01	4.64E-06	7.73E-04	1.55E-03
Emergency Generator 9-0410	3090-01	8.41E-06	1.40E-03	2.80E-03
Emergency Generator 9-0411	6010-01	1.88E-05	3.14E-03	6.28E-03
Emergency Generator 9-0412	6009-01	1.99E-06	3.31E-04	6.62E-04
Emergency Generator 9-0414	03-0328-A02	5.39E-07	8.99E-05	1.80E-04
Emergency Generator 9-0418	03-0328-A03	8.60E-07	1.43E-04	2.87E-04
Emergency Generator 9-0419	0311-01	6.79E-07	1.13E-04	2.26E-04
Emergency Generator 9-0433	0120-02	4.55E-06	7.58E-04	1.52E-03
Emergency Generator 9-0434	0120-03	4.33E-06	7.22E-04	1.44E-03
Emergency Generator 9-0435	BSS-01	1.58E-05	2.63E-03	5.26E-03
Emergency Generator 9-0436	LWE-01	9.69E-05	1.61E-02	3.23E-02
Emergency Generator 9-0437	UTF-01	1.82E-06	3.04E-04	6.07E-04
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	1.57E-06	2.62E-04	5.25E-04

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: PhenanthreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0500	3660-01	2.59E-07	4.31E-05	8.62E-05
Emergency Generator 9-0503	Bldg 120 - Gen. #1	4.30E-06	7.16E-04	1.43E-03
Emergency Generator 9-0504	Bldg 120 - Gen. #2	4.52E-06	7.53E-04	1.51E-03
Emergency Generator 9-0510	Bldg 5016 - pending	9.44E-07	1.57E-04	3.15E-04
Emergency Generator 9-0511	Bldg 5046 - pending	9.80E-08	1.63E-05	3.27E-05
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		2.12E-04	3.46E-02	6.68E-02

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: PyreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	5.81E-07	6.38E-06	2.66E-07
Fuel Oil Boiler 4-0689	26-0642-A01	1.38E-08	1.52E-07	6.32E-09
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	1.08E-08	1.18E-07	4.93E-09
Fuel Oil Boiler 4-0708	26-0394-A01	1.22E-08	1.34E-07	5.58E-09
Fuel Oil Boiler 4-0709	26-0392-A01	5.56E-09	3.05E-08	1.27E-09
Fuel Oil Boiler 5-0710	0339-A01	3.31E-09	3.63E-08	1.51E-09
Fuel Oil Boiler 4-0719	26-0670-A01	1.10E-08	1.21E-07	5.02E-09
Fuel Oil Boiler 4-0720	26-0688-A01	5.48E-09	6.02E-08	2.51E-09
Fuel Oil Boiler 4-0722	26-0449-A01	1.57E-08	1.73E-07	7.19E-09
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	5.57E-08	3.05E-07	1.27E-08
Dual Fuel Boiler 5-0080	26-0345-A02	5.57E-08	3.05E-07	1.27E-08
Dual Fuel Boiler 5-0081	26-0345-A03	5.57E-08	3.05E-07	1.27E-08
Dual Fuel Boiler 5-0085	26-4600-A06	6.18E-08	3.38E-07	1.41E-08
Dual Fuel Boiler 5-0087	26-4600-A08	1.13E-07	6.19E-07	2.58E-08
Dual Fuel Boiler 5-0152	26-3326-A02	1.42E-07	1.56E-06	6.51E-08
Dual Fuel Boiler 5-0167	26-03062-A02	8.11E-09	4.44E-08	1.85E-09
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	4.59E-08	5.04E-07	2.10E-08
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	1.10E-08	1.21E-07	5.03E-09
Dual Fuel Boiler 5-0300	26-HQ Building-A01	4.35E-08	4.79E-07	1.99E-08
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	2.75E-08	3.02E-07	1.26E-08
Dual Fuel Boiler 5-0308	26-04219-A03	5.17E-10	2.83E-09	1.18E-10
Natural Gas Boiler 5-0309	26-5100-A02	1.53E-08	1.68E-07	6.99E-09
Natural Gas Boiler 5-0310	26-5100-A01	1.53E-08	1.68E-07	6.99E-09

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: PyreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Dual Fuel Boiler 5-0315	26-0525-A02	2.10E-09	2.31E-08	9.61E-10
Natural Gas Boiler 5-0322	26-2202-A01	1.28E-08	1.40E-07	5.85E-09
Dual Fuel Boiler 5-0334	26-0525-A03	2.10E-09	2.31E-08	9.61E-10
Dual Fuel Boiler 5-0335	26-0525-A01	2.10E-09	2.31E-08	9.61E-10
Natural Gas Boiler 5-0336	26-04119-A03	3.68E-09	4.04E-08	1.69E-09
Natural Gas Boiler 5-0337	26-0459-A02	4.75E-09	5.22E-08	2.17E-09
Propane Boiler 5-0352	0367-A01	2.86E-09	3.14E-08	1.31E-09
Dual Fuel Boiler 5-0364	26-4312-A01	1.36E-08	7.44E-08	3.10E-09
Dual Fuel Boiler 5-0364	26-4312-A02	1.36E-08	7.44E-08	3.10E-09
Natural Gas Boiler 5-0367	26-2485-A01	3.32E-09	3.64E-08	1.52E-09
Dual Fuel Boiler 5-0370	26-4600-A09	6.18E-08	3.38E-07	1.41E-08
Natural Gas Boiler 5-0371	26-3660-A01	4.13E-09	4.54E-08	1.89E-09
Natural Gas Boiler 5-0376	0383A-A01 & A02	1.13E-08	1.24E-07	5.17E-09
Dual Fuel Boiler 5-0552	26-04219-A02	5.17E-10	2.83E-09	1.18E-10
Natural Gas Boiler 5-0710	0339-A01	3.31E-09	3.63E-08	1.51E-09
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	5.08E-07	8.46E-05	1.69E-04
Emergency Generator 9-0228	03-0394-A02	4.85E-07	8.08E-05	1.62E-04
Emergency Generator 9-0229	03-0328-A01	3.14E-07	5.23E-05	1.05E-04
Emergency Generator 9-0276	03-4600-A04	1.00E-06	1.67E-04	3.34E-04
Emergency Generator 9-0277	03-4600-A05	9.72E-07	1.62E-04	3.24E-04

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: PyreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0386	03-0394-A03	2.71E-07	3.87E-05	4.84E-06
Emergency Generator 9-0387	03-0394-A04	2.06E-07	3.44E-05	4.30E-06
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	2.84E-07	4.73E-05	2.37E-05
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	3.90E-07	6.50E-05	6.50E-05
Emergency Generator 9-0394	26-C2CNTWest-A05	4.54E-07	7.57E-05	7.57E-05
Emergency Generator 9-0395	26-GMS Tower-A04	3.79E-08	6.31E-06	3.15E-06
Emergency Generator 9-0396	26-HQBuilding-A06	1.01E-07	1.68E-05	1.68E-05
Emergency Generator 9-0408	0316-01	9.30E-07	1.55E-04	3.10E-04
Emergency Generator 9-0409	0120-01	7.54E-07	1.26E-04	2.51E-04
Emergency Generator 9-0410	3090-01	1.37E-06	2.28E-04	4.56E-04
Emergency Generator 9-0411	6010-01	1.06E-06	1.77E-04	3.54E-04
Emergency Generator 9-0412	6009-01	3.23E-07	5.38E-05	1.08E-04
Emergency Generator 9-0414	03-0328-A02	8.77E-08	1.46E-05	2.92E-05
Emergency Generator 9-0418	03-0328-A03	1.40E-07	2.33E-05	4.66E-05
Emergency Generator 9-0419	0311-01	1.10E-07	1.84E-05	3.68E-05
Emergency Generator 9-0433	0120-02	7.39E-07	1.23E-04	2.46E-04
Emergency Generator 9-0434	0120-03	7.04E-07	1.17E-04	2.35E-04
Emergency Generator 9-0435	BSS-01	2.57E-06	4.28E-04	8.55E-04
Emergency Generator 9-0436	LWE-01	5.46E-06	9.10E-04	1.82E-03
Emergency Generator 9-0437	UTF-01	2.96E-07	4.94E-05	9.87E-05
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	2.56E-07	4.27E-05	8.53E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: PyreneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0500	3660-01	4.20E-08	7.01E-06	1.40E-05
Emergency Generator 9-0503	Bldg 120 - Gen. #1	6.99E-07	1.16E-04	2.33E-04
Emergency Generator 9-0504	Bldg 120 - Gen. #2	7.34E-07	1.22E-04	2.45E-04
Emergency Generator 9-0510	Bldg 5016 - pending	1.53E-07	2.56E-05	5.11E-05
Emergency Generator 9-0511	Bldg 5046 - pending	1.59E-08	2.65E-06	5.31E-06
Total		2.29E-05	3.58E-03	6.77E-03

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Toluene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	8.32E-04	9.14E-03	3.81E-04
Fuel Oil Boiler 4-0689	26-0642-A01	2.01E-05	2.21E-04	9.22E-06
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	1.57E-05	1.72E-04	7.19E-06
Fuel Oil Boiler 4-0708	26-0394-A01	1.78E-05	1.95E-04	8.14E-06
Fuel Oil Boiler 4-0709	26-0392-A01	8.12E-06	4.45E-05	1.85E-06
Fuel Oil Boiler 5-0710	0339-A01	2.25E-06	2.47E-05	1.03E-06
Fuel Oil Boiler 4-0719	26-0670-A01	1.60E-05	1.76E-04	7.32E-06
Fuel Oil Boiler 4-0720	26-0688-A01	7.99E-06	8.78E-05	3.66E-06
Fuel Oil Boiler 4-0722	26-0449-A01	2.29E-05	2.52E-04	1.05E-05
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	3.78E-05	2.07E-04	8.64E-06
Dual Fuel Boiler 5-0080	26-0345-A02	3.78E-05	2.07E-04	8.64E-06
Dual Fuel Boiler 5-0081	26-0345-A03	3.78E-05	2.07E-04	8.64E-06
Dual Fuel Boiler 5-0085	26-4600-A06	4.25E-05	2.33E-04	9.71E-06
Dual Fuel Boiler 5-0087	26-4600-A08	1.17E-04	6.42E-04	2.68E-05
Dual Fuel Boiler 5-0152	26-3326-A02	1.43E-04	1.57E-03	6.55E-05
Dual Fuel Boiler 5-0167	26-03062-A02	5.51E-06	3.02E-05	1.26E-06
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	3.12E-05	3.43E-04	1.43E-05
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	7.48E-06	8.22E-05	3.42E-06
Dual Fuel Boiler 5-0300	26-HQ Building-A01	2.96E-05	3.25E-04	1.36E-05
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	1.87E-05	2.05E-04	8.55E-06
Dual Fuel Boiler 5-0308	26-04219-A03	3.52E-07	1.93E-06	8.03E-08
Natural Gas Boiler 5-0309	26-5100-A02	1.04E-05	1.14E-04	4.75E-06

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Toluene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0310	26-5100-A01	1.04E-05	1.14E-04	4.75E-06
Dual Fuel Boiler 5-0315	26-0525-A02	1.43E-06	1.57E-05	6.54E-07
Natural Gas Boiler 5-0322	26-2202-A01	8.68E-06	9.54E-05	3.98E-06
Dual Fuel Boiler 5-0334	26-0525-A03	1.43E-06	1.57E-05	6.54E-07
Dual Fuel Boiler 5-0335	26-0525-A01	1.43E-06	1.57E-05	6.54E-07
Natural Gas Boiler 5-0336	26-04119-A03	2.50E-06	2.75E-05	1.15E-06
Natural Gas Boiler 5-0337	26-0459-A02	3.23E-06	3.55E-05	1.48E-06
Propane Boiler 5-0352	0367-A01	4.17E-06	4.58E-05	1.91E-06
Dual Fuel Boiler 5-0364	26-4312-A01	9.24E-06	5.06E-05	2.11E-06
Dual Fuel Boiler 5-0364	26-4312-A02	9.24E-06	5.06E-05	2.11E-06
Natural Gas Boiler 5-0367	26-2485-A01	2.25E-06	2.48E-05	1.03E-06
Dual Fuel Boiler 5-0370	26-4600-A09	4.25E-05	2.33E-04	9.71E-06
Natural Gas Boiler 5-0371	26-3660-A01	2.81E-06	3.09E-05	1.29E-06
Natural Gas Boiler 5-0376	0383A-A01 & A02	7.68E-06	8.44E-05	3.52E-06
Dual Fuel Boiler 5-0552	26-04219-A02	3.52E-07	1.93E-06	8.03E-08
Natural Gas Boiler 5-0710	0339-A01	2.25E-06	2.47E-05	1.03E-06
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	2.20E-01	1.21E+00	1.51E-01
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	4.34E-05	7.24E-03	1.45E-02
Emergency Generator 9-0228	03-0394-A02	4.15E-05	6.91E-03	1.38E-02
Emergency Generator 9-0229	03-0328-A01	2.68E-05	4.47E-03	8.94E-03
Emergency Generator 9-0276	03-4600-A04	8.57E-05	1.43E-02	2.86E-02
Emergency Generator 9-0277	03-4600-A05	8.32E-05	1.39E-02	2.77E-02

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Toluene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0386	03-0394-A03	2.32E-05	3.31E-03	4.14E-04
Emergency Generator 9-0387	03-0394-A04	1.77E-05	2.94E-03	3.68E-04
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	2.43E-05	4.05E-03	2.02E-03
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	3.34E-05	5.56E-03	5.56E-03
Emergency Generator 9-0394	26-C2CNTWest-A05	3.89E-05	6.48E-03	6.48E-03
Emergency Generator 9-0395	26-GMS Tower-A04	3.24E-06	5.40E-04	2.70E-04
Emergency Generator 9-0396	26-HQBuilding-A06	8.60E-06	1.43E-03	1.43E-03
Emergency Generator 9-0408	0316-01	7.96E-05	1.33E-02	2.65E-02
Emergency Generator 9-0409	0120-01	6.45E-05	1.08E-02	2.15E-02
Emergency Generator 9-0410	3090-01	1.17E-04	1.95E-02	3.90E-02
Emergency Generator 9-0411	6010-01	9.08E-05	1.51E-02	3.03E-02
Emergency Generator 9-0412	6009-01	2.76E-05	4.61E-03	9.21E-03
Emergency Generator 9-0414	03-0328-A02	7.50E-06	1.25E-03	2.50E-03
Emergency Generator 9-0418	03-0328-A03	1.20E-05	1.99E-03	3.99E-03
Emergency Generator 9-0419	0311-01	9.45E-06	1.58E-03	3.15E-03
Emergency Generator 9-0433	0120-02	6.32E-05	1.05E-02	2.11E-02
Emergency Generator 9-0434	0120-03	6.02E-05	1.00E-02	2.01E-02
Emergency Generator 9-0435	BSS-01	2.20E-04	3.66E-02	7.32E-02
Emergency Generator 9-0436	LWE-01	4.67E-04	7.79E-02	1.56E-01
Emergency Generator 9-0437	UTF-01	2.53E-05	4.22E-03	8.45E-03
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	2.19E-05	3.65E-03	7.30E-03

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: Toluene

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0500	3660-01	3.60E-06	6.00E-04	1.20E-03
Emergency Generator 9-0503	Bldg 120 - Gen. #1	5.98E-05	9.97E-03	1.99E-02
Emergency Generator 9-0504	Bldg 120 - Gen. #2	6.28E-05	1.05E-02	2.09E-02
Emergency Generator 9-0510	Bldg 5016 - pending	1.31E-05	2.19E-03	4.38E-03
Emergency Generator 9-0511	Bldg 5046 - pending	0.00E+00	0.00E+00	0.00E+00
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		2.23E-01	1.53E+00	7.30E-01

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: XyleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	7.23E-05	7.94E-04	3.31E-05
Fuel Oil Boiler 4-0689	26-0642-A01	3.54E-07	3.89E-06	1.62E-07
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	2.76E-07	3.03E-06	1.26E-07
Fuel Oil Boiler 4-0708	26-0394-A01	3.13E-07	3.44E-06	1.43E-07
Fuel Oil Boiler 4-0709	26-0392-A01	1.43E-07	7.82E-07	3.26E-08
Fuel Oil Boiler 5-0710	0339-A01	1.80E-05	1.98E-04	8.24E-06
Fuel Oil Boiler 4-0719	26-0670-A01	2.81E-07	3.09E-06	1.29E-07
Fuel Oil Boiler 4-0720	26-0688-A01	1.40E-07	1.54E-06	6.43E-08
Fuel Oil Boiler 4-0722	26-0449-A01	4.03E-07	4.43E-06	1.84E-07
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	3.03E-04	1.66E-03	6.91E-05
Dual Fuel Boiler 5-0080	26-0345-A02	3.03E-04	1.66E-03	6.91E-05
Dual Fuel Boiler 5-0081	26-0345-A03	3.03E-04	1.66E-03	6.91E-05
Dual Fuel Boiler 5-0085	26-4600-A06	3.32E-04	1.82E-03	7.58E-05
Dual Fuel Boiler 5-0087	26-4600-A08	3.33E-04	1.83E-03	7.61E-05
Dual Fuel Boiler 5-0152	26-3326-A02	4.50E-04	4.95E-03	2.06E-04
Dual Fuel Boiler 5-0167	26-03062-A02	4.41E-05	2.42E-04	1.01E-05
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	2.49E-04	2.74E-03	1.14E-04
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	5.98E-05	6.57E-04	2.74E-05
Dual Fuel Boiler 5-0300	26-HQ Building-A01	2.37E-04	2.60E-03	1.08E-04
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	1.49E-04	1.64E-03	6.84E-05
Dual Fuel Boiler 5-0308	26-04219-A03	2.81E-06	1.54E-05	6.42E-07
Natural Gas Boiler 5-0309	26-5100-A02	8.30E-05	9.12E-04	3.80E-05

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: XyleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0310	26-5100-A01	8.30E-05	9.12E-04	3.80E-05
Dual Fuel Boiler 5-0315	26-0525-A02	1.14E-05	1.26E-04	5.23E-06
Natural Gas Boiler 5-0322	26-2202-A01	6.95E-05	7.63E-04	3.18E-05
Dual Fuel Boiler 5-0334	26-0525-A03	1.14E-05	1.26E-04	5.23E-06
Dual Fuel Boiler 5-0335	26-0525-A01	1.14E-05	1.26E-04	5.23E-06
Natural Gas Boiler 5-0336	26-04119-A03	2.00E-05	2.20E-04	9.17E-06
Natural Gas Boiler 5-0337	26-0459-A02	2.58E-05	2.84E-04	1.18E-05
Propane Boiler 5-0352	0367-A01	7.33E-08	8.06E-07	3.36E-08
Dual Fuel Boiler 5-0364	26-4312-A01	7.39E-05	4.05E-04	1.69E-05
Dual Fuel Boiler 5-0364	26-4312-A02	7.39E-05	4.05E-04	1.69E-05
Natural Gas Boiler 5-0367	26-2485-A01	1.80E-05	1.98E-04	8.26E-06
Dual Fuel Boiler 5-0370	26-4600-A09	3.32E-04	1.82E-03	7.58E-05
Natural Gas Boiler 5-0371	26-3660-A01	2.25E-05	2.47E-04	1.03E-05
Natural Gas Boiler 5-0376	0383A-A01 & A02	6.14E-05	6.75E-04	2.81E-05
Dual Fuel Boiler 5-0552	26-04219-A02	2.81E-06	1.54E-05	6.42E-07
Natural Gas Boiler 5-0710	0339-A01	1.80E-05	1.98E-04	8.24E-06
Paint Spray Booth 6-0159	07-00525-A06	2.69E-03	8.02E-02	8.02E-02
Paint Spray Booth 6-0162	07-00525-A04	2.70E-03	4.35E-02	4.35E-02
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	1.00E-01	5.48E-01	6.85E-02
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	3.03E-05	5.04E-03	1.01E-02
Emergency Generator 9-0228	03-0394-A02	2.89E-05	4.82E-03	9.63E-03
Emergency Generator 9-0229	03-0328-A01	1.87E-05	3.12E-03	6.23E-03
Emergency Generator 9-0276	03-4600-A04	5.97E-05	9.95E-03	1.99E-02
Emergency Generator 9-0277	03-4600-A05	5.80E-05	9.66E-03	1.93E-02

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: XyleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0386	03-0394-A03	1.62E-05	2.31E-03	2.89E-04
Emergency Generator 9-0387	03-0394-A04	1.23E-05	2.05E-03	2.57E-04
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	1.69E-05	2.82E-03	1.41E-03
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	2.33E-05	3.88E-03	3.88E-03
Emergency Generator 9-0394	26-C2CNTWest-A05	2.71E-05	4.51E-03	4.51E-03
Emergency Generator 9-0395	26-GMS Tower-A04	2.26E-06	3.76E-04	1.88E-04
Emergency Generator 9-0396	26-HQBuilding-A06	6.00E-06	9.99E-04	9.99E-04
Emergency Generator 9-0408	0316-01	5.55E-05	9.24E-03	1.85E-02
Emergency Generator 9-0409	0120-01	4.50E-05	7.49E-03	1.50E-02
Emergency Generator 9-0410	3090-01	8.16E-05	1.36E-02	2.72E-02
Emergency Generator 9-0411	6010-01	6.33E-05	1.05E-02	2.11E-02
Emergency Generator 9-0412	6009-01	1.93E-05	3.21E-03	6.42E-03
Emergency Generator 9-0414	03-0328-A02	5.23E-06	8.71E-04	1.74E-03
Emergency Generator 9-0418	03-0328-A03	8.34E-06	1.39E-03	2.78E-03
Emergency Generator 9-0419	0311-01	6.59E-06	1.10E-03	2.20E-03
Emergency Generator 9-0433	0120-02	4.41E-05	7.35E-03	1.47E-02
Emergency Generator 9-0434	0120-03	4.20E-05	7.00E-03	1.40E-02
Emergency Generator 9-0435	BSS-01	1.53E-04	2.55E-02	5.10E-02
Emergency Generator 9-0436	LWE-01	3.26E-04	5.43E-02	1.09E-01

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081Pollutant: XyleneCalendar Year: **2022**

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0437	UTF-01	1.77E-05	2.94E-03	5.89E-03
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	1.53E-05	2.54E-03	5.09E-03
Emergency Generator 9-0500	3660-01	2.51E-06	4.18E-04	8.36E-04
Emergency Generator 9-0503	Bldg 120 - Gen. #1	4.17E-05	6.95E-03	1.39E-02
Emergency Generator 9-0504	Bldg 120 - Gen. #2	4.38E-05	7.30E-03	1.46E-02
Emergency Generator 9-0510	Bldg 5016 - pending	9.15E-06	1.52E-03	3.05E-03
Emergency Generator 9-0511	Bldg 5046 - pending	9.50E-07	1.58E-04	3.17E-04
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		1.10E-01	9.15E-01	5.97E-01

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT****Facility Name:** Aberdeen Proving Ground - Aberdeen Area**Facility ID #:** 24-25-00081**Pollutant:** Hexane**Calendar Year:** 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	4.28E-03	4.71E-02	1.96E-03
Fuel Oil Boiler 4-0689	26-0642-A01	1.14E-05	1.25E-04	5.20E-06
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	8.86E-06	9.74E-05	4.06E-06
Fuel Oil Boiler 4-0708	26-0394-A01	1.00E-05	1.10E-04	4.60E-06
Fuel Oil Boiler 4-0709	26-0392-A01	4.58E-06	2.51E-05	1.05E-06
Fuel Oil Boiler 5-0710	0339-A01	1.19E-03	1.31E-02	5.45E-04
Fuel Oil Boiler 4-0719	26-0670-A01	9.03E-06	9.92E-05	4.13E-06
Fuel Oil Boiler 4-0720	26-0688-A01	4.51E-06	4.96E-05	2.07E-06
Fuel Oil Boiler 4-0722	26-0449-A01	1.29E-05	1.42E-04	5.92E-06
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.00E-02	1.10E-01	4.57E-03
Dual Fuel Boiler 5-0080	26-0345-A02	2.00E-02	1.10E-01	4.57E-03
Dual Fuel Boiler 5-0081	26-0345-A03	2.00E-02	1.10E-01	4.57E-03
Dual Fuel Boiler 5-0085	26-4600-A06	2.20E-02	1.20E-01	5.02E-03
Dual Fuel Boiler 5-0087	26-4600-A08	2.20E-02	1.21E-01	5.03E-03
Dual Fuel Boiler 5-0152	26-3326-A02	2.97E-02	3.27E-01	1.36E-02
Dual Fuel Boiler 5-0167	26-03062-A02	2.92E-03	1.60E-02	6.67E-04
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.65E-02	1.81E-01	7.56E-03
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	3.96E-03	4.35E-02	1.81E-03
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.57E-02	1.72E-01	7.18E-03
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	9.89E-03	1.09E-01	4.53E-03
Dual Fuel Boiler 5-0308	26-04219-A03	1.86E-04	1.02E-03	4.25E-05
Natural Gas Boiler 5-0309	26-5100-A02	5.49E-03	6.04E-02	2.51E-03

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081

Pollutant: Hexane

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0310	26-5100-A01	5.49E-03	6.04E-02	2.51E-03
Dual Fuel Boiler 5-0315	26-0525-A02	7.56E-04	8.31E-03	3.46E-04
Natural Gas Boiler 5-0322	26-2202-A01	4.60E-03	5.05E-02	2.10E-03
Dual Fuel Boiler 5-0334	26-0525-A03	7.56E-04	8.31E-03	3.46E-04
Dual Fuel Boiler 5-0335	26-0525-A01	7.56E-04	8.31E-03	3.46E-04
Natural Gas Boiler 5-0336	26-04119-A03	1.32E-03	1.46E-02	6.07E-04
Natural Gas Boiler 5-0337	26-0459-A02	1.71E-03	1.88E-02	7.83E-04
Propane Boiler 5-0352	0367-A01	2.35E-06	2.59E-05	1.08E-06
Dual Fuel Boiler 5-0364	26-4312-A01	4.89E-03	2.68E-02	1.12E-03
Dual Fuel Boiler 5-0364	26-4312-A02	4.89E-03	2.68E-02	1.12E-03
Natural Gas Boiler 5-0367	26-2485-A01	1.19E-03	1.31E-02	5.47E-04
Dual Fuel Boiler 5-0370	26-4600-A09	2.20E-02	1.20E-01	5.02E-03
Natural Gas Boiler 5-0371	26-3660-A01	1.49E-03	1.63E-02	6.81E-04
Natural Gas Boiler 5-0376	0383A-A01 & A02	4.07E-03	4.47E-02	1.86E-03
Dual Fuel Boiler 5-0552	26-04219-A02	1.86E-04	1.02E-03	4.25E-05
Natural Gas Boiler 5-0710	0339-A01	1.19E-03	1.31E-02	5.45E-04
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A04	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	2.86E-03	4.76E-01	9.52E-01
Emergency Generator 9-0228	03-0394-A02	2.73E-03	4.55E-01	9.09E-01
Emergency Generator 9-0229	03-0328-A01	1.76E-03	2.94E-01	5.88E-01
Emergency Generator 9-0276	03-4600-A04	5.63E-03	9.39E-01	1.88E+00

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081

Pollutant: Hexane

Calendar Year: 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0277	03-4600-A05	5.47E-03	9.12E-01	1.82E+00
Emergency Generator 9-0386	03-0394-A03	1.53E-03	2.18E-01	2.72E-02
Emergency Generator 9-0387	03-0394-A04	1.16E-03	1.94E-01	2.42E-02
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	1.60E-03	2.66E-01	1.33E-01
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	2.20E-03	3.66E-01	3.66E-01
Emergency Generator 9-0394	26-C2CNTWest-A05	2.56E-03	4.26E-01	4.26E-01
Emergency Generator 9-0395	26-GMS Tower-A04	2.13E-04	3.55E-02	1.78E-02
Emergency Generator 9-0396	26-HQBuilding-A06	5.66E-04	9.43E-02	9.43E-02
Emergency Generator 9-0408	0316-01	5.23E-03	8.72E-01	1.74E+00
Emergency Generator 9-0409	0120-01	4.24E-03	7.07E-01	1.41E+00
Emergency Generator 9-0410	3090-01	7.70E-03	1.28E+00	2.57E+00
Emergency Generator 9-0411	6010-01	5.97E-03	9.95E-01	1.99E+00
Emergency Generator 9-0412	6009-01	1.82E-03	3.03E-01	6.06E-01
Emergency Generator 9-0414	03-0328-A02	4.93E-04	8.22E-02	1.64E-01
Emergency Generator 9-0418	03-0328-A03	7.87E-04	1.31E-01	2.62E-01
Emergency Generator 9-0419	0311-01	6.22E-04	1.04E-01	2.07E-01
Emergency Generator 9-0433	0120-02	4.16E-03	6.93E-01	1.39E+00
Emergency Generator 9-0434	0120-03	3.96E-03	6.60E-01	1.32E+00
Emergency Generator 9-0435	BSS-01	1.44E-02	2.41E+00	4.81E+00
Emergency Generator 9-0436	LWE-01	3.07E-02	5.12E+00	1.02E+01
Emergency Generator 9-0437	UTF-01	1.67E-03	2.78E-01	5.56E-01
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00

FORM 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT****Facility Name:** Aberdeen Proving Ground - Aberdeen Area**Facility ID #:** 24-25-00081**Pollutant:** Hexane**Calendar Year:** 2022

Equipment Description/ Registration No.	Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0499	2202-01	1.44E-03	2.40E-01	4.80E-01
Emergency Generator 9-0500	3660-01	2.37E-04	3.94E-02	7.89E-02
Emergency Generator 9-0503	Bldg 120 - Gen. #1	3.93E-03	6.56E-01	1.31E+00
Emergency Generator 9-0504	Bldg 120 - Gen. #2	4.13E-03	6.89E-01	1.38E+00
Emergency Generator 9-0510	Bldg 5016 - pending	8.63E-04	1.44E-01	2.88E-01
Emergency Generator 9-0511	Bldg 5046 - pending	8.96E-05	1.49E-02	2.99E-02
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		3.70E-01	2.21E+01	3.82E+01

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 5

**BILLABLE TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Facility Name: Aberdeen Proving Ground - Aberdeen Area

Facility ID #: 24-25-00081

Calendar Year: 2022

Chemical Name	CAS Number		Actual Emissions		Estimation Method
			Tons/yr	lbs/dy	
Carbon Disulfide	75-15-0	s	0.00E+00	0.00E+00	
		f			
Carbonyl Sulfide	463-58-1	s	0.00E+00	0.00E+00	
		f			
Chlorine	7782-50-5	s	0.00E+00	0.00E+00	
		f			
Cyanide Compounds	57-12-5	s	0.00E+00	0.00E+00	
		f			
Hydrochloric Acid	7647-01-0	s	0.00E+00	0.00E+00	
		f			
Hydrogen Fluoride	7664-39-3	s	0.00E+00	0.00E+00	
		f			
Methyl Chloroform	71-55-6	s	0.00E+00	0.00E+00	
		f			
Methylene Chloride	74-87-3	s	0.00E+00	0.00E+00	
		f			
Perchloroethylene	127-18-4	s	0.00E+00	0.00E+00	
		f			
Phosphine	7803-51-2	s	0.00E+00	0.00E+00	
		f			
Titanium Tetrachloride	7550-45-0	s	0.00E+00	0.00E+00	
		f			
Totals			0.00E+00	0.00E+00	

Emission Estimation Method

- A1 - U.S. EPA Reference Method
- A2 - Other Particulate Sampling Train
- A3 - Liquid Absorption Technique
- A4 - Solid Absorption Technique
- A5 - Freezing-Out Technique
- A9 - Other, Specify

- C1 - User calculated based on source test or other measurement.
- C2 - User calculated based on material balance using engineering knowledge of the process.
- C3 - User calculated based on AP-42.
- C4 - User calculated by best guess / engineering judgement.
- C5 - User calculated based on a State or local agency factor.
- C6 - New Construction, not operational.
- C7 - Source closed, operation ceased.
- C8 - Computer calculated based on standard.

This form to include only the eleven chemicals identified

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source
PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: CO₂

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	3.29E+03	3.61E+04	1.51E+03
Fuel Oil Boiler 4-0689	26-0642-A01	7.24E+01	7.96E+02	3.32E+01
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	5.64E+01	6.20E+02	2.58E+01
Fuel Oil Boiler 4-0708	26-0394-A01	6.40E+01	7.03E+02	2.93E+01
Fuel Oil Boiler 4-0709	26-0392-A01	2.92E+01	1.60E+02	6.67E+00
Fuel Oil Boiler 5-0710	0339-A01	8.09E+01	8.89E+02	3.71E+01
Fuel Oil Boiler 4-0719	26-0670-A01	5.75E+01	6.32E+02	2.63E+01
Fuel Oil Boiler 4-0720	26-0688-A01	2.87E+01	3.16E+02	1.32E+01
Fuel Oil Boiler 4-0722	26-0449-A01	8.24E+01	9.05E+02	3.77E+01
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	1.36E+03	7.47E+03	3.11E+02
Dual Fuel Boiler 5-0080	26-0345-A02	1.36E+03	7.47E+03	3.11E+02
Dual Fuel Boiler 5-0081	26-0345-A03	1.36E+03	7.47E+03	3.11E+02
Dual Fuel Boiler 5-0085	26-4600-A06	1.50E+03	8.21E+03	3.42E+02
Dual Fuel Boiler 5-0087	26-4600-A08	1.50E+03	8.21E+03	3.42E+02
Dual Fuel Boiler 5-0152	26-3326-A02	2.03E+03	2.23E+04	9.29E+02
Dual Fuel Boiler 5-0167	26-03062-A02	1.99E+02	1.09E+03	4.53E+01
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	1.12E+03	1.23E+04	5.14E+02
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	2.69E+02	2.96E+03	1.23E+02
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.07E+03	1.17E+04	4.88E+02
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	6.73E+02	7.39E+03	3.08E+02
Dual Fuel Boiler 5-0308	26-04219-A03	1.27E+01	6.94E+01	2.89E+00
Natural Gas Boiler 5-0309	26-5100-A02	3.73E+02	4.10E+03	1.71E+02

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: CO₂

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0310	26-5100-A01	3.73E+02	4.10E+03	1.71E+02
Dual Fuel Boiler 5-0315	26-0525-A02	5.14E+01	5.65E+02	2.35E+01
Natural Gas Boiler 5-0322	26-2202-A01	3.13E+02	3.43E+03	1.43E+02
Dual Fuel Boiler 5-0334	26-0525-A03	5.14E+01	5.65E+02	2.35E+01
Dual Fuel Boiler 5-0335	26-0525-A01	5.14E+01	5.65E+02	2.35E+01
Natural Gas Boiler 5-0336	26-04119-A03	9.01E+01	9.90E+02	4.13E+01
Natural Gas Boiler 5-0337	26-0459-A02	1.16E+02	1.28E+03	5.32E+01
Propane Boiler 5-0352	0367-A01	8.41E+00	9.24E+01	3.85E+00
Dual Fuel Boiler 5-0364	26-4312-A01	3.33E+02	1.82E+03	7.59E+01
Dual Fuel Boiler 5-0364	26-4312-A02	3.33E+02	1.82E+03	7.59E+01
Natural Gas Boiler 5-0367	26-2485-A01	8.12E+01	8.92E+02	3.72E+01
Dual Fuel Boiler 5-0370	26-4600-A09	1.50E+03	8.21E+03	3.42E+02
Natural Gas Boiler 5-0371	26-3660-A01	1.01E+02	1.11E+03	4.63E+01
Natural Gas Boiler 5-0376	0383A-A01 & A02	2.76E+02	3.04E+03	1.27E+02
Dual Fuel Boiler 5-0552	26-04219-A02	1.27E+01	6.94E+01	2.89E+00
Natural Gas Boiler 5-0710	0339-A01	8.09E+01	8.89E+02	3.71E+01
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	1.73E+01	2.89E+03	5.77E+03
Emergency Generator 9-0228	03-0394-A02	1.65E+01	2.76E+03	5.51E+03
Emergency Generator 9-0229	03-0328-A01	1.07E+01	1.78E+03	3.57E+03

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: CO₂

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0276	03-4600-A04	3.42E+01	5.69E+03	1.14E+04
Emergency Generator 9-0277	03-4600-A05	3.32E+01	5.53E+03	1.11E+04
Emergency Generator 9-0386	03-0394-A03	9.25E+00	1.32E+03	1.65E+02
Emergency Generator 9-0387	03-0394-A04	7.04E+00	1.17E+03	1.47E+02
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	9.69E+00	1.61E+03	8.07E+02
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	1.33E+01	2.22E+03	2.22E+03
Emergency Generator 9-0394	26-C2CNTWest-A05	1.55E+01	2.58E+03	2.58E+03
Emergency Generator 9-0395	26-GMS Tower-A04	1.29E+00	2.15E+02	1.08E+02
Emergency Generator 9-0396	26-HQBuilding-A06	3.43E+00	5.72E+02	5.72E+02
Emergency Generator 9-0408	0316-01	3.17E+01	5.29E+03	1.06E+04
Emergency Generator 9-0409	0120-01	2.57E+01	4.29E+03	8.58E+03
Emergency Generator 9-0410	3090-01	4.67E+01	7.78E+03	1.56E+04
Emergency Generator 9-0411	6010-01	3.62E+01	6.03E+03	1.21E+04
Emergency Generator 9-0412	6009-01	1.10E+01	1.84E+03	3.67E+03
Emergency Generator 9-0414	03-0328-A02	2.99E+00	4.99E+02	9.97E+02
Emergency Generator 9-0418	03-0328-A03	4.77E+00	7.95E+02	1.59E+03
Emergency Generator 9-0419	0311-01	3.77E+00	6.28E+02	1.26E+03
Emergency Generator 9-0433	0120-02	2.52E+01	4.20E+03	8.40E+03
Emergency Generator 9-0434	0120-03	2.40E+01	4.00E+03	8.00E+03
Emergency Generator 9-0435	BSS-01	8.75E+01	1.46E+04	2.92E+04
Emergency Generator 9-0436	LWE-01	1.86E+02	3.10E+04	6.21E+04
Emergency Generator 9-0437	UTF-01	1.01E+01	1.68E+03	3.37E+03

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: CO₂

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	8.73E+00	1.46E+03	2.91E+03
Emergency Generator 9-0500	3660-01	1.43E+00	2.39E+02	4.78E+02
Emergency Generator 9-0503	Bldg 120 - Gen. #1	2.38E+01	3.97E+03	7.95E+03
Emergency Generator 9-0504	Bldg 120 - Gen. #2	2.50E+01	4.17E+03	8.35E+03
Emergency Generator 9-0510	Bldg 5016 - pending	5.23E+00	8.72E+02	1.74E+03
Emergency Generator 9-0511	Bldg 5046 - pending	5.43E-01	9.05E+01	1.81E+02
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		2.11E+04	2.93E+05	2.38E+05

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond more than one emission unit, even though only one emission unit number is listed.

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: CH₄

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	3.43E-02	3.77E-01	1.57E-02
Fuel Oil Boiler 4-0689	26-0642-A01	7.02E-04	7.71E-03	3.21E-04
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	5.47E-04	6.01E-03	2.50E-04
Fuel Oil Boiler 4-0708	26-0394-A01	6.20E-04	6.81E-03	2.84E-04
Fuel Oil Boiler 4-0709	26-0392-A01	2.83E-04	1.55E-03	6.46E-05
Fuel Oil Boiler 5-0710	0339-A01	1.55E-03	1.70E-02	7.10E-04
Fuel Oil Boiler 4-0719	26-0670-A01	5.57E-04	6.12E-03	2.55E-04
Fuel Oil Boiler 4-0720	26-0688-A01	2.78E-04	3.06E-03	1.27E-04
Fuel Oil Boiler 4-0722	26-0449-A01	7.98E-04	8.77E-03	3.65E-04
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.61E-02	1.43E-01	5.96E-03
Dual Fuel Boiler 5-0080	26-0345-A02	2.61E-02	1.43E-01	5.96E-03
Dual Fuel Boiler 5-0081	26-0345-A03	2.61E-02	1.43E-01	5.96E-03
Dual Fuel Boiler 5-0085	26-4600-A06	2.87E-02	1.57E-01	6.55E-03
Dual Fuel Boiler 5-0087	26-4600-A08	2.87E-02	1.57E-01	6.55E-03
Dual Fuel Boiler 5-0152	26-3326-A02	3.88E-02	4.26E-01	1.78E-02
Dual Fuel Boiler 5-0167	26-03062-A02	3.81E-03	2.08E-02	8.69E-04
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	2.15E-02	2.36E-01	9.85E-03
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	5.16E-03	5.67E-02	2.36E-03
Dual Fuel Boiler 5-0300	26-HQ Building-A01	2.04E-02	2.25E-01	9.36E-03
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	1.29E-02	1.42E-01	5.90E-03
Dual Fuel Boiler 5-0308	26-04219-A03	2.43E-04	1.33E-03	5.54E-05

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: CH₄

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0309	26-5100-A02	7.16E-03	7.87E-02	3.28E-03
Natural Gas Boiler 5-0310	26-5100-A01	7.16E-03	7.87E-02	3.28E-03
Dual Fuel Boiler 5-0315	26-0525-A02	9.85E-04	1.08E-02	4.51E-04
Natural Gas Boiler 5-0322	26-2202-A01	5.99E-03	6.58E-02	2.74E-03
Dual Fuel Boiler 5-0334	26-0525-A03	9.85E-04	1.08E-02	4.51E-04
Dual Fuel Boiler 5-0335	26-0525-A01	9.85E-04	1.08E-02	4.51E-04
Natural Gas Boiler 5-0336	26-04119-A03	1.73E-03	1.90E-02	7.91E-04
Natural Gas Boiler 5-0337	26-0459-A02	2.23E-03	2.45E-02	1.02E-03
Propane Boiler 5-0352	0367-A01	1.35E-04	1.48E-03	6.16E-05
Dual Fuel Boiler 5-0364	26-4312-A01	6.37E-03	3.49E-02	1.46E-03
Dual Fuel Boiler 5-0364	26-4312-A02	6.37E-03	3.49E-02	1.46E-03
Natural Gas Boiler 5-0367	26-2485-A01	1.56E-03	1.71E-02	7.12E-04
Dual Fuel Boiler 5-0370	26-4600-A09	2.87E-02	1.57E-01	6.55E-03
Natural Gas Boiler 5-0371	26-3660-A01	1.94E-03	2.13E-02	8.87E-04
Natural Gas Boiler 5-0376	0383A-A01 & A02	5.30E-03	5.82E-02	2.43E-03
Dual Fuel Boiler 5-0552	26-04219-A02	2.43E-04	1.33E-03	5.54E-05
Natural Gas Boiler 5-0710	0339-A01	1.55E-03	1.70E-02	7.10E-04
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	7.02E-04	1.17E-01	2.34E-01
Emergency Generator 9-0228	03-0394-A02	6.71E-04	1.12E-01	2.24E-01
Emergency Generator 9-0229	03-0328-A01	4.34E-04	7.23E-02	1.45E-01

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: CH₄

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0276	03-4600-A04	1.39E-03	2.31E-01	4.62E-01
Emergency Generator 9-0277	03-4600-A05	1.35E-03	2.24E-01	4.48E-01
Emergency Generator 9-0386	03-0394-A03	3.75E-04	5.36E-02	6.70E-03
Emergency Generator 9-0387	03-0394-A04	2.86E-04	4.76E-02	5.95E-03
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	3.93E-04	6.55E-02	3.27E-02
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	5.40E-04	9.00E-02	9.00E-02
Emergency Generator 9-0394	26-C2CNTWest-A05	6.29E-04	1.05E-01	1.05E-01
Emergency Generator 9-0395	26-GMS Tower-A04	5.24E-05	8.73E-03	4.37E-03
Emergency Generator 9-0396	26-HQBuilding-A06	1.39E-04	2.32E-02	2.32E-02
Emergency Generator 9-0408	0316-01	1.29E-03	2.15E-01	4.29E-01
Emergency Generator 9-0409	0120-01	1.04E-03	1.74E-01	3.48E-01
Emergency Generator 9-0410	3090-01	1.89E-03	3.16E-01	6.31E-01
Emergency Generator 9-0411	6010-01	1.47E-03	2.45E-01	4.90E-01
Emergency Generator 9-0412	6009-01	4.47E-04	7.45E-02	1.49E-01
Emergency Generator 9-0414	03-0328-A02	1.21E-04	2.02E-02	4.04E-02
Emergency Generator 9-0418	03-0328-A03	1.93E-04	3.22E-02	6.45E-02
Emergency Generator 9-0419	0311-01	1.53E-04	2.55E-02	5.10E-02
Emergency Generator 9-0433	0120-02	1.02E-03	1.70E-01	3.41E-01
Emergency Generator 9-0434	0120-03	9.74E-04	1.62E-01	3.25E-01
Emergency Generator 9-0435	BSS-01	3.55E-03	5.92E-01	1.18E+00
Emergency Generator 9-0436	LWE-01	7.56E-03	1.26E+00	2.52E+00
Emergency Generator 9-0437	UTF-01	4.10E-04	6.83E-02	1.37E-01
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: CH₄

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0499	2202-01	3.54E-04	5.90E-02	1.18E-01
Emergency Generator 9-0500	3660-01	5.82E-05	9.70E-03	1.94E-02
Emergency Generator 9-0503	Bldg 120 - Gen. #1	9.67E-04	1.61E-01	3.22E-01
Emergency Generator 9-0504	Bldg 120 - Gen. #2	1.02E-03	1.69E-01	3.39E-01
Emergency Generator 9-0510	Bldg 5016 - pending	2.12E-04	3.54E-02	7.08E-02
Emergency Generator 9-0511	Bldg 5046 - pending	2.20E-05	3.67E-03	7.35E-03
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		3.49E-01	7.45E+00	9.47E+00

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond to more than one emission unit, even though only one emission unit number is listed.

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: N₂O

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Fuel Oil Boiler 4-0619	26-0030-A01	4.01E-02	4.40E-01	1.83E-02
Fuel Oil Boiler 4-0689	26-0642-A01	8.44E-04	9.28E-03	3.87E-04
Atmospheric Burner 4-0692	Atmospheric Burner #1	0.00E+00	0.00E+00	0.00E+00
Fuel Oil Boiler 4-0707	26-0445-A01	6.58E-04	7.23E-03	3.01E-04
Fuel Oil Boiler 4-0708	26-0394-A01	7.46E-04	8.20E-03	3.42E-04
Fuel Oil Boiler 4-0709	26-0392-A01	3.40E-04	1.87E-03	7.77E-05
Fuel Oil Boiler 5-0710	0339-A01	1.48E-03	1.63E-02	6.79E-04
Fuel Oil Boiler 4-0719	26-0670-A01	6.71E-04	7.37E-03	3.07E-04
Fuel Oil Boiler 4-0720	26-0688-A01	3.35E-04	3.68E-03	1.53E-04
Fuel Oil Boiler 4-0722	26-0449-A01	9.61E-04	1.06E-02	4.40E-04
Fuel Oil Boiler 4-0724	Bldg 906C - pending	0.00E+00	0.00E+00	0.00E+00
Dual Fuel Boiler 5-0079	26-0345-A01	2.50E-02	1.37E-01	5.70E-03
Dual Fuel Boiler 5-0080	26-0345-A02	2.50E-02	1.37E-01	5.70E-03
Dual Fuel Boiler 5-0081	26-0345-A03	2.50E-02	1.37E-01	5.70E-03
Dual Fuel Boiler 5-0085	26-4600-A06	2.74E-02	1.50E-01	6.27E-03
Dual Fuel Boiler 5-0087	26-4600-A08	2.74E-02	1.50E-01	6.27E-03
Dual Fuel Boiler 5-0152	26-3326-A02	3.71E-02	4.08E-01	1.70E-02
Dual Fuel Boiler 5-0167	26-03062-A02	3.64E-03	1.99E-02	8.31E-04
Dual Fuel Boiler 5-0298	26-C2CNT West-A01	2.06E-02	2.26E-01	9.42E-03
Dual Fuel Boiler 5-0299	26-GMS Tower-A01	4.94E-03	5.42E-02	2.26E-03
Dual Fuel Boiler 5-0300	26-HQ Building-A01	1.95E-02	2.15E-01	8.95E-03
Dual Fuel Boiler 5-0301	26-GMS Lab-A01	1.23E-02	1.36E-01	5.65E-03
Dual Fuel Boiler 5-0308	26-04219-A03	2.32E-04	1.27E-03	5.30E-05
Natural Gas Boiler 5-0309	26-5100-A02	6.85E-03	7.52E-02	3.14E-03

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: N₂O

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Natural Gas Boiler 5-0310	26-5100-A01	6.85E-03	7.52E-02	3.14E-03
Dual Fuel Boiler 5-0315	26-0525-A02	9.42E-04	1.04E-02	4.31E-04
Natural Gas Boiler 5-0322	26-2202-A01	5.73E-03	6.30E-02	2.62E-03
Dual Fuel Boiler 5-0334	26-0525-A03	9.42E-04	1.04E-02	4.31E-04
Dual Fuel Boiler 5-0335	26-0525-A01	9.42E-04	1.04E-02	4.31E-04
Natural Gas Boiler 5-0336	26-04119-A03	1.65E-03	1.82E-02	7.56E-04
Natural Gas Boiler 5-0337	26-0459-A02	2.13E-03	2.34E-02	9.76E-04
Propane Boiler 5-0352	0367-A01	6.06E-04	6.65E-03	2.77E-04
Dual Fuel Boiler 5-0364	26-4312-A01	6.10E-03	3.34E-02	1.39E-03
Dual Fuel Boiler 5-0364	26-4312-A02	6.10E-03	3.34E-02	1.39E-03
Natural Gas Boiler 5-0367	26-2485-A01	1.49E-03	1.64E-02	6.81E-04
Dual Fuel Boiler 5-0370	26-4600-A09	2.74E-02	1.50E-01	6.27E-03
Natural Gas Boiler 5-0371	26-3660-A01	1.85E-03	2.04E-02	8.49E-04
Natural Gas Boiler 5-0376	0383A-A01 & A02	5.07E-03	5.57E-02	2.32E-03
Dual Fuel Boiler 5-0552	26-04219-A02	2.32E-04	1.27E-03	5.30E-05
Natural Gas Boiler 5-0710	0339-A01	1.48E-03	1.63E-02	6.79E-04
Paint Spray Booth 6-0159	07-00525-A06	0.00E+00	0.00E+00	0.00E+00
Paint Spray Booth 6-0162	07-00525-A04	0.00E+00	0.00E+00	0.00E+00
Gasoline Storage Tanks 9-0152	26-4029-A03 & -A05	0.00E+00	0.00E+00	0.00E+00
Fire Test Lab (IFEL) 9-0216	07-0525-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0227	03-0394-A01	1.40E-04	2.34E-02	4.68E-02
Emergency Generator 9-0228	03-0394-A02	1.34E-04	2.24E-02	4.47E-02
Emergency Generator 9-0229	03-0328-A01	8.68E-05	1.45E-02	2.89E-02

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: N₂O

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0276	03-4600-A04	2.77E-04	4.62E-02	9.24E-02
Emergency Generator 9-0277	03-4600-A05	2.69E-04	4.48E-02	8.97E-02
Emergency Generator 9-0386	03-0394-A03	7.50E-05	1.07E-02	1.34E-03
Emergency Generator 9-0387	03-0394-A04	5.71E-05	9.52E-03	1.19E-03
Emergency Generator 9-0388	03-0394-A05	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0389	03-0394-A06	7.86E-05	1.31E-02	6.55E-03
Emergency Generator 9-0390	03-0394-A07	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0393	26-GMS-Lab-A04	1.08E-04	1.80E-02	1.80E-02
Emergency Generator 9-0394	26-C2CNTWest-A05	1.26E-04	2.10E-02	2.10E-02
Emergency Generator 9-0395	26-GMS Tower-A04	1.05E-05	1.75E-03	8.73E-04
Emergency Generator 9-0396	26-HQBuilding-A06	2.78E-05	4.64E-03	4.64E-03
Emergency Generator 9-0408	0316-01	2.57E-04	4.29E-02	8.58E-02
Emergency Generator 9-0409	0120-01	2.09E-04	3.48E-02	6.96E-02
Emergency Generator 9-0410	3090-01	3.79E-04	6.31E-02	1.26E-01
Emergency Generator 9-0411	6010-01	2.94E-04	4.90E-02	9.79E-02
Emergency Generator 9-0412	6009-01	8.94E-05	1.49E-02	2.98E-02
Emergency Generator 9-0414	03-0328-A02	2.43E-05	4.04E-03	8.09E-03
Emergency Generator 9-0418	03-0328-A03	3.87E-05	6.45E-03	1.29E-02
Emergency Generator 9-0419	0311-01	3.06E-05	5.10E-03	1.02E-02
Emergency Generator 9-0433	0120-02	2.05E-04	3.41E-02	6.82E-02
Emergency Generator 9-0434	0120-03	1.95E-04	3.25E-02	6.49E-02
Emergency Generator 9-0435	BSS-01	7.10E-04	1.18E-01	2.37E-01
Emergency Generator 9-0436	LWE-01	1.51E-03	2.52E-01	5.04E-01
Emergency Generator 9-0437	UTF-01	8.20E-05	1.37E-02	2.73E-02

FORM 6**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**

Calendar Year: 2022

Facility Name: Aberdeen Proving Ground - Aberdeen AreaFacility ID #: 24-25-00081 Pollutant: N₂O

Equipment Description/ Registration No.	Boilers Emission Unit No.	Actual Emissions		
		Tons/year	Lbs/day	Lbs/hr
Emergency Generator 9-0491	3147-A01	0.00E+00	0.00E+00	0.00E+00
Emergency Generator 9-0499	2202-01	7.08E-05	1.18E-02	2.36E-02
Emergency Generator 9-0500	3660-01	1.16E-05	1.94E-03	3.88E-03
Emergency Generator 9-0503	Bldg 120 - Gen. #1	1.93E-04	3.22E-02	6.45E-02
Emergency Generator 9-0504	Bldg 120 - Gen. #2	2.03E-04	3.39E-02	6.77E-02
Emergency Generator 9-0510	Bldg 5016 - pending	4.25E-05	7.08E-03	1.42E-02
Emergency Generator 9-0511	Bldg 5046 - pending	4.41E-06	7.35E-04	1.47E-03
ECO Mobile Incinerator N/A	N/A	0.00E+00	0.00E+00	0.00E+00
Total		3.57E-01	3.88E+00	1.99E+00

Note: This data is presented by MDE registration number and not by emission unit number. Some MDE registration numbers correspond more than one emission unit, even though only one emission unit number is listed.

SUPPORTING CALCULATIONS

**Annual Usage
Data Input
CY 2022**

Report Year	2022	
Report type	Annual	
Total Natural Gas	2,831,296	therms
Total Fuel Oil	329,502	gals

Boilers

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
5-0152	26-3326-A02	Natural Gas	18,788	therms
Exempt		Hours of Operation (NG)		hrs
5-0376	0383A-A01 & A02	Natural Gas	46,072	therms
		Hours of Operation (NG)		hrs
5-0337	26-0459-A02	Natural Gas	19,376	therms
		Hours of Operation (NG)		hrs
5-0322	26-2202-A01	Natural Gas	26,046	therms
		Hours of Operation (NG)		hrs
5-0322	26-2202-A02	Natural Gas	26,046	therms
		Hours of Operation (NG)		hrs
5-0152	26-3300-A02	Natural Gas	7,227	therms
Exempt		Hours of Operation (NG)		hrs
5-0152	26-3300-A01	Natural Gas	7,227	therms
Exempt		Hours of Operation (NG)		hrs
5-0152	26-3144-A01	Natural Gas	68,665	therms
		Hours of Operation (NG)		hrs
5-0371	26-3660-A01	Natural Gas	16,847	therms
		Hours of Operation (NG)		hrs
5-0336	26-04119-A03	Natural Gas	15,015	therms
		Hours of Operation (NG)		hrs
5-0310	26-5100-A01	Natural Gas	62,246	therms
		Hours of Operation (NG)		hrs
5-0309	26-5100-A02	Natural Gas	62,246	therms
		Hours of Operation (NG)		hrs
5-0710	0339-A01	Natural Gas	13,490	therms
		Hours of Operation (NG)		hrs
5-0367	26-2485-A01	Natural Gas	13,530	therms
		Hours of Operation (NG)		hrs
5-0152	26-4304-A02	Natural Gas	12,154	therms
		Hours of Operation (NG)		hrs
4-0619	5046-A01	Natural Gas	6,167	therms
		Hours of Operation (NG)		hrs
4-0619	5046-A02	Natural Gas	6,167	therms
		Hours of Operation (NG)		hrs
4-0619	5046-A03	Natural Gas	6,167	therms
		Hours of Operation (NG)		hrs
5-0152	26-0436-A01	Natural Gas	1,865	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs

**Annual Usage
Data Input
CY 2022**

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
5-0152	26-0436-A02	Natural Gas	1,865	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152	26-0120-A01	Natural Gas	13,675	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152	26-0120-A02	Natural Gas	13,675	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0384	26-0400-A02	Natural Gas	13,279	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0384	26-0400-A03	Natural Gas	13,279	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152	26-0402-A01	Natural Gas	44,376	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152	26-0402-A02	Natural Gas	44,376	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152	26-0455-A01	Natural Gas	0	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	13,614	gals
		Hours of Operation (Oil)		hrs
5-0152	26-0455-A02	Natural Gas	0	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	13,614	gals
		Hours of Operation (Oil)		hrs
5-0335	26-0525-A01	Natural Gas	8,566	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0315	26-0525-A02	Natural Gas	8,566	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0334	26-0525-A03	Natural Gas	8,566	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs

**Annual Usage
Data Input
CY 2022**

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
5-0152	26-2352-A01	Natural Gas	2,352	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152 Exempt	26-3245-A01	Natural Gas	3,245	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152	26-04119-A02	Natural Gas	15,015	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152 Exempt	26-2401-A01	Natural Gas	2,401	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0552	26-04219-A02	Natural Gas	2,110	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0308	26-04219-A03	Natural Gas	2,110	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0364	26-4312-A01	Natural Gas	55,417	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0364	26-4312-A02	Natural Gas	55,417	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152	26-4404-A04	Natural Gas	2,202	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	430	gals
		Hours of Operation (Oil)		hrs
5-0152	26-4404-A06	Natural Gas	2,202	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	430	gals
		Hours of Operation (Oil)		hrs
5-0152	26-4727-A01	Natural Gas	24,719	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152	26-5014-A03	Natural Gas	12,368	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs

**Annual Usage
Data Input
CY 2022**

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
5-0152	26-5016-A01	Natural Gas	5,016	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0300	26-HQ Building-A01	Natural Gas	35,535	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0300	26-HQ Building-A02	Natural Gas	35,535	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0300	26-HQ Building-A03	Natural Gas	35,535	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0300	26-HQ Building-A04	Natural Gas	35,535	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0300	26-HQ Building-A05	Natural Gas	35,535	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0301	26-GMS Lab-A01	Natural Gas	37,366	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0301	26-GMS Lab-A02	Natural Gas	37,366	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0301	26-GMS Lab-A03	Natural Gas	37,366	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0299	26-GMS Tower-A01	Natural Gas	14,955	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0299	26-GMS Tower-A02	Natural Gas	14,955	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0299	26-GMS Tower-A03	Natural Gas	14,955	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs

**Annual Usage
Data Input
CY 2022**

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
5-0298	26-C2CNT West-A01	Natural Gas	46,775	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0298	26-C2CNT West-A02	Natural Gas	46,775	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0298	26-C2CNT West-A03	Natural Gas	46,775	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0298	26-C2CNT West-A04	Natural Gas	46,775	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0079	26-0345-A01	Natural Gas	227,082	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0080	26-0345-A02	Natural Gas	227,082	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0081	26-0345-A03	Natural Gas	227,082	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0152	26-3062-A01	Natural Gas	33,087	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0167	26-03062-A02	Natural Gas	33,087	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0085	26-4600-A06	Natural Gas	249,088	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	334	gals
		Hours of Operation (Oil)		hrs
5-0370	26-4600-A09	Natural Gas	249,088	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	334	gals
		Hours of Operation (Oil)		hrs
5-0087	26-4600-A08	Natural Gas	249,088	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	334	gals
		Hours of Operation (Oil)		hrs

**Annual Usage
Data Input
CY 2022**

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
5-0164 reported under 4-0619	26-5014-A01	Natural Gas	12,368	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
5-0165 reported under 4-0619	26-5014-A02	Natural Gas	12,368	therms
		Hours of Operation (NG)		hrs
		No. 2 Oil	0	gals
		Hours of Operation (Oil)		hrs
4-0619	26-0030-A01	No. 2 Oil	5,139	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0030-A02	No. 2 Oil	5,139	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0045-A01	No. 2 Oil	1,130	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0322-A01	No. 2 Oil	0	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0384-A01	No. 2 Oil	6,234	gal
		Hours of Operation (Oil)		hrs
4-0619	0402-A03	No. 2 Oil	0	gal
		Hours of Operation (Oil)		hrs
4-0709	26-0392-A01	No. 2 Oil	2,619	gal
		Hours of Operation (Oil)		hrs
4-0708	26-0394-A01	No. 2 Oil	5,738	gal
		Hours of Operation (Oil)		hrs
4-0546	0400-A01	No. 2 Oil	4,559	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0439-A01	No. 2 Oil	5,183	gal
		Hours of Operation (Oil)		hrs
4-0707	26-0445-A01	No. 2 Oil	5,063	gal
		Hours of Operation (Oil)		hrs
4-0722	26-0449-A01	No. 2 Oil	7,389	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0456-A01	No. 2 Oil	5,216	gal
		Hours of Operation (Oil)		hrs
4-0717 reported under 4-0619	0507-A05	No. 2 Oil	28,383	gal
		Hours of Operation (Oil)		hrs
5-0104 reported under 4-0619	0507-A04	No. 2 Oil	28,383	gal
		Hours of Operation (Oil)		hrs
4-0689	26-0642-A01	No. 2 Oil	6,496	gal
		Hours of Operation (Oil)		hrs
4-0721 reported under 4-0619	26-0643-A01	No. 2 Oil	4,676	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0644-A01	No. 2 Oil	4,690	gal
		Hours of Operation (Oil)		hrs
4-0719	26-0670-A01	No. 2 Oil	5,160	gal
		Hours of Operation (Oil)		hrs

**Annual Usage
Data Input
CY 2022**

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
4-0720	26-0688-A01	No. 2 Oil	2,578	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0699A-A01	No. 2 Oil	20,264	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0700-A01	No. 2 Oil	2,374	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0702-A01	No. 2 Oil	2,846	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0745A-A01	No. 2 Oil	0	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0860-A01	No. 2 Oil	1,932	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0896-A01	No. 2 Oil	0	gal
		Hours of Operation (Oil)		hrs
4-0619	26-1064-A01	No. 2 Oil	16,985	gal
		Hours of Operation (Oil)		hrs
4-0619	26-1064-A02	No. 2 Oil	16,985	gal
		Hours of Operation (Oil)		hrs
4-0619	26-1134-A01	No. 2 Oil	435	gal
		Hours of Operation (Oil)		hrs
4-0619	26-2184-A01	No. 2 Oil	0	gal
		Hours of Operation (Oil)		hrs
4-0619	26-2207-A03	No. 2 Oil	1,602	gal
		Hours of Operation (Oil)		hrs
4-0619 Removed from Title V 4/2020	26-2377-A01	No. 2 Oil	0	gal
		Hours of Operation (Oil)		hrs
4-0619	26-2377-A02	No. 2 Oil	10,029	gal
		Hours of Operation (Oil)		hrs
4-0619 Exempt	26-2379-A01	No. 2 Oil	3,515	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0269B-A01	No. 2 Oil	6,367	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0280B-A01	No. 2 Oil	6,145	gal
		Hours of Operation (Oil)		hrs
4-0619	26-3011-A01	No. 2 Oil	5,544	gal
		Hours of Operation (Oil)		hrs
4-0619	3070-A01	No. 2 Oil	28,586	gal
		Hours of Operation (Oil)		hrs
4-0619	26-4725-A01	No. 2 Oil	9,386	gal
		Hours of Operation (Oil)		hrs
4-0619	26-4728-A02	No. 2 Oil	13,932	gal
		Hours of Operation (Oil)		hrs
4-0724	Bldg 906C - pending	No. 2 Oil	0	gal
		Hours of Operation (Oil)		hrs
4-0619	26-5109-A01	No. 2 Oil	2,559	gal
		Hours of Operation (Oil)		hrs

**Annual Usage
Data Input
CY 2022**

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
4-0619	26-5116-A01	No. 2 Oil	6,145	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0733A-A01	No. 2 Oil	2,887	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0740B-A01	No. 2 Oil	2,225	gal
		Hours of Operation (Oil)		hrs
4-0619	26-0740C-A01	No. 2 Oil	5,479	gal
		Hours of Operation (Oil)		hrs
4-0619	26-1100F-A01	No. 2 Oil	422	gal
		Hours of Operation (Oil)		hrs
4-0619	26-745A-A01	No. 2 Oil	0	gal
		Hours of Operation (Oil)		hrs
4-0619	26-2312-A02	No. 2 Oil	0	gal
		Hours of Operation (Oil)		hrs
4-0692	Atmospheric Burner #1	F-24	0	gal
		Hours of Operation		hrs
5-0352	0367-A01	Propane	1,346	gal
		Hours of Operation (Oil)		hrs

* - For the annual report, the hours of operation are based on fuel usage and boiler ratings.

Operation Days:

All NSPS boilers are assumed to be 365 days.

All space heating boilers are assumed to be 182 days.

<u>Standby Generators</u>				
		Diesel		MMBtu
9-0409	0120-01	Hours of Operation	15.00	hrs
		Diesel		MMBtu
9-0433	0120-02	Hours of Operation	14.70	hrs
		Diesel		MMBtu
9-0434	0120-03	Hours of Operation	14.00	hrs
		Diesel		MMBtu
9-0503	Bldg 120 - Gen. #1	Hours of Operation	13.90	hrs
		Diesel		MMBtu
9-0504	Bldg 120 - Gen. #2	Hours of Operation	14.60	hrs
		Diesel		MMBtu
9-0410	3090-01	Hours of Operation	27.20	hrs
		Diesel		MMBtu
9-0408	0316-01	Hours of Operation	18.50	hrs
		Diesel		MMBtu
9-0418	03-0328-A03	Hours of Operation	10.10	hrs
		Diesel		MMBtu
9-0414	03-0328-A02	Hours of Operation	7.60	hrs
		Diesel		MMBtu
9-0229	03-0328-A01	Hours of Operation	17.00	hrs
		Diesel		MMBtu
9-0227	03-0394-A01	Hours of Operation	22.00	hrs
		Diesel		MMBtu

**Annual Usage
Data Input
CY 2022**

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
9-0228	03-0394-A02	Hours of Operation	21.00	hrs
		Diesel		MMBtu
9-0386	03-0394-A03	Hours of Operation	21.00	hrs
		Diesel		MMBtu
9-0387	03-0394-A04	Hours of Operation	16.00	hrs
		Diesel		MMBtu
9-0388	03-0394-A05	Hours of Operation	0.00	hrs
		Diesel		MMBtu
9-0389	03-0394-A06	Hours of Operation	22.00	hrs
		Diesel		MMBtu
9-0390	03-0394-A07	Hours of Operation	0.00	hrs
		Diesel		MMBtu
9-0276	03-4600-A04	Hours of Operation	31.00	hrs
		Diesel		MMBtu
9-0277	03-4600-A05	Hours of Operation	30.10	hrs
		Diesel		MMBtu
9-0412	6009-01	Hours of Operation	12.50	hrs
		Diesel		MMBtu
9-0411	6010-01	Hours of Operation	13.00	hrs
		Diesel		MMBtu
9-0411	6010-02	Hours of Operation	8.00	hrs
		Diesel		MMBtu
9-0436	LWE-01	Hours of Operation	115.00	hrs
		Diesel		MMBtu
9-0436	LWE-02	Hours of Operation	114.00	hrs
		Diesel		MMBtu
9-0436	LWE-03	Hours of Operation	115.00	hrs
		Diesel		MMBtu
9-0436	LWE-04	Hours of Operation	117.00	hrs
		Diesel		MMBtu
9-0436	LWE-05	Hours of Operation	116.00	hrs
		Diesel		MMBtu
9-0393	26-GMS-Lab-A04	Hours of Operation	6.00	hrs
		Diesel		MMBtu
9-0394	26-C2CNTWest-A05	Hours of Operation	12.00	hrs
		Diesel		MMBtu
9-0395	26-GMS Tower-A04	Hours of Operation	1.00	hrs
		Diesel		MMBtu
9-0396	26-HQBuilding-A06	Hours of Operation	2.00	hrs
		Diesel		MMBtu
9-0510	Bldg 5016 - pending	Hours of Operation	3.80	hrs
		Diesel		MMBtu
9-0511	Bldg 5046 - pending	Hours of Operation	1.50	hrs
		Diesel		MMBtu
9-0435	BSS-01	Hours of Operation	248.50	hrs

**Annual Usage
Data Input
CY 2022**

MDE Reg. No.	EU No.	Fuel Consumption/ Operational Hours		Units
9-0437	UTF-01	Diesel		MMBtu
		Hours of Operation	34.43	hrs
9-0419	0311-01	Diesel		MMBtu
		Hours of Operation	10.70	hrs
9-0491	3147-A01	Diesel		MMBtu
		Hours of Operation	0.00	hrs
9-0499	2202-01	Diesel		MMBtu
		Hours of Operation	19.70	hrs
9-0500	3660-01	Diesel		MMBtu
		Hours of Operation	3.80	hrs

Operation Days:

All emergency generators are assumed to be 12 days

ACTUAL EMISSION CALCULATIONS CY2022
BOILERS

Emission Factor Source: Criteria Pollutant Emission Factors from Table 1.3-1, 1.3-2 and 1.3-3 of AP-42.
GHG factors derived from oil combustion factors, Tables 1.3-3, 1.3-8, and 1.3-12.

Pollutant	Fuel oil lb/10 ³ gal
NOx	20
SOx*	7.2
CO	5
VOC	0.34

* Used 0.05% Sulfur (500 ppm)

Pollutant	Fuel oil lb/10 ³ gal
PM Filterable	2
PM-10 Filterable	1.08
PM-2.5 Filterable	0.83
PM Condensable	1.3

Emission Factor Source: Criteria Pollutant Emission Factors from Table 1.4-1 and 1.4-2 of AP-42.
GHG factors derived from oil combustion factors, Table 1.4-2.

	Natural Gas lb/10 ⁶ cft	C4ISR EF** Tab "C4ISR EF" Tab in spreadsheet	Pollutant	Natural Gas lb/10 ⁶ cft
Pollutant				
NOx	100	36 PM Filterable	PM Filterable	1.9
SOx	0.6	0.6 PM-10 Filterable*	PM-10 Filterable*	1.9
CO	84	84 PM-2.5 Filterable*	PM-2.5 Filterable*	1.9
VOC	5.5	5.5 PM Condensable*	PM Condensable*	5.7

*All PM (total, condensable, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM10, PM2.5 or PM1 emissions.

Emission Factor Source: Criteria Pollutant and GHG Emission Factors from Table 1.5-1 of AP-42.

Pollutant	Propane lb/10 ³ gal
NOx	13
SOx*	0.054
CO	7.5
VOC	0.8

* Used 0.54 gr/100cft Sulfur as national sulfur fuel content for LPG

Pollutant	Propane lb/10 ³ gal
CO2	12500
CH4	0.2
N2O	0.9

Pollutant	Natural Gas lb/10 ⁶ cft
CO2	120000
CH4	2.3
N2O	2.2

Pollutant	Natural Gas (low NOx burner) lb/10 ⁶ cft	Natural Gas (fuel gas recirculation) lb/10 ⁶ cft
NOx	50	32

**All PM (total, condensable, and filterable) is assumed to be less than 1.0 micrometer in diameter.

Therefore, the PM emission factors presented here may be used to estimate PM10, PM2.5 or PM1 emissions.

Calculation Method

Annual Emission Rate (ton/yr)= (Emission Factor) X (Fuel Used) / 2000

Daily Emission Rate = Annual emission rate (tons/yr) X 2000 / Days per year

MDE Reg. Number	Emissions Unit No.	Type of Boiler	Oil/Propane Used (gal)	Gas Used (Therm)	NOx (tpy)	SOx (tpy)	CO (tpy)	VOC (tpy)	CO2 (tpy)	CH4 (tpy)	N2O (tpy)	PM Filterable	PM-10 Filterable*	PM-2.5 Filterable*	PM Condensable*
5-0152	26-3326-A02	Natural Gas	0	18788	9.39E-02	5.64E-04	7.89E-02	5.17E-03	1.13E+02	2.18E-03	2.07E-03	1.78E-03	1.78E-03	1.78E-03	5.35E-03
5-0376	0383A-A01 & A02	Natural Gas	0	46072	2.30E-01	1.38E-03	1.94E-01	1.27E-02	2.76E+02	5.30E-03	5.07E-03	4.38E-03	4.38E-03	4.38E-03	1.31E-02
5-0337	26-0459-A02	Natural Gas	0	19376	9.69E-02	5.81E-04	8.14E-02	5.33E-03	1.16E+02	2.23E-03	2.13E-03	1.84E-03	1.84E-03	1.84E-03	5.52E-03
5-0322	26-2202-A01	Natural Gas	0	26046	1.30E-01	7.81E-04	1.09E-01	7.16E-03	1.56E+02	3.00E-03	2.87E-03	2.47E-03	2.47E-03	2.47E-03	7.42E-03
5-0322	26-2202-A02	Natural Gas	0	26046	1.30E-01	7.81E-04	1.09E-01	7.16E-03	1.56E+02	3.00E-03	2.87E-03	2.47E-03	2.47E-03	2.47E-03	7.42E-03
5-0152	26-3300-A02	Natural Gas	0	7226.5	3.61E-02	2.17E-04	3.04E-02	1.99E-03	4.34E+01	8.31E-04	7.95E-04	6.87E-04	6.87E-04	6.87E-04	2.06E-03
5-0152	26-3300-A01	Natural Gas	0	7226.5	3.61E-02	2.17E-04	3.04E-02	1.99E-03	4.34E+01	8.31E-04	7.95E-04	6.87E-04	6.87E-04	6.87E-04	2.06E-03
5-0152	68665	Natural Gas	0	68665	3.43E-01	2.06E-03	2.88E-01	1.89E-02	4.12E+02	7.90E-03	7.55E-03	6.52E-03	6.52E-03	6.52E-03	1.96E-02
5-0371	26-3660-A01	Natural Gas	0	16847	8.42E-02	5.05E-04	7.08E-02	4.63E-03	1.01E+02	1.94E-03	1.85E-03	1.60E-03	1.60E-03	1.60E-03	4.80E-03
5-0336	26-04119-A03	Natural Gas	0	15015	7.51E-02	4.50E-04	6.31E-02	4.13E-03	9.01E+01	1.73E-03	1.65E-03	1.43E-03	1.43E-03	1.43E-03	4.28E-03
5-0310	26-5100-A01	Natural Gas	0	62246	3.11E-01	1.87E-03	2.61E-01	1.71E-02	3.73E+02	7.18E-03	6.85E-03	5.91E-03	5.91E-03	5.91E-03	1.77E-02
5-0309	26-5100-A02	Natural Gas	0	62246	3.11E-01	1.87E-03	2.61E-01	1.71E-02	3.73E+02	7.18E-03	6.85E-03	5.91E-03	5.91E-03	5.91E-03	1.77E-02
5-0710	0339-A01	Natural Gas	0	13490	6.75E-02	4.05E-04	5.67E-02	3.71E-03	8.09E+01	1.48E-03	1.48E-03	1.28E-03	1.28E-03	1.28E-03	3.84E-03
5-0367	26-2485-A01	Natural Gas	0	13530	6.77E-02	4.06E-04	5.68E-02	3.72E-03	8.12E+01	1.58E-03	1.49E-03	1.29E-03	1.29E-03	1.29E-03	3.86E-03
5-0152	26-4304-A02	Natural Gas	0	12154	6.08E-02	3.65E-04	5.10E-02	3.34E-03	7.29E+01	1.40E-03	1.34E-03	1.15E-03	1.15E-03	1.15E-03	3.46E-03

ACTUAL EMISSION CALCULATIONS CY2022

MDE Reg. Number	Emissions Unit No.	Type of Boiler	Oil/Propane Used (gal)	Gas Used (Therm)	NOx (tpy)	SOx (tpy)	CO (tpy)	VOC (tpy)	CO2 (tpy)	CH4 (tpy)	N2O (tpy)	PM Filterable	PM-10 Filterable*	PM-2.5 Filterable*	PM Condensable
4-0619	5046-A01	Natural Gas	0	6167	3.08E-02	1.85E-04	2.59E-02	1.70E-03	3.70E+01	7.09E-04	6.79E-04	5.86E-04	5.86E-04	5.86E-04	1.76E-03
4-0619	5046-A02	Natural Gas	0	6167	3.08E-02	1.85E-04	2.59E-02	1.70E-03	3.70E+01	7.09E-04	6.79E-04	5.86E-04	5.86E-04	5.86E-04	1.76E-03
4-0619	5046-A03	Natural Gas	0	6167	3.08E-02	1.85E-04	2.59E-02	1.70E-03	3.70E+01	7.09E-04	6.79E-04	5.86E-04	5.86E-04	5.86E-04	1.76E-03
5-0384	26-0400-A02	Natural Gas	0	13279	6.64E-02	3.98E-04	5.58E-02	3.65E-03	7.97E+01	1.53E-03	1.46E-03	1.28E-03	1.26E-03	1.26E-03	3.78E-03
5-0384	26-0400-A03	Natural Gas	0	13279	6.64E-02	3.98E-04	5.58E-02	3.65E-03	7.97E+01	1.53E-03	1.46E-03	1.28E-03	1.26E-03	1.26E-03	3.78E-03
5-0152	26-0436-A01	Dual Fuel	0	1365	9.33E-03	5.60E-05	7.83E-02	5.13E-04	1.12E+01	2.14E-04	2.05E-04	1.77E-04	1.77E-04	1.77E-04	5.32E-04
5-0152	26-0436-A02	Dual Fuel	0	1365	9.33E-03	5.60E-05	7.83E-02	5.13E-04	1.12E+01	2.14E-04	2.05E-04	1.77E-04	1.77E-04	1.77E-04	5.32E-04
5-0152	26-0120-A01	Dual Fuel	0	13675	6.84E-02	4.10E-04	5.74E-02	3.76E-03	8.21E+01	1.57E-03	1.50E-03	1.30E-03	1.30E-03	1.30E-03	3.90E-03
5-0152	26-0120-A02	Dual Fuel	0	13675	6.84E-02	4.10E-04	5.74E-02	3.76E-03	8.21E+01	1.57E-03	1.50E-03	1.30E-03	1.30E-03	1.30E-03	3.90E-03
5-0152	26-0402-A01	Dual Fuel	0	44376	2.22E-01	1.33E-03	1.86E-01	1.22E-02	2.66E+02	5.10E-03	4.88E-03	4.22E-03	4.22E-03	4.22E-03	1.26E-02
5-0152	26-0402-A02	Dual Fuel	0	44376	2.22E-01	1.33E-03	1.86E-01	1.22E-02	2.66E+02	5.10E-03	4.88E-03	4.22E-03	4.22E-03	4.22E-03	1.26E-02
5-0152	26-0455-A01	Dual Fuel	13614.00	0	1.36E-01	4.90E-02	3.40E-02	2.31E-03	1.52E+02	1.47E-03	1.77E-03	1.36E-02	7.35E-03	5.65E-03	8.85E-03
5-0152	26-0455-A02	Dual Fuel	13614.00	0	1.36E-01	4.90E-02	3.40E-02	2.31E-03	1.52E+02	1.47E-03	1.77E-03	1.36E-02	7.35E-03	5.65E-03	8.85E-03
5-0335	26-0525-A01	Dual Fuel	0	8566.333333	4.28E-02	2.57E-04	3.60E-02	2.36E-03	5.14E+01	9.85E-04	9.42E-04	8.14E-04	8.14E-04	8.14E-04	2.44E-03
5-0315	26-0525-A02	Dual Fuel	0	8566.333333	4.28E-02	2.57E-04	3.60E-02	2.36E-03	5.14E+01	9.85E-04	9.42E-04	8.14E-04	8.14E-04	8.14E-04	2.44E-03
5-0334	26-0525-A03	Dual Fuel	0	8566.333333	4.28E-02	2.57E-04	3.60E-02	2.36E-03	5.14E+01	9.85E-04	9.42E-04	8.14E-04	8.14E-04	8.14E-04	2.44E-03
5-0152	26-2352-A01	Dual Fuel	0	2352	1.18E-02	7.05E-05	9.88E-03	6.47E-04	1.41E+01	2.70E-04	2.59E-04	2.23E-04	2.23E-04	2.23E-04	6.70E-04
5-0152	26-2352-A02	Dual Fuel	0	3245	1.18E-02	7.05E-05	9.88E-03	6.47E-04	1.41E+01	2.70E-04	2.59E-04	2.23E-04	2.23E-04	2.23E-04	6.70E-04
5-0152	26-04119-A02	Dual Fuel	0	15015	7.51E-02	4.50E-04	6.31E-02	4.13E-03	9.01E+01	1.73E-03	1.65E-03	1.43E-03	1.43E-03	1.43E-03	4.28E-03
5-0152	26-2401-A01	Dual Fuel	0	2401	1.20E-02	7.20E-05	1.01E-02	6.60E-04	1.44E+01	2.76E-04	2.64E-04	2.28E-04	2.28E-04	2.28E-04	6.84E-04
5-0552	26-04219-A02	Dual Fuel	0	2109.5	1.05E-02	6.33E-05	8.86E-03	5.80E-04	1.27E+01	2.43E-04	2.32E-04	2.00E-04	2.00E-04	2.00E-04	6.01E-04
5-0308	26-04219-A03	Dual Fuel	0	2109.5	1.05E-02	6.33E-05	8.86E-03	5.80E-04	1.27E+01	2.43E-04	2.32E-04	2.00E-04	2.00E-04	2.00E-04	6.01E-04
5-0364	26-4312-A01	Dual Fuel	0	55417	2.77E-01	1.66E-03	2.33E-01	1.52E-02	3.33E+02	6.37E-03	6.10E-03	5.26E-03	5.26E-03	5.26E-03	1.58E-02
5-0364	26-4312-A02	Dual Fuel	0	55417	2.77E-01	1.66E-03	2.33E-01	1.52E-02	3.33E+02	6.37E-03	6.10E-03	5.26E-03	5.26E-03	5.26E-03	1.58E-02
5-0152	26-4404-A04	Dual Fuel	430	2202	1.53E-02	1.61E-03	1.03E-02	6.79E-04	1.80E+01	3.00E-04	2.98E-04	6.39E-04	4.41E-04	3.87E-04	9.07E-04
5-0152	26-4404-A06	Dual Fuel	430	2202	1.53E-02	1.61E-03	1.03E-02	6.79E-04	1.80E+01	3.00E-04	2.98E-04	6.39E-04	4.41E-04	3.87E-04	9.07E-04
5-0152	26-4727-A01	Dual Fuel	0	24719	1.24E-01	7.42E-01	1.04E-01	6.80E-03	1.48E+02	2.84E-03	2.72E-03	2.35E-03	2.35E-03	2.35E-03	7.04E-03
5-0152	26-5014-A03	Dual Fuel	0	12368	6.18E-02	3.71E-04	5.19E-02	3.40E-03	7.42E+01	1.42E-03	1.36E-03	1.17E-03	1.17E-03	1.17E-03	3.52E-03
5-0152	26-5016-A01	Dual Fuel	0	5016	2.51E-02	1.50E-04	2.11E-02	1.38E-03	3.01E+01	5.77E-04	5.52E-04	4.77E-04	4.77E-04	4.77E-04	1.43E-03
5-0300	26-HQ Building-A01	Dual Fuel	0	35534.8	6.40E-02	1.07E-03	1.49E-01	9.77E-03	2.13E+02	4.05E-03	3.91E-03	3.38E-03	3.38E-03	3.38E-03	1.01E-02
5-0300	26-HQ Building-A02	Dual Fuel	0	35534.8	6.40E-02	1.07E-03	1.49E-01	9.77E-03	2.13E+02	4.05E-03	3.91E-03	3.38E-03	3.38E-03	3.38E-03	1.01E-02
5-0300	26-HQ Building-A03	Dual Fuel	0	35534.8	6.40E-02	1.07E-03	1.49E-01	9.77E-03	2.13E+02	4.05E-03	3.91E-03	3.38E-03	3.38E-03	3.38E-03	1.01E-02
5-0300	26-HQ Building-A04	Dual Fuel	0	35534.8	6.40E-02	1.07E-03	1.49E-01	9.77E-03	2.13E+02	4.05E-03	3.91E-03	3.38E-03	3.38E-03	3.38E-03	1.01E-02
5-0300	26-HQ Building-A05	Dual Fuel	0	35534.8	6.40E-02	1.07E-03	1.49E-01	9.77E-03	2.13E+02	4.05E-03	3.91E-03	3.38E-03	3.38E-03	3.38E-03	1.01E-02
5-0301	26-GMS Lab-A01	Dual Fuel	0	37366	6.73E-02	1.12E-03	1.57E-01	1.03E-02	2.24E+02	4.30E-03	4.11E-03	3.55E-03	3.55E-03	3.55E-03	1.08E-02
5-0301	26-GMS Lab-A02	Dual Fuel	0	37366	6.73E-02	1.12E-03	1.57E-01	1.03E-02	2.24E+02	4.30E-03	4.11E-03	3.55E-03	3.55E-03	3.55E-03	1.08E-02
5-0301	26-GMS Lab-A03	Dual Fuel	0	37366	6.73E-02	1.12E-03	1.57E-01	1.03E-02	2.24E+02	4.30E-03	4.11E-03	3.55E-03	3.55E-03	3.55E-03	1.08E-02
5-0299	26-GMS Tower-A01	Dual Fuel	0	14955	2.69E-02	4.49E-04	6.28E-02	4.11E-03	8.97E+01	1.72E-03	1.65E-03	1.42E-03	1.42E-03	1.42E-03	4.26E-03
5-0299	26-GMS Tower-A02	Dual Fuel	0	14955	2.69E-02	4.49E-04	6.28E-02	4.11E-03	8.97E+01	1.72E-03	1.65E-03	1.42E-03	1.42E-03	1.42E-03	4.26E-03
5-0299	26-GMS Tower-A03	Dual Fuel	0	14955	2.69E-02	4.49E-04	6.28E-02	4.11E-03	8.97E+01	1.72E-03	1.65E-03	1.42E-03	1.42E-03	1.42E-03	4.26E-03
5-0298	26-C2CNT West-A01	Dual Fuel	0	46775.25	8.42E-02	1.40E-03	1.96E-01	1.29E-02	2.81E+02	5.38E-03	5.15E-03	4.44E-03	4.44E-03	4.44E-03	1.33E-02
5-0298	26-C2CNT West-A02	Dual Fuel	0	46775.25	8.42E-02	1.40E-03	1.96E-01	1.29E-02	2.81E+02	5.38E-03	5.15E-03	4.44E-03	4.44E-03	4.44E-03	1.33E-02
5-0298	26-C2CNT West-A03	Dual Fuel	0	46775.25	8.42E-02	1.40E-03	1.96E-01	1.29E-02	2.81E+02	5.38E-03	5.15E-03	4.44E-03	4.44E-03	4.44E-03	1.33E-02
5-0298	26-C2CNT West-A04	Dual Fuel	0	46775.25	8.42E-02	1.40E-03	1.96E-01	1.29E-02	2.81E+02	5.38E-03	5.15E-03	4.44E-03	4.44E-03	4.44E-03	1.33E-02
5-0298	26-0345-A01	Dual Fuel	0	227082	1.14E+00	6.81E-03	9.54E-01	6.24E-02	1.36E+03	2.61E-02	2.50E-02	2.16E-02	2.16E-02	2.16E-02	6.47E-02
5-0080	26-0345-A02	Dual Fuel	0	227082	1.14E+00	6.81E-03	9.54E-01	6.24E-02	1.36E+03	2.61E-02	2.50E-02	2.16E-02	2.16E-02	2.16E-02	6.47E-02
5-0081	26-0345-A03	Dual Fuel	0	227082	1.14E+00	6.81E-03	9.54E-01	6.24E-02	1.36E+03	2.61E-02	2.50E-02	2.16E-02	2.16E-02	2.16E-02	6.47E-02
5-0152	26-3062-A01	Dual Fuel	0	33087	1.65E-01	9.93E-04	1.39E-01	9.10E-03	1.99E+02	3.81E-03	3.64E-03	3.14E-03	3.14E-03	3.14E-03	9.43E-03
5-0167	26-03062-A01	Dual Fuel	0	33087	1.65E-01	9.93E-04	1.39E-01	9.10E-03	1.99E+02	3.81E-03	3.64E-03	3.14E-03	3.14E-03	3.14E-03	9.43E-03
5-0085	26-4600-A06	Dual Fuel	334	249088.3333	1.29E+00	8.67E-03	1.05E+00	6.86E-02	1.50E+03	2.87E-02	2.74E-02	2.38E-02	2.38E-02	2.38E-02	7.12E-02
5-0370	26-4600-A09	Dual Fuel	334	249088.3333	1.25E+00	8.67E-03	1.05E+00	6.86E-02	1.50E+03	2.87E-02	2.74E-02	2.38E-02	2.38E-02	2.38E-02	7.12E-02
5-0087	26-5014-A08	Dual Fuel	0	12368	6.18E-02	3.71E-04	5.19E-02	3.40E-03	7.42E+01	1.42E-03	1.36E-03	1.17E-03	1.17E-03	1.17E-03	3.52E-03
5-0164	26-5014-A01	Dual Fuel	0	12368	6.18E-02	3.71E-04	5.19E-02	3.40E-03	7.42E+01	1.42E-03	1.36E-03	1.17E-03	1.17E-03	1.17E-03	3.52E-03
5-0165	26-5014-A02	Dual Fuel	0	12368	6.18E-02	3.71E-04	5.19E-02	3.40E-03	7.42E+01	1.42E-03	1.36E-03	1.17E-03	1.17E-03	1.17E-03	3.52E-03
4-0619	26-0030-A01	Fuel Oil	5138.5	0	5.14E-02	1.85E-02	1.28E-02	8.74E-04	5.73E+01	5.55E-04	6.68E-04	5.14E-04	2.77E-04	2.13E-04	3.34E-04
4-0619	26-0030-A02	Fuel Oil	5138.5	0	5.14E-02	1.85E-02	1.28E-02	8.74E-04	5.73E+01	5.55E-04	6.68E-04	5.14E-04	2.77E-04	2.13E-04	3.34E-04
4-0619	26-0045-A01	Fuel Oil	1130.2	0	1.13E-02	4.07E-03	2.83E-03	1.92E-04	1.26E+01	1.22E-04	1.47E-04	1.13E-04	6.10E-05	4.69E-05	7.39E-05
4-0619	26-0045-A02	Fuel Oil	1130.2	0	1.13E-02	4.07E-03	2.83E-03	1.92E-04	1.26E+01	1.22E-04	1.47E-04	1.13E-04	6.10E-05	4.69E-05	7.39E-05
4-0619	26-0322-A01	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**ACTUAL EMISSION CALCULATIONS CY2021
BOILERS**

MDE Reg. Number	Emissions Unit No.	Type of Boiler	Oil/Propane Used (gal)	Gas Used (Therm)	NOx (tpy)	SOx (tpy)	CO (tpy)	VOC (tpy)	CO2 (tpy)	CH4 (tpy)	N2O (tpy)	PM Filterable*	PM-10 Filterable*	PM-2.5 Filterable*	PM Condensable*
4-0619	26-0384-A01	Fuel Oil	6233.9	0	6.23E-02	2.24E-02	1.58E-02	1.06E-03	6.95E+01	6.73E-04	8.10E-04	6.23E-04	3.37E-04	2.59E-04	4.05E-04
4-0619	0390-A01	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-0619	0402-A03	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-0709	26-0392-A01	Fuel Oil	2618.7	0	2.62E-02	9.43E-03	6.55E-03	4.45E-04	2.92E+01	2.83E-04	3.40E-04	2.62E-04	1.41E-04	1.09E-04	1.70E-04
4-0708	26-0394-A01	Fuel Oil	5737.5	0	5.74E-02	2.07E-02	1.43E-02	9.75E-04	6.40E+01	7.46E-04	7.46E-04	5.74E-04	3.10E-04	2.38E-04	3.73E-04
4-0546	0400-A01	Fuel Oil	4559	0	4.56E-02	1.64E-02	1.14E-02	7.75E-04	5.08E+01	4.92E-04	5.93E-04	4.56E-04	2.46E-04	1.89E-04	2.96E-04
4-0619	26-0439-A01	Fuel Oil	5183.4	0	5.18E-02	1.87E-02	1.30E-02	8.81E-04	5.79E+01	5.60E-04	6.74E-04	5.18E-04	2.80E-04	2.15E-04	3.37E-04
4-0707	26-0445-A01	Fuel Oil	5062.5	0	5.06E-02	1.82E-02	1.27E-02	8.61E-04	5.64E+01	5.47E-04	6.58E-04	5.06E-04	2.73E-04	2.10E-04	3.29E-04
4-0722	26-0449-A01	Fuel Oil	7388.9	0	7.39E-02	2.66E-02	1.85E-02	1.26E-03	8.24E+01	7.98E-04	9.61E-04	7.39E-04	3.99E-04	3.07E-04	4.80E-04
4-0619	26-0456-A01	Fuel Oil	5216.4	0	5.22E-02	1.88E-02	1.10E-02	8.87E-04	5.82E+01	5.63E-04	6.78E-04	5.82E-04	2.82E-04	2.16E-04	3.39E-04
4-0717	0507-A05	Fuel Oil	28382.5	0	2.84E-01	1.02E-01	7.10E-02	4.83E-03	3.16E+02	3.07E-03	3.69E-03	2.84E-03	1.53E-03	1.18E-03	1.84E-03
5-0104	0507-A04	Fuel Oil	28382.5	0	2.84E-01	1.02E-01	7.10E-02	4.83E-03	3.16E+02	3.07E-03	3.69E-03	2.84E-03	1.53E-03	1.18E-03	1.84E-03
4-0689	26-0642-A01	Fuel Oil	6495.7	0	6.50E-02	2.34E-02	1.62E-02	1.10E-03	7.24E+01	7.02E-04	8.44E-04	6.50E-04	3.51E-04	2.70E-04	4.22E-04
4-0721	26-0643-A01	Fuel Oil	4676	0	4.68E-02	1.68E-02	1.17E-02	7.95E-04	5.21E+01	5.05E-04	6.08E-04	5.21E-04	2.53E-04	1.94E-04	3.04E-04
4-0619	26-0644-A01	Fuel Oil	4690.1	0	4.69E-02	1.69E-02	1.17E-02	7.97E-04	5.23E+01	5.07E-04	6.10E-04	4.69E-04	2.53E-04	1.95E-04	3.05E-04
4-0719	26-0670-A01	Fuel Oil	5160.4	0	5.16E-02	1.88E-02	1.29E-02	8.77E-04	5.75E+01	5.57E-04	6.71E-04	5.16E-04	2.79E-04	2.14E-04	3.35E-04
4-0720	26-0688-A01	Fuel Oil	2577.8	0	2.58E-02	9.28E-03	6.44E-03	4.38E-04	2.87E+01	2.78E-04	3.35E-04	2.58E-04	1.39E-04	1.07E-04	1.68E-04
4-0619	26-0699A-A01	Fuel Oil	20264	0	2.03E-01	7.30E-02	5.07E-02	3.44E-03	2.26E+02	2.19E-03	2.63E-03	2.03E-03	1.09E-03	8.41E-04	1.32E-03
4-0619	26-0700-A01	Fuel Oil	2373.5	0	2.37E-02	8.54E-03	5.93E-03	4.03E-04	2.65E+01	2.56E-04	3.09E-04	2.37E-04	1.28E-04	9.85E-05	1.54E-04
4-0619	26-0702-A01	Fuel Oil	2846.4	0	2.85E-02	1.02E-02	7.12E-03	4.84E-04	3.17E+01	3.07E-04	3.70E-04	2.85E-04	1.54E-04	1.18E-04	1.85E-04
4-0619	26-0745A-A01	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-0619	26-0860-A01	Fuel Oil	1931.6	0	1.93E-02	6.95E-03	4.83E-03	3.28E-04	2.15E+01	2.09E-04	2.51E-04	1.93E-04	1.04E-04	8.02E-05	1.26E-04
4-0619	26-0896-A01	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-0619	26-1064-A01	Fuel Oil	16984.5	0	1.70E-01	6.11E-02	4.25E-02	2.89E-03	1.89E+02	1.83E-03	2.21E-03	1.70E-03	9.17E-04	7.05E-04	1.10E-03
4-0619	26-1064-A02	Fuel Oil	16984.5	0	1.70E-01	6.11E-02	4.25E-02	2.89E-03	1.89E+02	1.83E-03	2.21E-03	1.70E-03	9.17E-04	7.05E-04	1.10E-03
4-0619	26-1134-A01	Fuel Oil	435.2	0	4.35E-03	1.57E-03	1.09E-03	7.40E-05	4.85E+00	4.70E-05	5.66E-05	4.35E-05	2.35E-05	1.81E-05	2.83E-05
4-0619	26-2184-A01	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-0619	26-2207-A03	Fuel Oil	1602.2	0	1.60E-02	5.77E-03	4.01E-03	2.72E-04	1.79E+01	1.73E-04	2.08E-04	1.60E-04	8.65E-05	6.65E-05	1.04E-04
4-0619	26-2377-A01	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-0619	26-2377-A02	Fuel Oil	10029	0	1.00E-01	3.61E-02	2.51E-02	1.70E-03	1.12E+02	1.08E-03	1.30E-03	1.00E-03	5.42E-04	4.16E-04	6.52E-04
4-0619	26-2379-A01	Fuel Oil	3514.7	0	3.51E-02	1.27E-02	8.79E-03	5.97E-04	3.92E+01	3.80E-04	4.57E-04	3.51E-04	1.90E-04	1.46E-04	2.28E-04
4-0619	26-0269B-A01	Fuel Oil	6366.8	0	6.37E-02	2.29E-02	1.59E-02	1.08E-03	7.10E+01	6.88E-04	8.28E-04	6.37E-04	3.44E-04	2.64E-04	4.14E-04
4-0619	26-0280B-A01	Fuel Oil	6145.1	0	6.15E-02	2.21E-02	1.54E-02	1.04E-03	6.85E+01	6.64E-04	7.99E-04	6.15E-04	3.32E-04	2.55E-04	3.99E-04
4-0619	26-3011-A01	Fuel Oil	5643.8	0	5.54E-02	2.00E-02	1.39E-02	9.42E-04	6.18E+01	5.98E-04	7.21E-04	5.54E-04	2.99E-04	2.30E-04	3.60E-04
4-0619	3070-A01	Fuel Oil	28586	0	2.86E-01	1.03E-01	7.15E-02	4.86E-03	3.19E+02	3.09E-03	3.72E-03	2.86E-03	1.54E-03	1.19E-03	1.86E-03
4-0619	26-4725-A01	Fuel Oil	9385.5	0	9.39E-02	3.38E-02	2.35E-02	1.60E-03	1.05E+02	1.01E-03	1.22E-03	9.39E-04	5.07E-04	3.89E-04	6.10E-04
4-0619	26-4728-A02	Fuel Oil	13932	0	1.39E-01	5.02E-02	3.48E-02	2.37E-03	1.55E+02	1.50E-03	1.81E-03	1.39E-03	7.52E-04	5.78E-04	9.08E-04
4-0724	Blkg 906C - pending	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-0619	5046-A01	Fuel Oil	6167	0	6.17E-02	2.22E-02	1.54E-02	1.05E-03	6.88E+01	6.68E-04	8.02E-04	6.17E-04	3.33E-04	2.56E-04	4.01E-04
4-0619	26-5109-A01	Fuel Oil	2558.9	0	2.56E-02	9.21E-03	6.40E-03	4.35E-04	2.85E+01	2.78E-04	3.33E-04	2.56E-04	1.38E-04	1.06E-04	1.68E-04
4-0619	26-5116-A01	Fuel Oil	6144.5	0	6.14E-02	2.21E-02	1.54E-02	1.04E-03	6.85E+01	6.64E-04	7.99E-04	6.14E-04	3.32E-04	2.55E-04	3.99E-04
4-0619	26-0733A-A01	Fuel Oil	2887.1	0	2.89E-02	1.04E-02	7.22E-03	4.91E-04	3.22E+01	3.12E-04	3.75E-04	2.89E-04	1.56E-04	1.20E-04	1.88E-04
4-0619	26-0740B-A01	Fuel Oil	2225	0	2.23E-02	8.01E-03	5.56E-03	3.78E-04	2.48E+01	2.40E-04	2.89E-04	2.23E-04	1.20E-04	9.23E-05	1.45E-04
4-0619	26-0740C-A01	Fuel Oil	5479.4	0	5.48E-02	1.97E-02	1.37E-02	9.31E-04	6.11E+01	5.92E-04	7.12E-04	5.48E-04	2.96E-04	2.27E-04	3.56E-04
4-0619	26-1100F-A01	Fuel Oil	421.5	0	4.22E-03	1.52E-03	1.05E-03	7.17E-05	4.70E+00	4.59E-05	5.48E-05	4.22E-05	2.28E-05	1.75E-05	2.74E-05
4-0619	26-745A-A01	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-0619	26-2312-A02	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-0692	Atmospheric Burner # F-24	Fuel Oil	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5-0352	0367-A01	Propane	1345.7	0	8.75E-03	3.63E-05	5.05E-03	5.38E-04	8.41E+00	1.35E-04	6.06E-04	1.35E-04	7.27E-05	5.58E-05	8.75E-05
Totals					1.59E+01	1.29E+00	1.27E+01	8.38E-01	2.07E+04	3.62E-01	3.56E-01	3.29E-01	3.01E-01	2.94E-01	8.48E-01

ACTUAL EMISSION CALCULATIONS
CY 2022
EMERGENCY GENERATORS

Emission Unit Number	MDE Reg. Number	HP	Capacity Factor	Hours/Yr	Emission Rates									
					NOx		SOx		CO		VOC			
					tpy	lb/day	tpy	lb/day	tpy	lb/day	tpy	lb/day	tpy	lb/day
0120-01	9-0409	2922	0.17%	15.0	5.05E-01	8.42E+01	2.39E-04	3.98E-02	1.34E-01	2.24E+01	1.29E-02	2.15E+00		
0120-02	9-0433	2922	0.17%	14.7	4.95E-01	8.25E+01	2.34E-04	3.90E-02	1.31E-01	2.19E+01	1.27E-02	2.11E+00		
0120-03	9-0434	2922	0.16%	14.0	4.71E-01	7.85E+01	2.23E-04	3.72E-02	1.25E-01	2.09E+01	1.21E-02	2.01E+00		
Bldg 120 - Gen. #1	9-0503	2922	0.16%	13.9	4.68E-01	7.80E+01	2.22E-04	3.69E-02	1.24E-01	2.07E+01	1.20E-02	2.00E+00		
Bldg 120 - Gen. #2	9-0504	2922	0.17%	14.6	4.91E-01	8.19E+01	2.33E-04	3.88E-02	1.31E-01	2.18E+01	1.26E-02	2.10E+00		
3090-01	9-0410	2923	0.31%	27.2	9.16E-01	1.53E+02	4.34E-04	7.23E-02	2.43E-01	4.05E+01	2.34E-02	3.91E+00		
0316-01	9-0408	2922	0.21%	18.5	6.23E-01	1.04E+02	2.95E-04	4.91E-02	1.65E-01	2.76E+01	1.59E-02	2.66E+00		
03-0328-A03	9-0418	804.6	0.12%	10.1	9.36E-02	1.56E+01	4.43E-05	7.39E-03	2.49E-02	4.14E+00	2.40E-03	3.99E-01		
03-0328-A02	9-0414	670.5	0.09%	7.6	5.87E-02	9.78E+00	2.78E-05	4.63E-03	1.56E-02	2.60E+00	1.50E-03	2.50E-01		
03-0328-A01	9-0229	1072	0.19%	17.0	2.10E-01	3.50E+01	9.94E-05	1.66E-02	5.58E-02	9.29E+00	5.37E-03	8.96E-01		
03-0394-A01	9-0227	1341	0.25%	22.0	3.40E-01	5.66E+01	1.61E-04	2.68E-02	9.03E-02	1.50E+01	8.70E-03	1.45E+00		
03-0394-A02	9-0228	1341	0.24%	21.0	3.24E-01	5.41E+01	1.54E-04	2.56E-02	8.62E-02	1.44E+01	8.30E-03	1.38E+00		
03-0394-A03	9-0386	750	0.24%	21.0	1.81E-01	3.02E+01	8.59E-05	1.43E-02	4.82E-02	8.03E+00	6.54E-03	7.74E-01		
03-0394-A04	9-0387	750	0.18%	16.0	1.38E-01	2.30E+01	6.54E-05	1.09E-02	3.67E-02	6.12E+00	3.54E-03	5.90E-01		
03-0394-A05	9-0388	750	0.00%	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
03-0394-A06	9-0389	750	0.25%	22.0	1.90E-01	3.17E+01	9.00E-05	1.50E-02	5.05E-02	8.42E+00	4.86E-03	8.11E-01		
03-0394-A07	9-0390	750	0.00%	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
03-4600-A04	9-0276	1877	0.35%	31.0	6.70E-01	1.12E+02	3.17E-04	5.29E-02	1.78E-01	2.97E+01	1.72E-02	2.86E+00		
03-4600-A05	9-0277	1877	0.34%	30.1	6.51E-01	1.08E+02	3.08E-04	5.14E-02	1.73E-01	2.88E+01	1.67E-02	2.78E+00		
6009-01	9-0412	1502	0.14%	12.5	2.16E-01	3.60E+01	1.02E-04	1.71E-02	5.75E-02	9.58E+00	5.54E-03	9.23E-01		
6010-01	9-0411	2937	0.15%	13.0	4.40E-01	7.33E+01	2.08E-04	3.47E-02	1.17E-01	1.95E+01	1.13E-02	1.88E+00		
6010-02	9-0411	2937	0.09%	8.0	2.71E-01	4.51E+01	1.28E-04	2.14E-02	7.19E-02	1.20E+01	6.93E-03	1.15E+00		
LWE-01	9-0436	550	1.31%	115.0	7.29E-01	1.21E+02	3.45E-04	5.75E-02	1.94E-01	3.23E+01	1.86E-02	3.11E+00		
LWE-02	9-0436	550	1.30%	114.0	7.22E-01	1.20E+02	3.42E-04	5.70E-02	1.92E-01	3.20E+01	1.85E-02	3.08E+00		
LWE-03	9-0436	550	1.31%	115.0	7.29E-01	1.21E+02	3.45E-04	5.75E-02	1.94E-01	3.23E+01	1.86E-02	3.11E+00		
LWE-04	9-0436	550	1.34%	117.0	7.41E-01	1.24E+02	3.51E-04	5.85E-02	1.97E-01	3.28E+01	1.90E-02	3.16E+00		
LWE-05	9-0436	550	1.32%	116.0	7.35E-01	1.22E+02	3.48E-04	5.80E-02	1.95E-01	3.25E+01	1.88E-02	3.14E+00		
26-GMS-Lab-A04	9-0393	3778	0.07%	6.0	2.18E-01	3.63E+01	1.24E-04	2.06E-02	7.26E-02	3.76E+00	3.97E-03	6.62E-01		
26-C2CNTWest-A05	9-0394	2200	0.14%	12.0	1.90E-01	3.17E+01	1.44E-04	2.40E-02	7.77E-03	1.29E+00	3.41E-03	5.69E-01		
26-GMS Tower-A04	9-0395	2200	0.01%	1.0	1.58E-02	2.64E+00	1.20E-05	2.00E-03	6.47E-04	1.08E-01	2.84E-04	4.74E-02		
26-HQBuilding-A06	9-0396	2922	0.02%	2.0	3.93E-02	6.55E+00	3.19E-05	5.31E-03	2.58E-03	4.30E-01	1.02E-03	1.71E-01		
Bldg 5016 - pending	9-0510	2346	0.04%	3.8	1.03E-01	1.71E+01	4.86E-05	8.10E-03	2.73E-02	4.55E+00	2.63E-03	4.38E-01		
Bldg 5046 - pending	9-0511	617	0.02%	1.5	1.07E-02	1.78E+00	5.05E-06	8.41E-04	2.83E-03	4.72E-01	2.73E-04	4.55E-02		
BSS-01	9-0435	600	2.84%	248.5	1.72E+00	2.86E+02	8.13E-04	1.36E-01	4.56E-01	7.60E+01	4.40E-02	7.33E+00		
UTF-01	9-0437	500	0.39%	34.4	1.98E-01	3.31E+01	9.39E-05	1.56E-02	5.27E-02	8.78E+00	5.08E-03	8.46E-01		
0311-01	9-0419	600	0.12%	10.7	7.40E-02	1.23E+01	3.50E-05	5.84E-03	1.96E-02	3.27E+00	1.89E-03	3.15E-01		
3147-A01	9-0491	670	0.00%	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
2202-01	9-0499	755	0.22%	19.7	1.71E-01	2.86E+01	8.11E-05	1.35E-02	4.55E-02	7.59E+00	4.39E-03	7.31E-01		
3660-01	9-0500	643	0.04%	3.8	2.81E-02	4.69E+00	1.33E-05	2.22E-03	7.48E-03	1.25E+00	7.20E-04	1.20E-01		
				Total	1.42E+01	2.36E+03	6.80E-03	1.13E+00	3.68E+00	6.13E+02	3.60E-01	5.99E+01		

ACTUAL EMISSION CALCULATIONS
CY 2022
EMERGENCY GENERATORS

Emission Unit Number	MDE Reg. Number	HP	Capacity Factor	Hours/Yr	Emission Rates									
					PM (filterable)		PM-10 (filterable)		PM-2.5 (filterable)		PM Condensable			
					tpy	lb/day	tpy	lb/day	tpy	lb/day	tpy	lb/day		
0120-01	9-0409	2922	0.17%	15.0	9.78E-03	1.63E+00	7.83E-03	1.30E+00	7.56E-03	1.26E+00	1.21E-03	2.02E-01		
0120-02	9-0433	2922	0.17%	14.7	9.59E-03	1.60E+00	7.67E-03	1.28E+00	7.41E-03	1.23E+00	1.19E-03	1.98E-01		
0120-03	9-0434	2922	0.16%	14.0	9.13E-03	1.52E+00	7.30E-03	1.22E+00	7.05E-03	1.18E+00	1.13E-03	1.89E-01		
Bldg 120 - Gen. #1	9-0503	2922	0.16%	13.9	9.03E-03	1.51E+00	7.25E-03	1.21E+00	7.00E-03	1.17E+00	1.13E-03	1.88E-01		
Bldg 120 - Gen. #2	9-0504	2922	0.17%	14.6	9.52E-03	1.59E+00	7.62E-03	1.27E+00	7.36E-03	1.23E+00	1.18E-03	1.97E-01		
3090-01	9-0410	2923	0.31%	27.2	1.77E-02	2.96E+00	1.42E-02	2.37E+00	1.37E-02	2.28E+00	2.20E-03	3.67E-01		
0316-01	9-0408	2922	0.21%	18.5	1.21E-02	2.01E+00	9.65E-03	1.61E+00	9.32E-03	1.55E+00	1.50E-03	2.50E-01		
03-0328-A03	9-0418	804.6	0.12%	10.1	1.81E-03	3.02E-01	1.45E-03	2.42E-01	1.40E-03	2.34E-01	2.25E-04	3.75E-02		
03-0328-A02	9-0414	670.5	0.09%	7.6	1.14E-03	1.90E-01	9.10E-04	1.52E-01	8.79E-04	1.46E-01	1.41E-04	2.35E-02		
03-0328-A01	9-0229	1072	0.19%	17.0	4.07E-03	6.78E-01	3.25E-03	5.42E-01	3.14E-03	5.24E-01	5.05E-04	8.42E-02		
03-0394-A01	9-0227	1341	0.25%	22.0	6.58E-03	1.10E+00	5.27E-03	8.78E-01	5.09E-03	8.48E-01	8.18E-04	1.36E-01		
03-0394-A02	9-0228	1341	0.24%	21.0	6.29E-03	1.05E+00	5.03E-03	8.38E-01	4.86E-03	8.09E-01	7.81E-04	1.30E-01		
03-0394-A03	9-0386	750	0.24%	21.0	3.52E-03	5.86E-01	2.81E-03	4.69E-01	2.72E-03	4.53E-01	4.37E-04	7.28E-02		
03-0394-A04	9-0387	750	0.18%	16.0	2.68E-03	4.46E-01	2.14E-03	3.57E-01	2.07E-03	3.45E-01	3.33E-04	5.54E-02		
03-0394-A05	9-0388	750	0.00%	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
03-0394-A06	9-0389	750	0.25%	22.0	3.68E-03	6.14E-01	2.95E-03	4.91E-01	2.85E-03	4.74E-01	4.57E-04	7.62E-02		
03-0394-A07	9-0390	750	0.00%	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
03-4600-A04	9-0276	1877	0.35%	31.0	1.30E-02	2.16E+00	1.04E-02	1.73E+00	1.00E-02	1.67E+00	1.61E-03	2.69E-01		
03-4600-A05	9-0277	1877	0.34%	30.1	1.26E-02	2.10E+00	1.01E-02	1.68E+00	9.74E-03	1.62E+00	1.57E-03	2.61E-01		
6009-01	9-0412	1502	0.14%	12.5	4.19E-03	6.98E-01	3.35E-03	5.59E-01	3.24E-03	5.40E-01	5.20E-04	8.67E-02		
6010-01	9-0411	2937	0.15%	13.0	8.52E-03	1.42E+00	6.82E-03	1.14E+00	6.58E-03	1.10E+00	1.06E-03	1.76E-01		
6010-02	9-0411	2937	0.09%	8.0	5.24E-03	8.74E-01	4.20E-03	6.99E-01	4.05E-03	6.75E-01	6.51E-04	1.09E-01		
LWE-01	9-0436	550	1.31%	115.0	1.41E-02	2.35E+00	1.13E-02	1.88E+00	1.09E-02	1.82E+00	1.75E-03	2.92E-01		
LWE-02	9-0436	550	1.30%	114.0	1.40E-02	2.35E+00	1.12E-02	1.87E+00	1.08E-02	1.80E+00	1.74E-03	2.90E-01		
LWE-03	9-0436	550	1.31%	115.0	1.41E-02	2.35E+00	1.13E-02	1.88E+00	1.09E-02	1.82E+00	1.75E-03	2.92E-01		
LWE-04	9-0436	550	1.34%	117.0	1.44E-02	2.39E+00	1.15E-02	1.92E+00	1.11E-02	1.85E+00	1.78E-03	2.97E-01		
LWE-05	9-0436	550	1.32%	116.0	1.42E-02	2.37E+00	1.14E-02	1.90E+00	1.10E-02	1.83E+00	1.77E-03	2.95E-01		
26-GMS-Lab-A04	9-0393	3778	0.07%	6.0	5.06E-03	8.43E-01	4.05E-03	6.75E-01	3.91E-03	6.51E-01	6.28E-04	1.05E-01		
26-C2CNTWest-A05	9-0394	2200	0.14%	12.0	5.89E-03	9.82E-01	4.71E-03	7.86E-01	4.55E-03	7.59E-01	7.32E-04	1.22E-01		
26-GMS Tower-A04	9-0395	2200	0.01%	1.0	4.91E-04	8.18E-02	3.93E-04	6.55E-02	3.79E-04	6.32E-02	6.10E-05	1.02E-02		
26-HQBuilding-A06	9-0396	2922	0.02%	2.0	1.30E-03	2.17E-01	1.04E-03	1.74E-01	1.01E-03	1.68E-01	1.62E-04	2.70E-02		
Bldg 5016 - pending	9-0510	2346	0.04%	3.8	1.99E-03	3.32E-01	1.59E-03	2.65E-01	1.54E-03	2.56E-01	2.47E-04	4.12E-02		
Bldg 5046 - pending	9-0511	617	0.02%	1.5	2.07E-04	3.44E-02	1.65E-04	2.75E-02	1.60E-04	2.66E-02	2.57E-05	4.28E-03		
BSS-01	9-0435	600	2.84%	248.5	3.33E-02	5.55E+00	2.66E-02	4.44E+00	2.57E-02	4.29E+00	4.13E-03	6.89E-01		
UTF-01	9-0437	500	0.39%	34.4	3.84E-03	6.40E-01	3.07E-03	5.12E-01	2.97E-03	4.95E-01	4.77E-04	7.95E-02		
0311-01	9-0419	600	0.12%	10.7	1.43E-03	2.39E-01	1.15E-03	1.91E-01	1.11E-03	1.85E-01	1.78E-04	2.97E-02		
3147-A01	9-0491	670	0.00%	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
2202-01	9-0499	755	0.22%	19.7	3.32E-03	5.53E-01	2.66E-03	4.43E-01	2.56E-03	4.27E-01	4.12E-04	6.87E-02		
3660-01	9-0500	643	0.04%	3.8	5.45E-04	9.09E-02	4.36E-04	7.27E-02	4.21E-04	7.02E-02	6.77E-05	1.13E-02		
				Total	2.78E-01	4.64E+01	2.23E-01	3.71E+01	2.15E-01	3.58E+01	3.46E-02	5.76E+00		

ACTUAL EMISSION CALCULATIONS
CY 2022
EMERGENCY GENERATORS

Emission Unit Number	MDE Reg. Number	HP	Capacity Factor	Hours/Yr	Emission Rates					
					CO2		CH4		N2O	
					tpy	lb/day	tpy	lb/day	tpy	lb/day
0120-01	9-0409	2922	0.17%	15.0	2.57E+01	4.29E+03	1.04E-03	1.74E-01	2.09E-04	3.48E-02
0120-02	9-0433	2922	0.17%	14.7	2.52E+01	4.20E+03	1.02E-03	1.70E-01	2.05E-04	3.41E-02
0120-03	9-0434	2922	0.16%	14.0	2.40E+01	4.00E+03	9.74E-04	1.62E-01	1.95E-04	3.25E-02
Bldg 120 - Gen. #1	9-0503	2922	0.16%	13.9	2.38E+01	3.97E+03	9.67E-04	1.61E-01	1.93E-04	3.22E-02
Bldg 120 - Gen. #2	9-0504	2922	0.17%	14.6	2.50E+01	4.17E+03	1.02E-03	1.69E-01	2.03E-04	3.39E-02
3090-01	9-0410	2923	0.31%	27.2	4.67E+01	7.78E+03	1.89E-03	3.16E-01	3.79E-04	6.31E-02
0316-01	9-0408	2922	0.21%	18.5	3.17E+01	5.29E+03	1.29E-03	2.15E-01	2.57E-04	4.29E-02
03-0328-A03	9-0418	804.6	0.12%	10.1	4.77E+00	7.95E+02	1.93E-04	3.22E-02	3.87E-05	6.45E-03
03-0328-A02	9-0414	670.5	0.09%	7.6	2.99E+00	4.99E+02	1.21E-04	2.02E-02	2.43E-05	4.04E-03
03-0328-A01	9-0229	1072	0.19%	17.0	1.07E+01	1.78E+03	4.34E-04	7.23E-02	8.68E-05	1.45E-02
03-0394-A01	9-0227	1341	0.25%	22.0	1.73E+01	2.89E+03	7.02E-04	1.17E-01	1.40E-04	2.34E-02
03-0394-A02	9-0228	1341	0.24%	21.0	1.65E+01	2.76E+03	6.71E-04	1.12E-01	1.34E-04	2.24E-02
03-0394-A03	9-0386	750	0.24%	21.0	9.25E+00	1.54E+03	3.75E-04	6.25E-02	7.50E-05	1.25E-02
03-0394-A04	9-0387	750	0.18%	16.0	7.04E+00	1.17E+03	2.86E-04	4.76E-02	5.71E-05	9.52E-03
03-0394-A05	9-0388	750	0.00%	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
03-0394-A06	9-0389	750	0.25%	22.0	9.69E+00	1.61E+03	3.93E-04	6.55E-02	7.86E-05	1.31E-02
03-0394-A07	9-0390	750	0.00%	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
03-4600-A04	9-0276	1877	0.35%	31.0	3.42E+01	5.69E+03	1.39E-03	2.31E-01	2.77E-04	4.62E-02
03-4600-A05	9-0277	1877	0.34%	30.1	3.32E+01	5.53E+03	1.35E-03	2.24E-01	2.69E-04	4.48E-02
6009-01	9-0412	1502	0.14%	12.5	1.10E+01	1.84E+03	4.47E-04	7.45E-02	8.94E-05	1.49E-02
6010-01	9-0411	2937	0.15%	13.0	2.24E+01	3.74E+03	9.09E-04	1.52E-01	1.82E-04	3.03E-02
6010-02	9-0411	2937	0.09%	8.0	1.38E+01	2.30E+03	5.99E-04	9.32E-02	1.12E-04	1.86E-02
LWE-01	9-0436	550	1.31%	115.0	3.71E+01	6.19E+03	1.51E-03	2.51E-01	3.01E-04	5.02E-02
LWE-02	9-0436	550	1.30%	114.0	3.68E+01	6.13E+03	1.49E-03	2.49E-01	2.99E-04	4.98E-02
LWE-03	9-0436	550	1.31%	115.0	3.71E+01	6.19E+03	1.51E-03	2.51E-01	3.01E-04	5.02E-02
LWE-04	9-0436	550	1.34%	117.0	3.78E+01	6.30E+03	1.53E-03	2.55E-01	3.06E-04	5.11E-02
LWE-05	9-0436	550	1.32%	116.0	3.75E+01	6.24E+03	1.52E-03	2.53E-01	3.04E-04	5.06E-02
26-GMS-Lab-A04	9-0393	3778	0.07%	6.0	1.33E+01	2.22E+03	5.40E-04	9.00E-02	1.08E-04	1.80E-02
26-C2CNTWest-A05	9-0394	2200	0.14%	12.0	1.55E+01	2.58E+03	6.29E-04	1.05E-01	1.26E-04	2.10E-02
26-GMS Tower-A04	9-0395	2200	0.01%	1.0	1.29E+00	2.15E+02	5.24E-05	8.73E-03	1.05E-05	1.75E-03
26-HQBuilding-A06	9-0396	2922	0.02%	2.0	3.43E+00	5.72E+02	1.39E-04	2.32E-02	2.78E-05	4.64E-03
Bldg 5016 - pending	9-0510	2346	0.04%	3.8	5.23E+00	8.72E+02	2.12E-04	3.54E-02	4.25E-05	7.08E-03
Bldg 5046 - pending	9-0511	617	0.02%	1.5	5.43E-01	9.05E+01	2.20E-05	3.67E-03	4.41E-06	7.35E-04
BSS-01	9-0435	600	2.84%	248.5	8.75E+01	1.46E+04	3.55E-03	5.92E-01	7.10E-04	1.18E-01
UTF-01	9-0437	500	0.39%	34.4	1.01E+01	1.68E+03	4.10E-04	6.83E-02	8.20E-05	1.37E-02
0311-01	9-0419	600	0.12%	10.7	3.77E+00	6.28E+02	1.53E-04	2.55E-02	3.06E-05	5.10E-03
3147-A01	9-0491	670	0.00%	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2202-01	9-0499	755	0.22%	19.7	8.73E+00	1.46E+03	3.54E-04	5.90E-02	7.08E-05	1.18E-02
3660-01	9-0500	643	0.04%	3.8	1.43E+00	2.39E+02	5.82E-05	9.70E-03	1.16E-05	1.94E-03
				Total	7.32E+02	1.22E+05	2.97E-02	4.95E+00	5.94E-03	9.90E-01

NOTES:
Capacity Factor is calculated as defined in 40 CFR 72.2.
The generator hours shown on Forms 2 and 3 are based on the maintenance schedule, while the hours shown in the table above are the actual operating hours for maintenance and emergency use during the calendar year.

Paint Spray Booth
#1 Log CY2022

Paint Spray Booth (PSB#1: Bldg 0525, 7-00525-A04, MDE Registration # 12-6-0162)

HAPTAP Emissions				Tons/year		lbs/hr					
Material	Constituent	Constituent % by weight (expressed as a decimal)	Density (lb/gal)	Volatile Constituent Emissions (tpy)	Particulate Constituent Emissions (tpy)*	Volatile Constituent Emissions (lb/hr)	Particulate Constituent Emissions (lb/hr)	Reporting Threshold (lb/hr)	Reporting Threshold (tpy)	Report on Form 4 (lb/hr)	Report on Form 4 (tpy)
Adhesion Promoter E90GC101	Diphenylmethane Diisocyanate Polymer	0.0830	28.957		2.10E-05		5.61E-02				
	Xylene	0.0500	28.957	3.62E-04		9.65E-01		1.00E+00	1.00E+01	No	No
	4,4'-Diphenylmethane Diisocyanate	0.0230	28.957		5.83E-06		1.55E-02				
	Light Aromatic Hydrocarbons	0.0200	28.957	1.45E-04		3.86E-01					
	Ethylbenzene	0.0100	28.957	7.24E-05		1.93E-01		1.00E+00	1.00E+01	No	No
	trimethylbenzene	0.0100	28.957	7.24E-05		1.93E-01					
	p-Toluenesulfonyl Isocyanate	0.0100	28.957	7.24E-05		1.93E-01					
	1,3,5-Trimethylbenzene	0.0030	28.957	2.17E-05		5.79E-02					
	1,2,4-Trimethylbenzene	0.0030	28.957	2.17E-05		5.79E-02					
	Diphenylmethane Diisocyanate	0.0030	28.957		7.60E-07		2.03E-03				
Epoxy Primer SW E90A229	Epoxy Polymer	0.0868	8.000		1.07E-04		9.90E-03				
	p-Chlorobenzotrifluoride	0.1174	8.000	4.13E-03		3.83E-01					
	Acetone	0.1011	8.000	3.56E-03		3.30E-01					
	t-Butyl Acetate	0.0584	8.000	2.06E-03		1.90E-01					
	Methyl Propyl ketone	0.0000	8.000	0.00E+00		0.00E+00	0.00E+00				
	Silica, Crystalline - Quartz	0.0000	8.000		0.00E+00						
	Talc (no asbestos)	0.0000	8.000	0.00E+00							
	Titanium Dioxide	0.1912	8.000		2.36E-04		2.18E-02				
	Zinc Oxide	0.0157	8.000		1.93E-05		1.79E-03	1.00E-02	1.00E-01	No	No
	p-Chlorobenzotrifluoride	0.3750	11.099	6.39E-02		3.97E+00					
Green CARC 2 F93G0S116	Hexamethylene Diisocyanate Polymer	0.1750	11.099	2.98E-02		1.85E+00		1.00E-04	1.00E-03	Yes	Yes
	Cobalt Chromite Green Spinel	0.1000	11.099		5.96E-04		3.71E-02	1.00E-03	1.00E-02	No	Yes
	Chromium Oxide	0.1000	11.099		5.96E-04		3.71E-02	1.00E-03	1.00E-02	No	Yes
	Magnesium Ferrite	0.0300	11.099		1.79E-04		1.11E-02				
	Polyester	0.0300	11.099		1.79E-04		1.11E-02				
	Light Aromatic Hydrocarbons	0.0300	11.099	5.11E-03		3.18E-01					
	n-Butyl Acetate	0.0300	11.099	5.11E-03		3.18E-01					
	trimethylbenzene	0.0100	11.099	1.70E-03		1.06E-01					
	Bis(pentamethyl-4-piperidyl)sebacate	0.0100	11.099	1.70E-03		1.06E-01					
	1,3,5-Trimethylbenzene	0.0100	11.099	1.70E-03		1.06E-01					
Green CARC 3 F93G704	1,2,4-Trimethylbenzene	0.0100	11.099	1.70E-03		1.06E-01					
	Pentamethylpiperidyl Sebacate	0.0030	11.099	5.11E-04		3.18E-02		1.00E+00	1.00E+01	No	No
	Xylene	0.0030	11.099	5.11E-04		3.18E-02					
	1,2,3-Trimethylbenzene	0.0030	11.099	5.11E-04		3.18E-02		1.00E+00	1.00E+01	No	No
	Cumene	0.0030	11.099								
	p-Chlorobenzotrifluoride	0.3750	11.015	1.03E-01		3.86E+00					
	Hexamethylene Diisocyanate Polymer	0.1750	11.015	4.82E-02		1.80E+00		1.00E-04	1.00E-03	Yes	Yes
	Cobalt Chromite Green Spinel	0.1000	11.015		9.64E-04		3.60E-02	1.00E-03	1.00E-02	No	Yes
	Chromium Oxide	0.1000	11.015		9.64E-04		3.60E-02	1.00E-03	1.00E-02	No	Yes
	Magnesium Ferrite	0.0300	11.015		2.89E-04		1.08E-02				

Paint Spray Booth
#1 Log CY2021

Paint Spray Booth (PSB#1: Bldg 0525, 7-00525-A04, MDE Registration # 12-6-0162)

HAPTAP Emissions				Tons/year		lbs/hr					
Material	Constituent	Constituent % by weight (expressed as a decimal)	Density (lb/gal)	Volatle Constituent Emissions (tpy)	Particulate Constituent Emissions (tpy)*	Volatle Constituent Emissions (lb/hr)	Particulate Constituent Emissions (lb/hr)	Reporting Threshold (lb/hr)	Reporting Threshold (tpy)	Report on Form 4 (lb/hr)	Report on Form 4 (tpy)
Black CARC 2 F93B0S114	p-Chlorobenzotrifluoride	0.3750	9.847	1.85E-02		3.69E+00		1.00E-04	1.00E-03		Yes
	Hexamethylene Diisocyanate Polymer	0.1750	9.847	8.62E-03		1.72E+00					
	Polyester	0.0300	9.847		5.17E-05		1.03E-02				
	Light Aromatic Hydrocarbons	0.0300	9.847	1.48E-03		2.95E-01					
	n-Butyl Acetate	0.0300	9.847	1.48E-03		2.95E-01					
	trimethylbenzene	0.0100	9.847	4.92E-04		9.85E-02	3.45E-03				
	Carbon Black	0.0100	9.847		1.72E-05						
	Bis(pentamethyl-4-piperidyl)sebacate	0.0100	9.847	4.92E-04		9.85E-02					
	1,3,5-Trimethylbenzene	0.0100	9.847	4.92E-04		9.85E-02					
	1,2,4-Trimethylbenzene	0.0100	9.847	4.92E-04		9.85E-02					
	1,1,2-(Dimethylamino)ethyl-4-methylpiperazine	0.0030	9.847	1.48E-04		2.95E-02					
	Pentamethyliperidyl Sebacate	0.0030	9.847	1.48E-04		2.95E-02					
	Xylene	0.0030	9.847	1.48E-04		2.95E-02		1.00E+00	1.00E+01	No	No
	1,2,3-Trimethylbenzene	0.0030	9.847	1.48E-04		2.95E-02					
	Cumene	0.0030	9.847	1.48E-04		2.95E-02		1.00E+00	1.00E+01	No	No
Tan CARC 2 F93H0S124	p-Chlorobenzotrifluoride	0.3750	10.348	3.88E-03		2.22E+00					
	Hexamethylene Diisocyanate Polymer	0.1750	10.348	1.81E-03		1.03E+00		1.00E-04	1.00E-03	Yes	Yes
	Polyester	0.0300	10.348		1.09E-05		6.21E-03				
	Light Aromatic Hydrocarbons	0.0300	10.348	3.10E-04		1.77E-01					
	n-Butyl Acetate	0.0300	10.348	3.10E-04		1.77E-01					
	trimethylbenzene	0.0100	10.348	1.03E-04		5.91E-02					
	Titanium Dioxide	0.1750	10.348		6.34E-05		3.62E-02				
	Bis(pentamethyl-4-piperidyl)sebacate	0.0100	10.348	1.03E-04		5.91E-02					
	1,3,5-Trimethylbenzene	0.0100	10.348	1.03E-04		5.91E-02					
	1,2,4-Trimethylbenzene	0.0100	10.348	1.03E-04		5.91E-02					
	Isophorone Diisocyanate (max.)	0.0100	10.348	1.03E-04		5.91E-02		1.00E-01	1.00E+00	No	No
	Pentamethyliperidyl Sebacate	0.0030	10.348	3.10E-05		1.77E-02					
	Xylene	0.0030	10.348	3.10E-05		1.77E-02		1.00E+00	1.00E+01	No	No
	1,2,3-Trimethylbenzene	0.0030	10.348	3.10E-05		1.77E-02					
	Cumene	0.0030	10.348	3.10E-05		1.77E-02		1.00E+00	1.00E+01	No	No
Black Epoxy SW B67T204	Xylene	0.0700	11.530	7.06E-04		5.65E-01		1.00E+00	1.00E+01	No	No
	Epoxy Polymer	0.3400	11.530		1.20E-04		9.60E-02				
	1-Methoxy-2-Propanol Acetate	0.0300	11.530	3.03E-04		2.42E-01					
	Butyl Benzyl Phthalate	0.0000	11.530	0.00E+00		0.00E+00					
	Ethyl Benzene	0.0100	11.530	1.01E-04		8.07E-02		1.00E+00	1.00E+01	No	No
	Light Aromatic Hydrocarbons	0.0100	11.530	1.01E-04		8.07E-02					
	Alkyl Glycidyl Ether	0.0300	11.530	3.03E-04		2.42E-01					
	1,2,4-Trimethylbenzene	0.0200	11.530	2.02E-04		1.61E-01					
	Talc, respirable dust	0.1700	11.530		6.00E-05		4.80E-02				
	Crystalline Silica, respirable	0.0020	11.530		7.06E-07		5.65E-04				
	Epoxy Polymer	0.2500	14.090		1.54E-05		6.16E-02				
	Titanium Dioxide	0.2600	14.090		1.60E-05		6.41E-02				
	Xylene	0.0800	14.090	1.41E-04		5.64E-01		1.00E+00	1.00E+01	No	No
	1-Methoxy-2-Propanol Acetate	0.0200	14.090	3.52E-05		1.41E-01					
	Ethyl Benzene	0.0100	14.090	1.76E-05		7.05E-02		1.00E+00	1.00E+01	No	No
Totals				3.46E-01	4.51E-03						

* Conservative assumption that there is 35% overspray and the filter capture efficiency is 90%, so 10% of the overspray escapes the filters.

Paint Spray Booth
#2 Log CY2021

Paint Spray Booth (PSB)#2: Bldg 0525, 7-00525-A06, MDE Registration # 12-6-0159)

HAP/TAP Emissions		lbs/hr									
Material	Constituent	Constituent t % by weight (expressed as a decimal)	Density (lb/gal)	Volatile Constituent Emissions (tpy)	Particulate Constituent Emissions (tpy)*	Volatile Constituent Emissions (lb/hr)	Particulate Constituent Emissions (lb/hr)	Reporting Threshold (lb/hr)	Reporting Threshold (tpy)	Report on Form 4 (tpy)	Report on Form 4 (lb/hr)
Adhesion Promoter E90GC101	Diphenylmethane Diisocyanate Polymer	0.0830	28.957	1.92E-03	1.11E-04	9.25E-01	5.37E-02	1.00E+00	1.00E+01	No	No
	Xylene	0.0500	28.957	1.92E-03			1.49E-02				
	4,4'-Diphenylmethane Diisocyanate	0.0230	28.957		3.09E-05						
	Light Aromatic Hydrocarbons	0.0200	28.957	7.67E-04		3.70E-01					
	Ethylbenzene	0.0100	28.957	3.84E-04		1.85E-01		1.00E+00	1.00E+01	No	No
	trimethylbenzene	0.0100	28.957	3.84E-04		1.85E-01					
	p-Toluenesulfonyl Isocyanate	0.0100	28.957	3.84E-04		1.85E-01					
	1,3,5-Trimethylbenzene	0.0030	28.957	1.15E-04		5.55E-02					
	1,2,4-Trimethylbenzene	0.0030	28.957	1.15E-04		5.55E-02					
	Diphenylmethane Diisocyanate	0.0030	28.957		4.03E-06		1.94E-03				
Epoxy Primer SW E90A229	Epoxy Polymer	0.0868	8.000		1.26E-04		1.16E-02				
	p-Chlorobenzotrifluoride	0.1174	8.000	4.88E-03		4.48E-01					
	Acetone	0.1011	8.000	4.21E-03		3.86E-01					
	t-Butyl Acetate	0.0584	8.000	2.43E-03		2.23E-01					
	Methyl Propyl Ketone	0.0000	8.000	0.00E+00		0.00E+00					
	Silica, Crystalline - Quartz	0.0000	8.000		0.00E+00		0.00E+00				
	Talc (no asbestos)	0.0000	8.000	0.00E+00		0.00E+00					
	Titanium Dioxide	0.1912	8.000		2.78E-04		2.55E-02				
	Zinc Oxide	0.0157	8.000		2.29E-05		2.10E-03	1.00E-02	1.00E-01	No	No
	Green CARC 2 F93G05116	p-Chlorobenzotrifluoride	0.3750	11.099	3.23E-02		3.00E+00				
Hexamethylene Diisocyanate Polymer		0.1750	11.099	1.51E-02		1.40E+00					
Cobalt Chromite Green Spinel		0.1000	11.099		3.01E-04		2.80E-02	1.00E-03	1.00E-02	No	Yes
Chromium Oxide		0.1000	11.099		3.01E-04		2.80E-02	1.00E-03	1.00E-02	No	Yes
Magnesium Ferrite		0.0300	11.099		9.03E-05		8.40E-03				
Polyester		0.0300	11.099		9.03E-05		8.40E-03				
Light Aromatic Hydrocarbons		0.0300	11.099	2.58E-03		2.40E-01					
n-Butyl Acetate		0.0300	11.099	2.58E-03		2.40E-01					
trimethylbenzene		0.0100	11.099	8.60E-04		8.00E-02					
Bis(pentamethyl-4-piperidyl)sebacate		0.0100	11.099	8.60E-04		8.00E-02					
Green CARC 3 F93G704	1,3,5-Trimethylbenzene	0.0100	11.099	8.60E-04		8.00E-02					
	1,2,4-Trimethylbenzene	0.0100	11.099	2.58E-04		2.40E-02					
	Pentamethylpiperidyl Sebacate	0.0030	11.099	2.58E-04		2.40E-02					
	Xylene	0.0030	11.099	2.58E-04		2.40E-02					
	1,2,3-Trimethylbenzene	0.0030	11.099	2.58E-04		2.40E-02					
	Cumene	0.0030	11.099	2.58E-04		2.40E-02		1.00E+00	1.00E+01	No	No
	p-Chlorobenzotrifluoride	0.3750	11.015	4.60E-02		3.68E+00					
	Hexamethylene Diisocyanate Polymer	0.1750	11.015	2.14E-02		1.72E+00		1.00E-04	1.00E-03	Yes	Yes
	Cobalt Chromite Green Spinel	0.1000	11.015		4.29E-04		3.43E-02	1.00E-03	1.00E-02	No	Yes
	Chromium Oxide	0.1000	11.015		4.29E-04		3.43E-02	1.00E-03	1.00E-02	No	Yes
Magnesium Ferrite	0.0300	11.015		1.29E-04		1.03E-02					
Green CARC 3 F93G704	Light Aromatic Hydrocarbons	0.0300	11.015	3.68E-03		2.94E-01					
	n-Butyl Acetate	0.0300	11.015	3.68E-03		2.94E-01					
	trimethylbenzene	0.0100	11.015	1.23E-03		9.80E-02					
	1,2,4-Trimethylbenzene	0.0097	11.015	1.19E-03		9.51E-02					
	1,3,5-Trimethylbenzene	0.0097	11.015	1.19E-03		9.51E-02					
	Bis(pentamethyl-4-piperidyl)sebacate	0.0030	11.015	3.68E-04		2.94E-02					
	Heavy Aromatic Naphtha	0.0030	11.015	3.68E-04		2.94E-02					
	1-[2-(Dimethylamino)ethyl]-4-methylpiperazine	0.0030	11.015	3.68E-04		2.94E-02					
	Xylene	0.0029	11.015	3.55E-04		2.84E-02		1.00E+00	1.00E+01	No	No
	1,2,3-Trimethylbenzene	0.0029	11.015	3.55E-04		2.84E-02		1.00E+00	1.00E+01	No	No
Cumene	0.0029	11.015	3.55E-04		2.84E-02		1.00E+00	1.00E+01	No	No	

Paint Spray Booth
#2 Log CY2021

Paint Spray Booth (PSB)#2: Bldg 0525, 7-00525-A06, MDE Registration # 12-6-0159)

Material	Constituent	Constituent t % by weight (expressed as a decimal)	Density (lb/gal)	Volatile Constituent Emissions (tpv)	Particulate Constituent Emissions (tpy)*	lbs/hr		Reporting Threshold (lb/hr)	Reporting Threshold (tpy)	Report on Form 4 (tpy)	Report on Form 4 (lb/hr)
						Volatile Constituent Emissions (lb/hr)	Particulate Constituent Emissions (lb/hr)				
Black CARC 2 F93B0S114	p-Chlorobenzotrifluoride	0.3750	9.847	9.23E-04		2.46E+00		1.00E-04	1.00E-03	No	Yes
	Hexamethylene Diisocyanate Polymer	0.1750	9.847	4.31E-04		1.15E+00					
	Polyester	0.0300	9.847		2.58E-06		6.89E-03				
	Light Aromatic Hydrocarbons	0.0300	9.847	7.39E-05		1.97E-01					
	n-Butyl Acetate	0.0300	9.847	7.39E-05		1.97E-01					
	Trimethylbenzene	0.0100	9.847	2.46E-05		6.56E-02					
	Carbon Black	0.0100	9.847		8.62E-07		2.30E-03				
	Bis(pentamethyl-4-piperidyl)sebacate	0.0100	9.847	2.46E-05		6.56E-02					
	1,3,5-Trimethylbenzene	0.0100	9.847	2.46E-05		6.56E-02					
	1,2,4-Trimethylbenzene	0.0100	9.847	2.46E-05		6.56E-02					
	1,1,2-Dimethylamino)ethyl-4-methylpiperazine	0.0030	9.847	7.39E-06		1.97E-02					
	Pentamethylperidyl Sebacate	0.0030	9.847	7.39E-06		1.97E-02					
	Xylene	0.0030	9.847	7.39E-06		1.97E-02					
	1,2,3-Trimethylbenzene	0.0030	9.847	7.39E-06		1.97E-02					
	Cumene	0.0030	9.847	7.39E-06		1.97E-02		1.00E+00	1.00E+01	No	No
	p-Chlorobenzotrifluoride	0.3740	10.566	1.48E-03		1.98E+00					
	Hexamethylene Diisocyanate Polymer	0.1568	10.566	6.17E-04		8.23E-01		1.00E-04	1.00E-03	No	No
White CARC F93W103	Titanium Dioxide	0.1569	10.566		2.18E-05		2.90E-02				
	1,2,4-Trimethylbenzene	0.0176	10.566	6.97E-05		9.30E-02					
	Polyester	0.0136	10.566		1.89E-06		2.51E-03				
	Light Aromatic Hydrocarbons	0.0117	10.566	4.64E-05		6.18E-02					
	N-Butyl Acetate	0.0112	10.566	4.44E-05		5.92E-02					
	Bis(pentamethyl-4-piperidyl)sebacate	0.0047	10.566	1.86E-05		2.48E-02					
	1,3,5-Trimethylbenzene	0.0047	10.566	1.86E-05		2.48E-02					
	Cumene	0.0023	10.566	9.11E-06		1.22E-02		1.00E+00	1.00E+01	No	No
	1,1,2-(Dimethylamino)ethyl-4-methylpiperazine	0.0023	10.566	9.11E-06		1.22E-02					
	1,2,3-Trimethylbenzene	0.0016	10.566	6.34E-06		8.45E-03					
	Xylene	0.0012	10.566	4.75E-06		6.34E-03					
	Pentamethylperidyl Sebacate	0.0012	10.566	4.75E-06		6.34E-03					
	p-Chlorobenzotrifluoride	0.3750	10.348	1.79E-02		2.93E+00					
	Hexamethylene Diisocyanate Polymer	0.1750	10.348	8.38E-03		1.37E+00		1.00E-04	1.00E-03	Yes	Yes
	Polyester	0.0300	10.348		5.03E-05		8.20E-03				
	Light Aromatic Hydrocarbons	0.0300	10.348	1.44E-03		2.34E-01					
Tan CARC 2 F93H0S124	n-Butyl Acetate	0.0300	10.348	1.44E-03		2.34E-01					
	Trimethylbenzene	0.0100	10.348	4.79E-04		7.81E-02					
	Titanium Dioxide	0.1750	10.348		2.93E-04		4.79E-02				
	Bis(pentamethyl-4-piperidyl)sebacate	0.0100	10.348	4.79E-04		7.81E-02					
	1,3,5-Trimethylbenzene	0.0100	10.348	4.79E-04		7.81E-02					
	1,2,4-Trimethylbenzene	0.0100	10.348	4.79E-04		7.81E-02					
	Isophorone Diisocyanate (max.)	0.0100	10.348	4.79E-04		7.81E-02		1.00E-01	1.00E+00	No	No
	Pentamethylperidyl Sebacate	0.0030	10.348	1.44E-04		2.34E-02					
	Xylene	0.0030	10.348	1.44E-04		2.34E-02					
	1,2,3-Trimethylbenzene	0.0030	10.348	1.44E-04		2.34E-02		1.00E+00	1.00E+01	No	No

Paint Spray Booth (PSB#2: Bldg 0525, 7-00525-A06, MDE Registration # 12-6-0159)

* Conservative assumption that there is 35% overspray and the filter capture efficiency is 90%, so 10% of the overspray escapes the filters.

Fire Test Lab (IFEL) Emissions (07-0525-A01, MDE Registration # 12-9-0216) - CY2021

Part 1 (fuel)

Fuel	Total used (gal)
JP-8, gasoline, and fuel oil	
combined	0.00
Number of hours/year	0.00
Number of days/year	0.00
	Assuming 8 hours/day

Pollutant	Uncontrolled emission factor (lb/1000 gallons)	Control efficiency	Emissions (lbs/year)	Emissions (tons/year)	Emissions (lbs/day)	Emissions (lbs/hr)
Criteria air pollutants						
NOx	20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SOx*	7.2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CO	5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VOC	0.34	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM Filterable	2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM-10 Filterable	1.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM-2.5 Filterable	0.83	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM Condensable	1.3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Greenhouse gases						
CO2	22.300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CH4	0.216	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
N2O	0.26	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hazardous air pollutants						
Acenaphthene	2.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	2.53E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	1.22E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	4.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	2.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(ghi)perylene	2.20E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	2.38E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenz(a,h)anthracene	1.67E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethyl Benzene	6.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluorene	4.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	3.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	2.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	1.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	1.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pyrene	4.25E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	6.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylene	1.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

* Based on 0.05% Sulfur

NOTES:

1. Emission Factor Source: Criteria Pollutant Emission Factors from Table 1.3-1, 1.3-2 and 1.3-3 of AP-42.
2. GHG factors derived from oil combustion factors, Tables 1.3-3, 1.3-8, and 1.3-12.
3. Emission factors for JP-8 not available, so boiler oil EFs used from AP-42 Vol I:1.3: Fuel Oil Combustion, Table 1.3-9.

Part 2 (agent)

Agent component which produces TAP	Component Formula	Component MW (g/mol)	Quantity of agent component (lbs)	Days/yr	Toxic air pollutants	lb TAP / lb agent (100% conversion)	% conversion (assumed)	% emitted (assumed)	TAP emission lbs/yr	TAP emission tons/yr	TAP emission lbs/day	TAP emission lbs/hour***
Potassium lactate*	C3H5KO3	128.17	0.00	0.00	K ₂ O**	0.367	90%	50%	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Opleton	C4H2F6	164.00	0.00	0.00	HF	0.73	90%	90%	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FM-200	C3HF7	170.03	0.00	0.00	HF	0.82	90%	90%	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Halon 1301	CBF3	148.90	0.00	0.00	HF	0.40	90%	90%	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Halon 1301	CBF3	148.90	0.00	0.00	HBr	0.54	90%	90%	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*Assuming 45% of total quantity is water and 55% of total quantity is potassium lactate ***Assuming 8 hours/day

** Molecular weight of K2O = 94.2 g/mol

ECO Mobile Incinerator Emissions - CY2021

Part 1 (municipal waste)

Waste processed (lbs/year) 0.00 assumes 244 lbs/day - based on historical throughput
Waste processed (tons/year) 0.00
Number of hours/year 0.00 assumed 8 hrs/day operated
Number of days: 0.00

Pollutant	Uncontrolled emission factor (lb/ton)	Control efficiency	Emissions (lbs/year)	Emissions (tons/year)	Emissions (lbs/day)	Emissions (lbs/hr)
Criteria air pollutants						
PM Filterable	2.51E+01	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM-10 Filterable	2.51E+01	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM2.5 Filterable	2.51E+01	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM Condensable	0.00E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NOx	1.24E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CO	0.00E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SO ₂	3.46E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VOC	0.00E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Greenhouse gases						
CO ₂	1.97E+03	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toxic air pollutants						
As	4.37E-03	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd	1.09E-02	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cr	8.97E-03	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hg	5.60E-03	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni	7.85E-03	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb	2.13E-01	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HCl	6.40E+00	10.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

NOTES:

- Control efficiency is assumed. The refractory in the breeches and ducts has material that absorbs the toxic components of the fumes generated from the process.
- Emission factors from AP-42 Tables 2.1-2 and 2.1-7, for modular excess air combustors
- No emission factors were available available for Filterable and Condensable fractions of PM. It is assumed at PM Filterable = PM-10 Filterable = PM2.5 Filterable, and PM Condensable is zero.

Part 2 (supplemental fuel)

Gallons of diesel per bur 0.00 assumes 1 gal/hr fuel consumption rate
Number of burns per year 0.00
Number of hours/year 0.00
Number of days/year: 0.00

Pollutant	Uncontrolled emission factor (lb/1000 gallons)	Control efficiency	Emissions (lbs/year)	Emissions (tons/year)	Emissions (lbs/day)	Emissions (lbs/hr)
Criteria air pollutants						
NOx	2.00E+01	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SOx*	7.20E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CO	5.00E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VOC	3.40E-01	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM Filterable	2.00E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM-10 Filterable	1.08E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM-2.5 Filterable	8.30E-01	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM Condensable	1.30E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Greenhouse gases						
CO ₂	2.23E+04	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CH ₄	2.16E-01	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
N ₂ O	2.60E-01	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toxic air pollutants						
Acenaphthene	2.11E-05	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	2.53E-07	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	1.22E-06	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	4.01E-06	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	2.14E-04	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(ghi)perylene	2.20E-06	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	2.38E-06	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	1.67E-06	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethyl Benzene	6.36E-05	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluorene	4.47E-06	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	3.30E-02	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	2.14E-06	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	1.13E-03	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	1.05E-05	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pyrene	4.25E-06	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	6.20E-03	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylene	1.09E-04	25.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

* Based on 0.05% Sulfur

NOTES:

- Control efficiency is assumed. The refractory in the breeches and ducts has material that absorbs the toxic components of the fumes generated from the process.
- Emission Factor Source: Criteria Pollutant Emission Factors from Table 1.3-1, 1.3-2 and 1.3-3 of AP-42.
- GHG factors derived from oil combustion factors, Tables 1.3-3, 1.3-8, and 1.3-12.

Gasoline Storage Tanks - CY2021 (26-4029-A03 & A05, MDE Registration No. 12-9-012)

VOC Emissions Factor Source: AP-42, Table 5.2-7, 5th Ed., Vol. 1: Chap. 5 - Petroleum Industry, July 2008.

Emissions Factors (lb/1000 gal throughput)		
Type of Control	Stage I Only	Stage I and II *
Stage I balanced submerged filling	0.30	0.30
Tank breathing and emptying	1.00	1.00
Vehicle refueling losses	11.00	1.10
Spillage	0.70	0.70
Total EF	13.00	3.10

* Stage II VRS Decommissioned on 3/19/20, so use Stage I only Emission Factors for all of 2020 to be conservative.

VOC Emissions

Emissions Unit No.	MDE Reg. No.	EF (lb/1000 gal)	Throughput (gal/yr) (see table)	VOC Emissions (lb/day)	VOC Emissions (tpy)
26-4029-A03 & -05	12-9-0152	13.00	153884.00	5.48	1.00

HAP	Percent
Benzene	4.0%
Ethyl Benzene	2.0%
Toluene	22.0%
Xylene	10.0%
MTBE	15.0%

HAP Emissions

Emissions Unit No.	MDE Reg. No.	Benzene (tpy)	Ethyl Benzene (tpy)	Toluene (tpy)	Xylene (tpy)	MTBE (tpy)
26-4029-A03 & -05	12-9-0152	4.00E-02	2.00E-02	2.20E-01	1.00E-01	1.50E-01

Emissions Unit No.	MDE Reg. No.	Benzene (lb/hr)	Ethyl Benzene (lb/hr)	Toluene (lb/hr)	Xylene (lb/hr)	MTBE (lb/hr)
26-4029-A03 & -05	12-9-0152	0.03	0.014	0.15	0.07	0.10

For worst case hourly emissions, 8 hr/day is used in the hourly emission calculations rather than 24 hr/day

ACTUAL HAP EMISSION CALCULATIONS CY 2022
BOILERS AND GENERATORS

Boilers		
HAP	NG EF lbm/1000 Btu	O/E EF lbm/1000 Btu
Acetaldehyde	4.30E-03	2.15E-06
Acenaphthene	1.80E-06	2.11E-05
Acenaphthylene	1.80E-06	2.53E-07
Acrolein	2.70E-03	3.51E-01
Anthracene	2.40E-06	1.22E-06
Benzo(a)anthracene	1.80E-06	4.01E-06
Benzo(a)pyrene	2.10E-03	2.14E-04
Chrysene	1.80E-06	2.38E-06
Dibenz(a,h)anthracene	1.20E-06	1.67E-06
Ethyl Benzene	9.50E-03	6.36E-05
Fluorene	2.80E-06	4.47E-06
Formaldehyde	7.50E-02	3.50E-02
Hexachloro(1,2,3-cyclopentadiene)	1.80E-06	2.14E-06
Naphthalene	6.10E-04	1.13E-03
Phenanthrene	1.70E-05	1.05E-05
Pyrene	5.00E-06	4.25E-06
Toluene	3.40E-03	6.20E-03
Xylene	2.72E-02	1.09E-04
Hexane	1.80E+00	3.50E-03

Emergency Generators		
HAP	O/E EF lbm/1000 Btu	O/E EF lbm/1000 Btu
Acetaldehyde	7.67E-04	7.67E-04
Acenaphthene	1.42E-06	1.42E-06
Acenaphthylene	5.06E-06	5.06E-06
Acrolein	9.25E-06	9.25E-06
Anthracene	1.87E-06	1.87E-06
Benzo(a)anthracene	1.68E-06	1.68E-06
Benzo(a)pyrene	9.53E-04	9.53E-04
Chrysene	3.53E-07	4.89E-07
Dibenz(a,h)anthracene	5.83E-07	5.83E-07
Ethyl Benzene	1.09E-02	1.09E-02
Fluorene	2.92E-05	2.92E-05
Formaldehyde	1.18E-03	1.18E-03
Hexachloro(1,2,3-cyclopentadiene)	3.75E-07	3.75E-07
Naphthalene	8.48E-05	8.48E-05
Phenanthrene	2.94E-05	2.94E-05
Pyrene	4.78E-06	4.78E-06
Toluene	4.09E-04	4.09E-04
Xylene	2.85E-04	2.85E-04
Hexane	2.69E-02	2.69E-02

* No HAP emissions factors are available for Propane boilers, thus NG emission factors were used for Propane boilers. Emission calculation method is same as criteria pollutants calculated.

Notes: 1. Boiler NG EFs from AP-42 Vol. 11.4: Natural Gas Combustion, Table 1.4-3.

2. Boiler Oil EFs from AP-42 Vol. 11.3: Fuel Oil Combustion, Table 1.3-9.

3. Emergency Generator EFs from APC-42 Vol. 13.3: Gasoline and Diesel Industrial Engines, Table 3.3-2.

4. HAPs EF not available from AP-42 were replaced with factors from "Ventura County Air Pollution Control District - AB 2588 Combustion Emission Factors, May 17, 2001."

From MDE's Air Quality Compliance Program webpage: Beginning with the 2010 emissions year, ARA is requiring that all Title V facilities report emissions of HAPs from all registered equipment including fuel burning sources.

ACTUAL HAP EMISSION CALCULATIONS CY 2022
BOILERS AND GENERATORS

Emergency Generators Emissions (t/y)

Emissions Unit	Registration Number	HP	Hours	Acetaldehyde	Aceaphthylene	Aceaphthene	Acrolein	Anthracene	Benzo(a)anthr	Benzene	Benzo(b)flupe	Chrysene	Dibenz(a,h)a	Ethyl	Fluorene	Formaldehyde	Indene(1,2,3-	Naphthalene	Phenanthren	Pyrene	Toluene	Xylene	Hexane
0120-01	0120-01	2822.0	15.0	1.21E-04	7.98E-07	2.95E-07	1.48E-05	2.95E-07	2.65E-07	1.47E-04	7.75E-08	5.57E-08	9.02E-08	1.72E-03	4.61E-06	1.88E-04	5.09E-06	1.34E-05	4.64E-06	7.54E-07	6.95E-07	4.50E-05	4.24E-03
0120-02	0120-02	2822.0	14.7	1.19E-04	7.82E-07	2.90E-07	1.36E-05	2.95E-07	2.60E-07	1.44E-04	7.56E-08	5.40E-08	9.02E-08	1.69E-03	4.50E-06	1.82E-04	5.02E-06	1.31E-05	4.55E-06	7.39E-07	6.92E-05	4.41E-05	4.16E-03
Bldg 120 - Gen. #1	9-0434	2922.0	14.0	1.13E-04	7.45E-07	2.79E-07	1.35E-05	2.79E-07	2.46E-07	1.37E-04	7.20E-08	5.20E-08	8.52E-08	1.61E-03	4.30E-06	1.74E-04	5.52E-06	1.25E-05	4.33E-06	7.04E-07	6.02E-05	4.20E-05	3.96E-03
Bldg 120 - Gen. #2	9-0503	2922.0	13.9	1.12E-04	7.40E-07	2.76E-07	1.35E-05	2.76E-07	2.46E-07	1.36E-04	7.15E-08	5.16E-08	8.52E-08	1.59E-03	4.27E-06	1.73E-04	5.48E-06	1.24E-05	4.30E-06	6.99E-07	5.98E-05	4.17E-05	3.93E-03
3090-01	9-0410	2922.0	14.6	1.18E-04	7.71E-07	2.87E-07	1.42E-05	2.87E-07	2.58E-07	1.43E-04	7.51E-08	5.42E-08	8.95E-08	1.67E-03	4.48E-06	1.81E-04	5.76E-06	1.30E-05	4.51E-06	7.34E-07	6.38E-05	4.38E-05	4.13E-03
03-0329-A03	9-0408	2922.0	27.2	2.20E-04	1.45E-06	2.65E-05	3.59E-07	5.95E-07	4.81E-07	1.82E-04	1.40E-07	1.01E-07	1.67E-07	3.12E-03	3.68E-06	3.39E-04	7.30E-08	1.95E-05	5.72E-06	9.30E-07	1.79E-06	5.55E-05	7.70E-03
03-0418	9-0418	2922.0	19.5	2.24E-05	1.35E-08	5.91E-08	2.71E-06	5.91E-08	3.31E-08	7.75E-05	6.03E-08	6.03E-08	1.71E-08	3.10E-04	8.94E-07	2.49E-05	1.10E-08	2.48E-06	6.00E-07	3.40E-07	1.26E-05	8.24E-06	4.87E-04
03-0436	9-0436	670.0	7.6	5.13E-05	3.15E-07	5.95E-07	8.95E-07	1.35E-07	3.27E-07	1.62E-04	1.40E-07	1.01E-07	1.67E-07	3.12E-03	3.68E-06	3.39E-04	7.30E-08	1.95E-05	5.72E-06	9.30E-07	1.79E-06	5.55E-05	7.70E-03
03-0329-A01	9-0229	1072.0	7.6	5.13E-05	3.15E-07	5.95E-07	8.95E-07	1.35E-07	3.27E-07	1.62E-04	1.40E-07	1.01E-07	1.67E-07	3.12E-03	3.68E-06	3.39E-04	7.30E-08	1.95E-05	5.72E-06	9.30E-07	1.79E-06	5.55E-05	7.70E-03
03-0329-A02	9-0229	1072.0	7.6	5.13E-05	3.15E-07	5.95E-07	8.95E-07	1.35E-07	3.27E-07	1.62E-04	1.40E-07	1.01E-07	1.67E-07	3.12E-03	3.68E-06	3.39E-04	7.30E-08	1.95E-05	5.72E-06	9.30E-07	1.79E-06	5.55E-05	7.70E-03
03-0394-A01	9-0227	1341.0	22.0	8.15E-05	5.37E-07	9.82E-06	1.39E-07	1.90E-07	1.78E-07	9.91E-05	5.19E-08	3.75E-08	6.19E-08	1.16E-03	3.10E-06	1.29E-04	3.98E-08	9.01E-06	3.12E-06	5.08E-07	4.91E-05	3.03E-05	2.86E-03
03-0394-A02	9-0228	1341.0	21.0	7.78E-05	5.13E-07	9.38E-06	1.30E-07	1.70E-07	1.70E-07	9.48E-05	4.96E-08	3.58E-08	5.91E-08	1.11E-03	2.96E-06	1.29E-04	3.80E-08	8.60E-06	2.98E-06	4.89E-07	4.15E-05	2.89E-05	2.73E-03
03-0394-A03	9-0386	750.0	21.0	4.35E-05	8.05E-08	2.87E-07	5.24E-06	1.90E-07	9.53E-08	5.29E-05	2.77E-08	2.00E-08	3.31E-08	6.18E-04	1.66E-06	6.69E-05	2.13E-08	4.81E-06	1.67E-06	2.71E-07	2.32E-05	1.62E-05	1.53E-03
03-0394-A04	9-0387	750.0	16.0	3.31E-05	6.13E-08	2.19E-07	4.00E-06	8.08E-07	7.26E-08	4.03E-05	2.11E-08	1.52E-08	2.52E-08	4.71E-04	1.24E-06	5.10E-05	1.62E-08	3.66E-06	1.27E-06	2.08E-07	1.71E-05	1.23E-05	1.16E-03
03-0394-A05	9-0388	750.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
03-4600-A04	9-0276	1877.0	30.0	1.61E-04	1.05E-07	1.90E-06	1.94E-05	3.9E-07	3.52E-07	1.90E-04	1.02E-07	7.39E-08	1.22E-07	2.29E-03	6.12E-06	2.47E-04	7.86E-08	1.72E-05	5.98E-06	9.72E-07	8.32E-05	5.91E-05	5.63E-03
03-4600-A05	9-0277	1877.0	30.1	1.56E-04	2.98E-07	1.85E-05	1.88E-05	3.9E-07	3.42E-07	1.90E-04	9.95E-08	7.18E-08	1.19E-07	2.22E-03	5.94E-06	2.40E-04	7.98E-08	1.72E-05	5.98E-06	9.72E-07	8.32E-05	5.91E-05	5.63E-03
6010-01	9-0412	1902.0	12.5	5.18E-05	9.60E-08	3.42E-07	6.25E-06	1.29E-07	1.14E-07	6.31E-05	3.31E-08	2.39E-08	3.94E-08	1.97E-04	1.97E-06	7.98E-05	2.53E-08	7.3E-06	1.99E-06	3.23E-07	2.76E-05	1.93E-05	1.82E-03
6010-02	9-0411	2937.0	13.0	1.09E-04	1.95E-07	6.96E-07	1.27E-05	2.57E-07	2.31E-07	1.28E-04	6.72E-08	4.85E-08	8.01E-08	1.50E-03	4.01E-06	1.62E-04	5.15E-08	1.71E-05	4.04E-06	6.57E-07	5.62E-05	3.92E-05	3.70E-03
LWF-01	9-0436	550.0	8.0	6.49E-05	1.20E-07	4.28E-07	7.82E-06	1.58E-07	1.42E-07	7.89E-05	4.14E-08	2.99E-08	4.93E-08	9.22E-04	2.47E-06	9.98E-05	3.17E-08	1.71E-06	2.49E-06	4.04E-07	3.46E-05	2.41E-05	2.28E-03
LWF-02	9-0436	550.0	115.0	1.79E-04	3.23E-07	1.15E-06	2.11E-05	4.9E-07	3.83E-07	2.12E-04	1.11E-07	8.04E-08	1.33E-07	2.48E-03	6.65E-06	2.69E-04	8.54E-08	1.93E-06	6.69E-06	1.09E-06	9.31E-05	6.49E-05	6.13E-03
LWF-03	9-0436	550.0	114.0	1.79E-04	3.21E-07	1.14E-06	2.09E-05	4.2E-07	3.79E-07	2.11E-04	1.10E-07	7.97E-08	1.32E-07	2.48E-03	6.59E-06	2.69E-04	8.40E-08	1.91E-06	6.64E-06	1.08E-06	9.25E-05	6.43E-05	6.07E-03
LWF-04	9-0436	550.0	117.0	1.79E-04	3.26E-07	1.15E-06	2.14E-05	4.2E-07	3.88E-07	2.16E-04	1.13E-07	8.18E-08	1.35E-07	2.53E-03	6.76E-06	2.72E-04	8.69E-08	1.95E-06	6.81E-06	1.10E-06	9.71E-05	6.50E-05	6.23E-03
LWF-05	9-0436	550.0	116.0	1.76E-04	3.26E-07	1.16E-06	2.12E-05	4.3E-07	3.86E-07	2.14E-04	1.12E-07	8.11E-08	1.34E-07	2.50E-03	6.71E-06	2.71E-04	8.61E-08	1.95E-06	6.75E-06	1.10E-06	9.81E-05	6.55E-05	6.18E-03
26-GMS-Lab-A04	9-0393	3778.0	6.0	6.29E-05	1.16E-07	7.55E-06	1.35E-07	1.35E-07	1.37E-07	7.61E-05	3.99E-08	2.88E-08	4.78E-08	8.89E-04	2.38E-06	9.63E-05	3.06E-08	6.92E-06	2.40E-06	3.90E-07	3.94E-05	2.33E-05	2.20E-03
26-C201 West-A05	9-0394	2200.0	12.0	7.29E-05	1.35E-07	8.79E-06	1.35E-07	1.48E-07	1.60E-07	8.87E-05	4.65E-08	3.35E-08	5.54E-08	1.04E-03	2.78E-06	1.12E-04	3.56E-08	8.06E-06	2.79E-06	4.54E-07	3.89E-05	2.71E-05	2.56E-03
26-GMS Tower-A05	9-0395	2200.0	1.0	6.07E-05	1.12E-08	7.33E-07	1.48E-06	1.35E-08	1.33E-08	7.39E-05	3.87E-09	2.80E-09	4.62E-09	6.63E-05	2.31E-07	9.35E-06	2.97E-09	6.72E-07	2.33E-07	3.79E-08	3.24E-06	2.26E-06	2.13E-04
26-HQBuilding-A05	9-0396	2822.0	2.0	1.61E-05	2.99E-08	1.05E-07	1.95E-06	3.9E-08	3.53E-08	1.96E-05	1.03E-08	7.43E-09	1.23E-08	2.29E-04	6.14E-07	2.48E-05	7.89E-09	1.78E-06	6.19E-07	1.01E-07	8.60E-06	6.00E-06	5.66E-04
Bldg 5016 - pending	9-0510	2346.0	3.8	2.49E-05	4.59E-08	1.82E-07	2.97E-06	6.00E-08	5.39E-08	2.99E-05	1.57E-08	1.13E-08	1.87E-08	3.50E-04	9.37E-07	3.79E-05	1.20E-08	2.72E-06	9.44E-07	1.53E-07	1.31E-06	9.15E-06	8.63E-04
Bldg 5016 - pending	9-0511	630.0	4.0	4.59E-06	7.73E-09	3.09E-08	3.08E-07	6.24E-08	5.60E-09	2.11E-04	1.03E-08	1.88E-09	3.94E-09	3.63E-05	9.73E-08	3.96E-06	2.70E-09	2.83E-07	9.80E-08	1.59E-08	1.39E-06	9.50E-07	8.94E-05
U1F-01	9-0437	500.0	248.5	4.71E-05	8.60E-08	3.14E-07	5.73E-06	1.0E-07	1.04E-07	5.79E-05	3.03E-08	2.19E-08	3.61E-08	6.76E-04	1.81E-06	7.31E-05	2.32E-08	5.26E-06	1.82E-06	2.96E-07	2.58E-05	1.77E-05	1.67E-03
0311-01	9-0419	600.0	10.7	1.77E-05	3.28E-08	1.17E-07	2.14E-06	4.32E-08	3.88E-08	2.16E-05	1.13E-08	8.16E-09	1.35E-08	2.52E-04	6.75E-07	2.73E-05	8.67E-09	1.96E-06	6.79E-07	1.10E-07	9.45E-06	6.59E-06	6.22E-04
3147-A01	9-0491	670.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2202-01	9-0499	755.0	19.7	4.11E-05	7.60E-08	2.71E-07	4.95E-06	1.00E-07	9.00E-08	5.00E-05	2.62E-08	1.89E-08	3.12E-08	5.84E-04	1.56E-06	6.32E-05	2.01E-08	4.54E-06	1.57E-06	2.58E-07	2.19E-05	1.53E-05	1.44E-03
3660-01	9-0500	643.0	3.8	6.79E-05	1.25E-08	4.45E-08	8.14E-07	1.64E-08	1.48E-08	8.21E-06	4.30E-09	3.11E-09	5.13E-09	9.59E-05	2.57E-07	1.04E-05	3.30E-09	7.46E-07	2.59E-07	4.20E-08	3.06E-06	2.51E-06	2.37E-04
Totals				344E-03	2.77E-05	4.13E-04	8.0E-06	7.54E-06	4.19E-03	2.20E-06	1.59E-06	2.62E-06	2.62E-06	4.89E-02	1.31E-04	5.30E-03	1.68E-06	3.81E-04	1.32E-04	2.19E-05	1.94E-03	1.28E-03	1.21E-01

ACTUAL HAP EMISSION CALCULATIONS CY 2022
BOLLERS AND GENERATORS

Boilers (tpy)		Registration Number	Oil Used (1000 gal)	Gas Used (MMBtu)	Acetaldehyde	Acenaphthene	Acenaphthylene	Acrolein	Anthracene	Benzofuran	Benzene	Benzophenone	Chrysene	Dibenzofuran	Ethyl Benzene	Fluorene	Formaldehyde	Indene(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Toluene	Xylene	Heavies
26-332E-A02	000	5-0152	184	0.00	3.9E-06	1.65E-09	2.45E-06	2.21E-09	1.65E-09	1.93E-06	1.11E-09	1.66E-09	1.11E-09	1.66E-09	7.75E-06	2.58E-09	6.91E-05	1.66E-09	5.02E-07	1.57E-08	4.60E-09	3.13E-06	2.51E-05	1.66E-03
083A-A01 & A02	0.00	5-0376	0.00	4.52	3.9E-06	1.65E-09	6.10E-06	5.02E-09	1.65E-09	1.93E-06	1.11E-09	1.66E-09	1.11E-09	1.66E-09	7.75E-06	2.58E-09	6.91E-05	1.66E-09	5.02E-07	1.57E-08	4.60E-09	3.13E-06	2.51E-05	1.66E-03
26-0459-A01	0.00	5-0376	0.00	1.90	4.08E-06	1.71E-09	2.56E-06	2.28E-09	1.71E-09	1.90E-06	1.11E-09	1.71E-09	1.11E-09	1.71E-09	2.15E-05	2.66E-09	1.69E-04	4.07E-09	1.38E-06	3.61E-08	1.13E-08	7.98E-06	6.14E-05	1.70E-03
26-2202-A01	0.00	5-0322	0.00	2.55	5.49E-06	2.30E-09	3.45E-06	3.00E-09	2.30E-09	2.68E-06	1.13E-09	2.30E-09	1.13E-09	2.30E-09	1.21E-05	3.57E-09	9.59E-05	2.30E-09	7.79E-07	2.17E-08	6.39E-09	4.34E-06	3.47E-05	2.30E-03
26-0459-A02	0.00	5-0322	0.00	2.55	5.49E-06	2.30E-09	3.45E-06	3.00E-09	2.30E-09	2.68E-06	1.13E-09	2.30E-09	1.13E-09	2.30E-09	1.21E-05	3.57E-09	9.59E-05	2.30E-09	7.79E-07	2.17E-08	6.39E-09	4.34E-06	3.47E-05	2.30E-03
26-0459-A03	0.00	5-0322	0.00	2.55	5.49E-06	2.30E-09	3.45E-06	3.00E-09	2.30E-09	2.68E-06	1.13E-09	2.30E-09	1.13E-09	2.30E-09	1.21E-05	3.57E-09	9.59E-05	2.30E-09	7.79E-07	2.17E-08	6.39E-09	4.34E-06	3.47E-05	2.30E-03
26-3300-A01	0.00	5-0152	0.00	0.71	1.52E-06	6.38E-10	9.56E-07	8.00E-10	6.38E-10	7.44E-07	4.25E-10	6.38E-10	4.25E-10	6.38E-10	3.37E-06	9.92E-10	2.68E-05	6.38E-10	2.16E-07	6.02E-09	1.77E-09	1.20E-06	9.64E-05	6.38E-04
26-314A-A01	0.00	5-0152	0.00	0.71	1.52E-06	6.38E-10	9.56E-07	8.00E-10	6.38E-10	7.44E-07	4.25E-10	6.38E-10	4.25E-10	6.38E-10	3.37E-06	9.92E-10	2.68E-05	6.38E-10	2.16E-07	6.02E-09	1.77E-09	1.20E-06	9.64E-05	6.38E-04
26-3660-A01	0.00	5-0376	0.00	1.65	3.55E-06	1.49E-09	2.23E-06	1.98E-09	1.49E-09	1.73E-06	9.01E-10	1.49E-09	9.01E-10	1.49E-09	7.85E-06	2.31E-09	6.19E-05	1.49E-09	5.04E-07	1.40E-08	4.13E-09	2.50E-06	2.25E-05	1.49E-03
26-0419-A03	0.00	5-0376	0.00	1.47	3.10E-06	1.32E-09	1.99E-06	1.77E-09	1.32E-09	1.55E-06	8.83E-10	1.32E-09	8.83E-10	1.32E-09	6.99E-06	2.06E-09	5.52E-05	1.32E-09	4.49E-07	1.25E-08	3.68E-09	2.50E-06	2.25E-05	1.32E-03
26-5100-A01	0.00	5-0310	0.00	6.10	1.31E-05	5.49E-09	8.24E-06	7.32E-09	5.49E-09	6.41E-06	3.66E-09	5.49E-09	3.66E-09	5.49E-09	2.90E-05	8.54E-09	2.29E-04	5.49E-09	1.80E-06	5.19E-08	1.53E-08	1.04E-05	8.30E-05	5.49E-03
26-5100-A02	0.00	5-0310	0.00	6.10	1.31E-05	5.49E-09	8.24E-06	7.32E-09	5.49E-09	6.41E-06	3.66E-09	5.49E-09	3.66E-09	5.49E-09	2.90E-05	8.54E-09	2.29E-04	5.49E-09	1.80E-06	5.19E-08	1.53E-08	1.04E-05	8.30E-05	5.49E-03
0339-A01	0.00	5-0710	0.00	1.33	2.88E-06	1.19E-09	1.79E-06	1.59E-09	1.19E-09	1.39E-06	7.98E-10	1.19E-09	7.98E-10	1.19E-09	6.20E-06	1.85E-09	4.99E-05	1.19E-09	4.03E-07	1.12E-08	3.31E-09	2.25E-06	1.80E-05	1.19E-03
26-0485-A01	0.00	5-0387	0.00	0.19	2.50E-06	1.07E-09	1.59E-06	1.39E-09	1.07E-09	1.29E-06	7.98E-10	1.07E-09	7.98E-10	1.07E-09	6.20E-06	1.85E-09	4.99E-05	1.07E-09	4.03E-07	1.12E-08	3.31E-09	2.25E-06	1.80E-05	1.07E-03
26-0485-A02	0.00	5-0387	0.00	0.19	2.50E-06	1.07E-09	1.59E-06	1.39E-09	1.07E-09	1.29E-06	7.98E-10	1.07E-09	7.98E-10	1.07E-09	6.20E-06	1.85E-09	4.99E-05	1.07E-09	4.03E-07	1.12E-08	3.31E-09	2.25E-06	1.80E-05	1.07E-03
504E-A02	0.00	4-0619	0.00	0.60	1.30E-06	5.44E-10	8.16E-07	7.28E-10	5.44E-10	6.39E-07	3.63E-10	5.44E-10	3.63E-10	5.44E-10	2.87E-06	8.48E-10	2.27E-05	5.44E-10	1.84E-07	5.14E-09	1.51E-09	1.03E-06	8.22E-05	5.44E-04
504E-A03	0.00	4-0619	0.00	0.60	1.30E-06	5.44E-10	8.16E-07	7.28E-10	5.44E-10	6.39E-07	3.63E-10	5.44E-10	3.63E-10	5.44E-10	2.87E-06	8.48E-10	2.27E-05	5.44E-10	1.84E-07	5.14E-09	1.51E-09	1.03E-06	8.22E-05	5.44E-04
26-043E-A01	0.00	5-0152	0.00	0.80	3.93E-07	1.65E-10	2.47E-07	2.19E-10	1.65E-10	1.92E-07	1.10E-10	1.65E-10	1.10E-10	1.65E-10	8.69E-07	2.56E-10	6.86E-06	1.65E-10	5.58E-08	1.55E-09	4.57E-10	3.11E-07	2.46E-05	1.65E-04
26-043E-A02	0.00	5-0152	0.00	0.80	3.93E-07	1.65E-10	2.47E-07	2.19E-10	1.65E-10	1.92E-07	1.10E-10	1.65E-10	1.10E-10	1.65E-10	8.69E-07	2.56E-10	6.86E-06	1.65E-10	5.58E-08	1.55E-09	4.57E-10	3.11E-07	2.46E-05	1.65E-04
26-0120-A01	0.00	5-0152	0.00	1.34	2.88E-06	1.19E-09	1.79E-06	1.59E-09	1.19E-09	1.39E-06	7.98E-10	1.19E-09	7.98E-10	1.19E-09	6.20E-06	1.85E-09	4.99E-05	1.19E-09	4.03E-07	1.12E-08	3.31E-09	2.25E-06	1.80E-05	1.19E-03
26-0120-A02	0.00	5-0152	0.00	1.34	2.88E-06	1.19E-09	1.79E-06	1.59E-09	1.19E-09	1.39E-06	7.98E-10	1.19E-09	7.98E-10	1.19E-09	6.20E-06	1.85E-09	4.99E-05	1.19E-09	4.03E-07	1.12E-08	3.31E-09	2.25E-06	1.80E-05	1.19E-03
26-0402-A01	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0402-A02	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A03	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A04	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A05	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A06	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A07	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A08	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A09	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A10	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A11	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A12	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A13	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A14	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A15	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A16	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A17	0.00	5-0152	0.00	4.35	9.39E-06	3.92E-09	5.87E-06	5.12E-09	3.92E-09	4.57E-06	2.81E-09	3.92E-09	2.81E-09	3.92E-09	2.07E-05	6.09E-09	1.63E-04	3.92E-09	1.33E-06	3.70E-08	1.09E-08	7.40E-06	5.92E-05	3.92E-03
26-0421-A18	0.00	5																						

CY2022 Summary of Criteria Pollutants, tons/yr

	Boilers	Generators	PSB/Gasoline Storage Tanks	Fire Test Lab	ECO Mobile Incinerator	Total
VOC	8.36E+01	3.60E-01	1.09E+00	0.00E+00	0.00E+00	2.28
NO _x	1.59E+01	1.42E+01		0.00E+00	0.00E+00	30.03
CO	1.27E+01	3.68E+00		0.00E+00	0.00E+00	16.41
PM Filterable	3.29E-01	2.78E-01		0.00E+00	0.00E+00	0.61
PM-10 Filterable	3.01E-01	2.23E-01		0.00E+00	0.00E+00	0.52
PM-2.5 Filterable	2.94E-01	2.15E-01		0.00E+00	0.00E+00	0.51
PM Condensable	8.46E-01	3.46E-02		0.00E+00	0.00E+00	0.88
PM			3.09E-02			0.03
SO ₂	1.29E+00	6.80E-03		0.00E+00	0.00E+00	1.30
TOTAL	3.25E+01	1.90E+01	1.12E+00	0.00E+00	0.00E+00	5.26E+01

CY2021 Summary of Hazardous Air Pollutants (HAPs) and Toxic Air Pollutants (TAPs), tons/yr

	Boilers	Generators	PSB/Gasoline Storage Tanks	Fire Test Lab	ECO Mobile Incinerator	Total
Acetaldehyde	6.3E-02	3.4E-03		0.0E+00	0.0E+00	6.7E-02
Acenaphthene	4.0E-06	6.4E-06		0.0E+00	0.0E+00	1.0E-05
Acenaphthylene	2.9E-07	2.3E-05		0.0E+00	0.0E+00	2.3E-05
Acrolein	6.3E-02	4.2E-04		0.0E+00	0.0E+00	6.4E-02
Anthracene	5.5E-07	8.4E-06		0.0E+00	0.0E+00	8.9E-06
Benzo(a)anthracene	9.7E-07	7.5E-06		0.0E+00	0.0E+00	8.5E-06
Benzene	3.3E-04	4.2E-03	4.00E-02	0.0E+00	0.0E+00	4.5E-02
Benzo(ghi)perylene	5.6E-07	2.2E-06		0.0E+00	0.0E+00	2.8E-06
Cadmium					0.0E+00	0.0E+00
Chromium			4.8E-03		0.0E+00	4.8E-03
Chrysene	6.7E-07	1.6E-06		0.0E+00	0.0E+00	2.3E-06
Dibenzo(a,h)anthracene	4.6E-07	2.6E-06		0.0E+00	0.0E+00	3.1E-06
Ethyl Benzene	1.3E-03	4.9E-02	2.0E-02	0.0E+00	0.0E+00	7.0E-02
Fluorene	1.2E-06	1.3E-04		0.0E+00	0.0E+00	1.3E-04
Formaldehyde	1.6E-02	5.3E-03		0.0E+00	0.0E+00	2.2E-02
Hexamethylene diisocyanate			1.0E-01			1.0E-01
Indeno(1,2,3-cd)pyrene	6.3E-07	1.7E-06		0.0E+00	0.0E+00	2.3E-06
Lead Compounds					0.0E+00	0.0E+00
Naphthalene	2.9E-04	3.8E-04		0.0E+00	0.0E+00	6.7E-04
Phenanthrene	4.2E-06	1.3E-04		0.0E+00	0.0E+00	1.4E-04
Pyrene	1.4E-06	2.1E-05		0.0E+00	0.0E+00	2.3E-05
Toluene	1.6E-03	1.8E-03	2.2E-01	0.0E+00	0.0E+00	2.2E-01
Xylenes	3.8E-03	1.3E-03	1.1E-01	0.0E+00	0.0E+00	1.1E-01
Hexane	2.5E-01	1.2E-01		0.0E+00	0.0E+00	3.7E-01
TOTAL HAPs	4.0E-01	1.9E-01	4.9E-01	0.0E+00	0.0E+00	1.1E+00

Summary of Consolidated Emission Units

Used for Forms 2 and 3 - Criteria Air Pollutants, Form 4 - TAPs and HAPs, and Form 6 - GHGs

MDE Reg. Number	Note	NOx (tpy)	SOx (tpy)	CO (tpy)	VOC (tpy)	CO ₂ (tpy)	CH ₄ (tpy)	N ₂ O (tpy)
4-0619	2	2.93E+00	9.79E-01	8.60E-01	5.81E-02	3.29E+03	3.43E-02	4.01E-02
5-0152	1	1.96E+00	1.11E-01	1.48E+00	9.73E-02	2.33E+03	4.17E-02	4.07E-02
5-0298	3	3.37E-01	5.61E-03	7.86E-01	5.15E-02	1.12E+03	2.15E-02	2.06E-02
5-0299	4	8.08E-02	1.35E-03	1.88E-01	1.23E-02	2.69E+02	5.16E-03	4.94E-03
5-0300	5	3.20E-01	5.33E-03	7.46E-01	4.89E-02	1.07E+03	2.04E-02	1.95E-02
5-0301	6	2.02E-01	3.36E-03	4.71E-01	3.08E-02	6.73E+02	1.29E-02	1.23E-02
5-0322	7	2.60E-01	1.56E-03	2.19E-01	1.43E-02	3.13E+02	5.99E-03	5.73E-03
9-0411	8	7.11E-01	3.36E-04	1.89E-01	1.82E-02	3.62E+01	1.47E-03	2.94E-04
9-0436	9	3.66E+00	1.73E-03	9.71E-01	9.36E-02	1.86E+02	7.56E-03	1.51E-03

Notes:

1. Consolidated emissions for 5-0152 into one entry
2. Consolidated emissions for 4-0619, 5-0164, 5-0165, 4-0721, 4-0546, 4-0717, and 5-0104
3. Consolidated emissions for 5-0298 into one entry
4. Consolidated emissions for 5-0299 into one entry
5. Consolidated emissions for 5-0300 into one entry
6. Consolidated emissions for 5-0301 into one entry
7. Consolidated emissions for 5-0322 into one entry
8. Consolidated emissions for 9-0411 into one entry
9. Consolidated emissions for 9-0436 into one entry

Emission Comparison (TPY)										
Pollutant	2022	2021	2020	2019	2018	2017	2016	2015	2014	
NOx	30.03	34.74	39.80	35.94	34.08	28.52	35.75	36.33	35.23	
SOx	1.30	1.55	1.67	1.45	1.88	1.66	1.40	6.37	7.11	
VOC	2.28	2.72	2.66	1.86	1.83	1.42	1.57	1.54	1.72	
CO	16.41	18.86	19.40	20.03	20.75	17.79	20.20	20.95	20.49	
PM Filterable	0.61	0.73	0.78							
PM-10 Filterable	0.52	0.62	0.66							
PM-2.5 Filterable	0.51	0.61	0.64							
PM Condensable	0.88	0.99	0.94							
PM				1.05	1.26	0.94	0.97	1.05	1.18	
CO ₂ e	21,577.90	24,573.90	23,996.21	26,474.22	29,832.73	25,941.28	27,293.69	29,837.87	30,358.10	
Total HAPs	1.08	1.22	0.74	0.53	0.25	0.35	0.37	0.39	0.38	

Boilers - Aberdeen Proving Ground - C4ISR Research and Development

Assumed Heat Content for Natural Gas =	1,020	Btu/ft ³
Assumed Heat Content for No. 2 Fuel Oil =	140,000	Btu/gal
Natural Gas NOx for boilers (ppm)	30	ppm
Natural Gas Low NOx Emission Factor	36	lb/MMBtu

Natural Gas Combustion

Location	Dual-Fired Heating Units - Natural Gas Heat Input Each (Btu/hr)	Total Natural Gas Consumption Limit (Btu/yr)	NO _x Emission Factor (lb/10 ⁶ cf)	NO _x Emissions (tpy)	CO Emission Factor (lb/10 ⁶ cf)	CO Emissions (tpy)	VOC Emission Factor (lb/10 ⁶ cf)	VOC Emissions (tpy)	PM Emission Factor (lb/10 ⁶ cf)	PM Emissions (tpy)	SO _x Emission Factor (lb/10 ⁶ cf)	SO _x Emissions (tpy)
Four (4) Boilers at C2CNT West Building	3,500,000	82,355,000	36	1.48	84	3.46	5.5	0.23	7.6	0.31	0.6	6.025
Three (3) Boilers at GMS Tower Building	3,500,000	61,765,000	36	1.11	84	2.59	5.5	0.17	7.6	0.23	0.6	6.010
Five (5) Boilers at HQ1 Building ¹	3,500,000	102,842,000	36	1.88	84	4.32	5.5	0.28	7.6	0.39	0.6	6.031
Three (3) Boilers at GMS Lab Building	3,500,000	61,765,000	36	1.11	84	2.59	5.5	0.17	7.6	0.23	0.6	6.010
Total		308,827,000		6.58		12.97		0.95		1.17		3.70

Number 2 Fuel Oil Combustion

Location	Dual-Fired Heating Units - Fuel Oil Heat Input Each (Btu/hr)	Total No. 2 Fuel Oil Consumption Limit (gal/yr)	NO _x Emission Factor (lb/10 ³ gal)	NO _x Emissions (tpy)	CO Emission Factor (lb/10 ³ gal)	CO Emissions (tpy)	VOC Emission Factor (lb/10 ³ gal)	VOC Emissions (tpy)	PM Emission Factor (lb/10 ³ gal)	PM Emissions (tpy)	SO _x Emission Factor (lb/10 ³ gal)	SO _x Emissions (tpy)
Four (4) Boilers at C2CNT West Building	3,500,000	160,000	20	1.60	5	0.40	0.34	0.027	3.3	0.26	43.2	3.48
Three (3) Boilers at GMS Tower Building	3,500,000	120,000	20	1.20	5	0.30	0.34	0.020	3.3	0.26	43.2	2.69
Five (5) Boilers at HQ1 Building ¹	3,500,000	200,000	20	2.00	5	0.50	0.34	0.034	3.3	0.33	43.2	4.32
Three (3) Boilers at GMS Lab Building	3,500,000	120,000	20	1.20	5	0.30	0.34	0.020	3.3	0.26	43.2	2.69
Total		600,000		5.80		1.50		0.081		0.99		17.58

- For the boilers, natural gas emission factors for all pollutants except NO_x were obtained from U.S. EPA's AP-42, Section 1.4. The low NO_x burners reduce NO_x emissions to 30 ppm according to the information provided. Using a standard conversion: lb/MMBtu = ppm / 850, the NO_x emission factor appropriate for burning natural gas in the proposed burners is 0.035 lb/MMBtu or 36 lb/MMBtu. (This conversion assumes that the NO_x concentration reflects 3% oxygen.) Conservatively assume that PM₁₀ = PM.
- Number 2 fuel oil emission factors for all pollutants were obtained from U.S. EPA's AP-42, Section 1.3. Conservatively assume that PM₁₀ = PM. The SO_x emission factor uses a sulfur content of 0.3 wt%.
- The boilers located at HQ1 building also heat the HQ2 building.

Generators - Aberdeen Proving Ground - C4ISR Research and Development

Emergency Generators	Potential Hours (Hours/yr)	Horsepower (hp)	NO _x Emission Factor (lb/hp-hr)	NO _x Emissions (tpy)	CO Emission Factor (lb/hp-hr)	CO Emissions (tpy)	VOC Emission Factor (lb/hp-hr)	VOC Emissions (tpy)	PM Emission Factor (lb/hp-hr)	PM Emissions (tpy)	SO _x Emission Factor (lb/hp-hr)	SO _x Emissions (tpy)
C2CNT West (one 1,500 kW) ¹	135	2,200	0.015	2.28	5.29E-04	0.079	3.09E-04	0.046	2.20E-04	0.033	4.05E-04	0.080
GMS Tower (one 1,500 kW) ¹	135	2,200	0.015	2.28	5.29E-04	0.079	3.09E-04	0.046	2.20E-04	0.033	4.05E-04	0.080
HQ1 and HQ2 (one 2,000 kW located at HQ2) ²	135	2,922	0.014	2.77	7.94E-04	0.16	4.19E-04	0.063	2.65E-04	0.052	4.05E-04	0.080
GMS Lab (one 2,500 kW) ²	135	3,778	0.020	5.22	1.79E-03	0.46	4.19E-04	0.11	2.20E-04	0.056	4.05E-04	0.10
MTF (250 kW) ³	135	399	0.010	0.28	8.82E-04	0.024	1.98E-04	5.34E-03	2.20E-04	8.94E-03	2.05E-03	0.055
PIFF (250 kW) ³	135	399	0.010	0.28	8.82E-04	0.024	1.98E-04	5.34E-03	2.20E-04	8.94E-03	2.05E-03	0.055
TOTAL				13.10		0.82		0.28		0.19		0.41

- Emission factors reflect Cummins not-to-exceed emissions data for a Tier 2, 1,500 kW standby generator. SO_x emission factor provided by AP-42, assuming sulfur content of 0.05%.
- Emission factors reflect Cummins not-to-exceed emissions data for a Tier 2, 2,000 kW standby generator. SO_x emission factor provided by AP-42, assuming sulfur content of 0.05%.
- Emission factors reflect Cummins not-to-exceed emissions data for a Tier 1, 2,500 kW standby generator. SO_x emission factor provided by AP-42, assuming sulfur content of 0.05%.
- Emission factors reflect Cummins not-to-exceed emissions data for a Tier 3, 250 kW standby generator. SO_x emission factor provided by AP-42.
- Brake horsepower (hp) was obtained from Cummins specification sheets.

Emissions in pounds per operating day (lb/day) per generator:

Location	NO _x Emissions (lb/day)	CO Emissions (lb/day)	VOC Emissions (lb/day)	PM Emissions (lb/day)	SO _x Emissions (lb/day)
C2CNT West (one 1,500 kW)	351	13	8	6	10
GMS Tower (one 1,500 kW)	351	13	8	6	10
HQ1 and HQ2 (one 2,000 kW located at HQ2)	426	26	13	9	13
GMS Lab (one 2,500 kW)	804	71	17	9	16
MTF (250 kW)	43	4	1	1	9
PIFF (250 kW)	43	4	1	1	9

To calculate lb/operating day emissions, the total annual emissions for each generator were divided by the estimated number of days of operation (13 days). The emissions in lb/day were then rounded up to nearest whole number.
Assumed PM₁₀ = PM

From Permit Application	C2CNT and GMS	HQ1 and 2	GMS Lab	MTF and PIFF	AP-42	C2CNT and GMS	HQ1 and 2	GMS Lab	MTF and PIFF
Pollutant	Fuel Oil lb/hp-hr	Fuel Oil lb/hp-hr	Fuel Oil lb/hp-hr	Fuel Oil lb/hp-hr	Fuel Oil lb/hp-hr	Ratio	Ratio	Ratio	Ratio
NO _x	0.015	0.014	0.020	0.010	0.024	0.63	0.58	0.83	0.42
SO _x									
CO	5.29E-04	7.94E-04	1.79E-03	8.82E-04	5.50E-03	0.10	0.14	0.33	0.16
PM	2.20E-04	2.65E-04	2.20E-04	2.20E-04	7.00E-04	0.31	0.38	0.31	0.31
VOC	3.09E-04	4.19E-04	4.19E-04	1.98E-04	7.05E-04	0.44	0.59	0.59	0.28

Table 3.4-1. GASEOUS EMISSION FACTORS FOR LARGE STATIONARY DIESEL AND ALL STATIONARY DUAL-FUEL ENGINES^a

Pollutant	Diesel Fuel (SCC 2-02-004-01)			Dual Fuel ^b (SCC 2-02-004-02)		
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	EMISSION FACTOR RATING	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	EMISSION FACTOR RATING
NO _x						
Uncontrolled	0.024	3.2	B	0.018	2.7	D
Controlled	0.013 ^c	1.9 ^c	B	ND	ND	NA
CO	5.5 E-03	0.85	C	7.5 E-03	1.16	D
SO _x ^d	8.09 E-03S ₁	1.01S ₁	B	4.06 E-04S ₁ + 9.57 E-03S ₂	0.05S ₁ + 0.895S ₂	B
CO ₂ ^e	1.16	165	B	0.772	110	B
PM	0.0007 ^c	0.1 ^c	B	ND	ND	NA
TOC (as CH ₄)	7.05 E-04	0.09	C	5.29 E-03	0.8	D
Methane	f	f	E	3.97 E-03	0.6	E
Nonmethane	f	f	E	1.32 E-03	0.2 ^g	E

^a Based on uncontrolled levels for each fuel, from References 2,6-7. When necessary, the average heating value of diesel was assumed to be 19,300 Btu/lb with a density of 7.1 lb/gallon. The power output and fuel input values were averaged independently from each other, because of the use of actual brake-specific fuel consumption (BSFC) values for each data point and of the use of data possibly sufficient to calculate only 1 of the 2 emission factors (e. g., enough information to calculate lb/MMBtu, but not lb/hp-hr). Factors are based on averages across all manufacturers and duty cycles. The actual emissions from a particular engine or manufacturer could vary considerably from these levels. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code.

^b Dual fuel assumes 95% natural gas and 5% diesel fuel.

^c References 8-26. Controlled NO_x is by ignition timing retard.

^d Assumes that all sulfur in the fuel is converted to SO₂. S₁ = % sulfur in fuel oil; S₂ = % sulfur in natural gas. For example, if sulfur content is 1.5%, then S = 1.5.

^e Assumes 100% conversion of carbon in fuel to CO₂ with 87 weight % carbon in diesel, 70 weight % carbon in natural gas, dual-fuel mixture of 5% diesel with 95% natural gas, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and natural gas heating value of 1050 Btu/scf.

^f Based on data from 1 engine, TOC is by weight 9% methane and 91% nonmethane.

^g Assumes that nonmethane organic compounds are 25% of TOC emissions from dual-fuel engines. Molecular weight of nonmethane gas stream is assumed to be that of methane.

Pollutant	PLANT LEVEL	
	Round to Nearest:	
	Lbs / hour	Tons/year
Acetaldehyde	1.00E-01	1.00E-01
Acetamide	1.00E-01	1.00E+00
Acetonirile	1.00E+00	1.00E+00
Acetophenone	1.00E-01	1.00E+00
2-Acetylaminofluorene	1.00E-02	1.00E-02
Acrolein	1.00E-03	1.00E-02
Acrylamide	1.00E-04	1.00E-04
Acrylic Acid	1.00E-01	1.00E-01
Acrylonitrile	1.00E-02	1.00E-02
Allyl chloride	1.00E-02	1.00E-01
4-Aminobiphenyl	1.00E-02	1.00E-01
Ammonia	1.00E-01	1.00E+00
Aniline	1.00E-01	1.00E-01
o-Anisidine	1.00E-03	1.00E-02
Antimony & compounds	1.00E-03	1.00E-02
Arsenic & compounds	1.00E-04	1.00E-04
Benzene	1.00E-02	1.00E-01
Benzidene	1.00E-02	1.00E-05
Benzotrichloride	1.00E-02	1.00E-04
Benzyl chloride	1.00E-02	1.00E-01
Beryllium & compounds	1.00E-05	1.00E-04
Biphenyl	1.00E-02	1.00E-01
Bis (2-ethylhexyl) phthalate	1.00E-02	1.00E-01
Bis (chloromethyl) ether	1.00E-05	1.00E-05
Bromoform	1.00E-02	1.00E-01
1,3-Butadiene	1.00E-02	1.00E-03
Cadmium & compounds	1.00E-04	1.00E-04
Calcium cyanamide	1.00E-03	1.00E-02
Captan	1.00E-02	1.00E-01
Carbaryl	1.00E-02	1.00E-01
Carbon disulfide	1.00E-01	1.00E+00
Carbon tetrachloride	1.00E-01	1.00E-02
Carbonyl sulfide	1.00E-01	1.00E+00
Catechol	1.00E-01	1.00E+00
Chloramben	1.00E-01	1.00E+00
Chlordane	1.00E-03	1.00E-02
Chlorine	1.00E-02	1.00E-01
Chlorine dioxide	1.00E-03	1.00E-02
Chloroacetic acid	1.00E-02	1.00E-01
2-Chloroacetophenone	1.00E-03	1.00E-02

Pollutant	PLANT LEVEL	
	Round to Nearest:	
	Lbs / hour	Tons/year
Chlorobenzene	1.00E-01	1.00E+00
Chlorobenzilate	1.00E-02	1.00E-01
Chloroform	1.00E-01	1.00E-02
Chloromethyl methyl ether	1.00E-02	1.00E-01
Chloroprene	1.00E-01	1.00E+00
Chromium (Elemental) Compounds	1.00E-03	1.00E-02
Chromium III Compounds	1.00E-03	1.00E-02
Chromium VI Compounds	1.00E-03	1.00E-05
Cobalt & compounds	1.00E-04	1.00E-03
Coke oven emissions	1.00E-03	1.00E-03
Copper	1.00E-03	1.00E-02
Cresol/Cresylic acid	1.00E-01	1.00E+00
0-Cresol	1.00E-01	1.00E+00
m-Cresol	1.00E-01	1.00E+00
p-Cresol	1.00E-01	1.00E+00
Cumene	1.00E+00	1.00E+01
Cyanide Compounds	1.00E-02	1.00E-01
2,4-D (including salts and esters)	1.00E-01	1.00E-01
DDE	1.00E-02	1.00E-01
Diazomethane	1.00E-03	1.00E-02
Dibenzofuran	1.00E-01	1.00E+00
1,2-Dibromo-3-chloropropane	1.00E-02	1.00E+00
Dibutyl phthalate	1.00E-02	1.00E-01
1,4-Dichlorobenzene(P)	1.00E+00	1.00E-01
3,3'-Dichlorobenzidine	1.00E-03	1.00E-03
Dichloroethyl ether	1.00E-01	1.00E+00
1,2-Dichloropropane	1.00E+00	1.00E+01
1,3-Dichloropropene	1.00E-02	1.00E-02
Dichlorvos	1.00E-02	1.00E-02
Dieldrin	1.00E-03	1.00E-02
Diethanolamine	1.00E-02	1.00E-01
Diethyl sulfate	1.00E-02	1.00E-01
3,3'-Dimethoxybenzidine	1.00E-01	1.00E-01

Pollutant	PLANT LEVEL	
	Round to Nearest:	
	Lbs / hour	Tons/year
4-Dimethylaminoazobenzene	1.00E-02	1.00E-02
N,N-Dimethylaniline	1.00E-01	1.00E+00
3,3'-Dimethylbenzidine	1.00E-01	1.00E-01
Dimethylcarbamoyl chloride	1.00E-02	1.00E-01
N,N-Dimethylformamide	1.00E-01	1.00E+00
1,1-Dimethylhydrazine	1.00E-04	1.00E-04
Dimethyl phthalate	1.00E-02	1.00E-01
Dimethyl sulfate	1.00E-03	1.00E-02
4,6-Dinitro-o-cresol (including salts)	1.00E-03	1.00E-02
2,4-Dinitrophenol	1.00E-03	1.00E-03
2,4-Dinitrotoluene	1.00E-02	1.00E-01
1,4-dioxane	1.00E+00	1.00E-01
1,2-Diphenylhydrazine	1.00E-02	1.00E-03
Epichlorohydrin	1.00E-02	1.00E-01
1,2-Epoxybutane	1.00E-02	1.00E-02
Ethyl arcylate	1.00E-01	1.00E-02
Ethyl benezene	1.00E+00	1.00E+01
Ethyl carbamate	1.00E-02	1.00E-01
Ethyl chloride	1.00E-03	1.00E-02
Ethylene dibromide	1.00E+00	1.00E-03
Ethylene dichloride	1.00E-01	1.00E-02
Ethylene glycol	1.00E+00	1.00E+00
Ethyleneimine	1.00E-02	1.00E-02
Ethylene oxide	1.00E-02	1.00E-03
Ethylene thiourea	1.00E-01	1.00E-02
Ethylidene dichloride	1.00E+00	1.00E+01
Formaldehyde	1.00E-03	1.00E-02
Glycol ethers	1.00E-01	1.00E+00
Heptachlor	1.00E-04	1.00E-03
Hexachlorobenzene	1.00E-05	1.00E-03
Hexachlorobutadiene	1.00E-03	1.00E-02
1,2,3,4,5,6-Hexachlorocyclohexane (including all stereo isomers)	1.00E-03	1.00E-02
Hexachlorocyclopentadiene	1.00E-03	1.00E-03

Pollutant	PLANT LEVEL	
	Round to Nearest:	
	Lbs / hour	Tons/year
Hexachloroethane	1.00E-01	1.00E-01
Hexamethylene diisocyanate	1.00E-04	1.00E-03
Hexamethylphosphoramide	1.00E-01	1.00E-01
n-Hexane	1.00E+00	1.00E+01
Hydrazine	1.00E-03	1.00E-03
Hydrochloric acid	1.00E-01	1.00E-01
Hydrogen fluoride	1.00E-02	1.00E-01
Hydroquinone	1.00E-02	1.00E-01
Isophorone	1.00E-01	1.00E+00
Lead & compounds	1.00E-04	1.00E-03
Maleic anhydride	1.00E-02	1.00E-02
Manganese & compounds	1.00E-03	1.00E-02
Mercury & compounds	1.00E-04	1.00E-03
Methanol	1.00E+00	1.00E+01
Methoxychlor	1.00E-01	1.00E-01
Methyl bromide	1.00E-02	1.00E-02
Methyl chloride	1.00E-01	1.00E-01
Methyl chloroform	1.00E+01	1.00E+01
Methyl ethyl ketone (MEK)	1.00E+01	1.00E+01
Methyl hydrazine	1.00E-04	1.00E-03
Methyl iodide	1.00E-01	1.00E-01
Methyl isobutyl ketone (MIBK)	1.00E+00	1.00E+01
Methyl isocyanate	1.00E-04	1.00E-03
Methyl methacrylate	1.00E+00	1.00E+01
Methyl tert-butyl ether (MTBE)	1.00E+00	1.00E+01
4,4'-Methylenebis(2-chloroaniline)	1.00E-03	1.00E-02
Methylene chloride	1.00E+00	1.00E+00
4,4'-Methylenediphenyl diisocyanate (MDI)	1.00E-04	1.00E-03
4,4'-Methylenedianiline	1.00E-02	1.00E-02
Naphthalene	1.00E-01	1.00E+00
Nickel & compounds	1.00E-03	1.00E-03
Nitrobenzene	1.00E-02	1.00E-01
4-Nitrobiphenyl	1.00E-01	1.00E-01

Pollutant	PLANT LEVEL	
	Round to Nearest:	
	Lbs / hour	Tons/year
4-Nitrophenol	1.00E-02	1.00E-02
2-Nitropropane	1.00E-01	1.00E-04
N-Nitroso-N-methylurea	1.00E-03	1.00E-02
N-Nitrosodimethylamine	1.00E-03	1.00E-05
N-Nitrosomorpholine	1.00E-02	1.00E-02
Parathion	1.00E-03	1.00E-03
Pentachloronitrobenzene	1.00E-03	1.00E-02
Pentachlorophenol	1.00E-03	1.00E-02
Phenol	1.00E-01	1.00E+00
p-Phenylenediamine	1.00E-03	1.00E-03
Phosgene	1.00E-03	1.00E-02
Phosphine	1.00E-03	1.00E-02
Phosphorus	1.00E-03	1.00E-03
Phthalic anhydride	1.00E-01	1.00E-01
PCB	1.00E-02	1.00E-03
POM (PAHs)^a	As Individual Pollutant (See Below)	
1,3-Propane sultone	1.00E+01	1.00E+01
Beta-Propiolactone	1.00E-02	1.00E-01
Propionaldehyde	1.00E-01	1.00E-01
Propoxur	1.00E-03	1.00E-02
Propylene oxide	1.00E-01	1.00E-01
1,2-Propylenimine	1.00E-02	1.00E-01
Quinoline	1.00E-02	1.00E-01
Quinone	1.00E-03	1.00E-02
Selenium & Compounds	1.00E-03	1.00E-02
Styrene	1.00E+00	1.00E+00
Stryene oxide	1.00E-01	1.00E-01
2,3,7,8,-TCDF/2,3,7,8-TCDD ^b	1.00E-07	1.00E-08
1,1,2,2-Tetrachloroethane	1.00E-01	1.00E-01
Tetrachloroethylene	1.00E+00	1.00E+01
Titanium Tetrachloride	1.00E-02	1.00E-01
Toluene	1.00E+00	1.00E+01
Toluene-2,4-damine	1.00E-04	1.00E-04
2,4-Toluene Diisocyanate	1.00E-04	1.00E-02

Pollutant	PLANT LEVEL	
	Round to Nearest:	
	Lbs / hour	Tons/year
o-Toluidine	1.00E-01	1.00E-02
Toxaphene	1.00E-03	1.00E-03
1,2,4-Trichlorobenzene	1.00E-01	1.00E+00
1,1,2-Trichloroethane	1.00E-01	1.00E+00
Trichloroethylene	1.00E+00	1.00E+01
2,4,5-Trichlorophenol	1.00E-02	1.00E-01
2,4,6-Trichlorophenol	1.00E-02	1.00E-01
Triethylamine	1.00E-02	1.00E-01
Trifluranlin	1.00E-01	1.00E-01
2,2,4-Trimethylpentane	1.00E-01	1.00E+00
Vinyl acetate	1.00E-01	1.00E+00
Vinyl bromide	1.00E-01	1.00E+00
Vinyl chloride	1.00E-01	1.00E-02
Vinylidenen chloride	1.00E-01	1.00E+00
Xylenes	1.00E+00	1.00E+01
o-Xylene	1.00E+00	1.00E+01
m-Xylene	1.00E+00	1.00E+01
p-Xylene	1.00E+00	1.00E+01
Zinc compounds	1.00E-02	1.00E-01
aPOM includes:		
Acenaphthene	1.00E-03	1.00E-02
Acenaphthylene	1.00E-02	1.00E-01
Anthracene	1.00E-03	1.00E-02
Benz(a)anthracene	1.00E-03	1.00E-03
Benzo(a)pyrene	1.00E-03	1.00E-04
Benzo(b)fluoranthene	1.00E-01	1.00E-03
Benzo(ghi)perylene	1.00E-03	1.00E-02
Benzo(k)fluoranthene	1.00E-02	1.00E-02
Chrysene	1.00E-03	1.00E-02
Dibenzo(a,h)anthracene	1.00E-04	1.00E-04
Fluoranthene	1.00E-01	1.00E-01
Fluorene	1.00E-03	1.00E-02
Indeno(1,2,3-cd)pyrene	1.00E-03	1.00E-03
Naphthalene	1.00E-01	1.00E+00
Phenanthrene	1.00E-02	1.00E-02
Pyrene	1.00E-03	1.00E-02
b2,3,7,8-Tetrachlorodibenzofuran/		

Pollutant	PLANT LEVEL	
	Round to Nearest:	
	Lbs / hour	Tons/year
2,3,7,8-Tetrachlorodibenzo-p-dioxin.		
Inventory these HAPS as toxic equivalents		
(TEQs)		



DEPARTMENT OF THE ARMY
U.S. ARMY INSTALLATION MANAGEMENT COMMAND
U.S. ARMY GARRISON ABERDEEN PROVING GROUND
DPW ENVIRONMENTAL DIVISION BUILDING 4304, 6504 RODMAN RD
ABERDEEN PROVING GROUND MARYLAND 21005-1946

March 22, 2023

Mr. Daniel Davis
Air Quality Compliance Program
Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Boulevard, Suite 715
Baltimore, MD 21230-1720

Dear Mr. Davis:

As required under Title V – Part 70 Operating Permit # 24-025-00081 issued by the Maryland Department of the Environment to Aberdeen Area of Aberdeen Proving Ground, Maryland, Aberdeen Proving Ground is herewith submitting a digital file in '.pdf' format of the Annual Compliance Certification for Permit # 24-025-00081, comprising the Certification of Truth, Accuracy, and Completeness, Certification of Plant-Wide Conditions, and Form A-COMP – Annual Compliance Certification enclosed. The compliance period for these Certifications is January 1, 2022 through December 31, 2022.

The report titled "2022 Title V Compliance Certification Report for Aberdeen Area of Aberdeen Proving Ground, March 2023" was prepared by a contractor, Groundwater and Environmental Services. Based on the information obtained and compiled by Groundwater and Environmental Services: "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."

Copied on this email submission are Mr. Alexander Holt, Regulatory and Compliance Engineer Supervisor, alexander.holt@maryland.gov and the Environmental Protection Agency, R3_APD_Permits@epa.gov.

The point of contact for this matter in the Directorate of Public Works, Environmental Compliance Branch is Dr. Hazoor B. Khan, 410-306-2278, hazoor.b.khan.civ@army.mil.

Sincerely,

GRAINE.JANMICH
AEL.SHADD.10793
34860

Digitally signed by
GRAINE.JANMICHAEL.SHADD.1
079334860
Date: 2023.03.22 14:32:47 -04'00'

Janmichael Graine
Acting Chief Environmental Compliance Branch
Directorate of Public Works

Enclosure

Directorate of Public Works - U.S. Army Garrison, Aberdeen Proving Ground

2022 Title V Compliance Certification Report

Aberdeen Area

Aberdeen Proving Ground

March 2023





2022 Title V Compliance Certification Report

Aberdeen Area
Aberdeen Proving Ground

Prepared for:
Department of Public Works
U.S. Army Garrison
DPW Environmental Division Building 4304
6504 Rodman Rd
Aberdeen Proving Ground, MD 21005-1946

Prepared by:
Groundwater & Environmental Services, Inc.
1599 Route 34, Suite 1
Wall Township, NJ 07727
TEL: 800-220-3068
www.gesonline.com

GES Project:
0403423.50.871

Date:
March 2023

A handwritten signature in blue ink that reads 'Amelia Ryan'.

Amelia Ryan, PE
Environmental Engineer

A handwritten signature in black ink that reads 'Douglas Wolf'.

Douglas Wolf
Director, Air Quality Services



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Appendices

Appendix A – Semiannual NESHAPS 40 CFR Part 63 Subpart ZZZZ Compliance Certification Reports

1 Executive Summary

The Aberdeen Area (AA) of Aberdeen Proving Ground (APG) is subject to the conditions in the Title V Operating Permit No. 24-025-00081, issued 1 February 2020. This document was prepared to comply with the requirement in Section III, Part 9 of the permit, that the Permittee must submit a report certifying compliance with each permit condition, to the Maryland Department of the Environment (MDE) and the Environmental Protection Agency (EPA) Region III by 1 April of each year.

Compliance status was determined by interviews with operating personnel, site visits to each of the permitted emission sources, and reviews of information such as fuel usage logs, material usage logs, and training logs. The following conditions are addressed in this document: Plant Wide Conditions, Plant Specific Conditions, requirements applicable to Insignificant Activities, and State Only Conditions.

The Aberdeen Area was in compliance with the permit requirements during the period 1 January through 31 December 2022, with the following exceptions, which are noted on A-COMP Form, Part C.

- In 2021 two chillers containing more than 50 lbs. of Class I and Class II ozone depleting substances were repaired. The repair log for the repair of Building 4727 Trane Chiller and Building 4304 Trane Chiller did not include the required annualized % leakage rate calculation and a description of the method of the leakage rate calculation used. The repair logs were corrected to display the annualized % leak rate on March 10, 2022.
- Tune-ups for oil fired boilers under 5 MMBtu/hr are required every five years. Tune-ups for the majority of small boilers have been completed in the past five years. The five-year tune-up for unit 0896-A01 (due 28 December 2020) was delayed. 0896-A01 was discovered to be a radiant tube space heater and not a boiler by definition so it is not required to be tuned up. This change will be corrected in the next Title V application.
- Process and NSPS boilers are required to have annual tune ups. The combustion optimization for unit 4600-A06 (due 2 December 2021) had not been conducted because the unit was offline. The boiler was repaired and tuned up on December 6, 2022. Unit 0345-A01 (due December 7, 2022) has not been conducted, a combustion optimization will be completed as soon as possible.
- The stationary engines subject to NESHAP Subpart ZZZZ have operational limitations. These limitations were not continuously met for units UTF-01 (9-0435), BSS-01 (9-0435) and LWE-01 thru 05 (9-0436) during the reporting period.
- The stationary engines subject to NESHAP Subpart ZZZZ are required to have performance tests completed every 8,760 hours or 3 years whichever comes first. The three-year performance test for unit BSS-01 (due 7, November 2022) was delayed and was completed on January 4, 2023.



- ZZZZ affected insignificant sources are subject to ZZZZ maintenance requirements. These requirements were not continuously met for engines at building 3600A and 1043 due to a lapse in contractual coverage.
- An annual combustion optimization is required for the atmospheric burner at HESATF. A combustion optimization was not performed in 2022 because there is no known method to conduct a combustion analysis on this bench scale device which most closely resembles a jet engine. Consideration is underway to remove this requirement from the Permit to Construct and the APG Aberdeen Area Title V Permit. This device is operated per the manufacturer's recommendations under the supervision of trained personnel to achieve the lab results required. This unit was not used in 2022.



2 GES Certification Statement

Groundwater & Environmental Services, Inc. (GES) certifies under penalty of law that the 2022 Title V Compliance Certification Report for Aberdeen Area of Aberdeen Proving Ground was prepared under my direction or supervision, in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. In as such, information was gathered by GES personnel who possessed appropriate training and/or expertise and derived from researching US Army Garrison, APG files and researching published referenced materials.

GES has assumed the accuracy of, but did not independently verify information gathered from the US Army Garrison, APG files and other sources, except where we had actual knowledge that the information was accurate. The information submitted is therefore, to the best of our knowledge and belief, true, accurate and complete.

We understand that the US Army Garrison, APG intends to rely upon our certification in submitting the 2022 Title V Compliance Certification Report for the Aberdeen Area of Aberdeen Proving Ground to the Maryland Department of the Environment and US Environmental Protection Agency, Region 3.

A handwritten signature in black ink that reads "Douglas G. Wolf". The signature is written in a cursive, flowing style.

By: _____

Date: March 13, 2023

Groundwater & Environmental Services, Inc.
Douglas G, Wolf, Principal Engineer
Director of Air Quality Services

3 EPA Certification of Truth, Accuracy, and Completeness (EPA Form 5900-02)



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

Federal Operating Permit Program (40 CFR Part 71)

CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS (CTAC)

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

A. Responsible Official

Name: (Last) Kryston (First) Sarah (MI)

Title Chief, Environmental Compliance Branch, Directorate of Public Works

Street or P.O. Box ATTN: AMIM-APP-E

City Aberdeen Proving Ground State MD ZIP 21005 -1946

Telephone (410) 306 – 2270 Ext. Facsimile (410) 306 – 2261

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

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

Name (signed) GRAINE.JANMICH AEL.SHADD.10793 34860

Digitally signed by
GRAINE.JANMICHAEL.SHADD.1
079334860
Date: 2023.03.22 14:35:10 -04'00'

Name (typed) Janmichael Graine Date: 03/22/2023

4 Certification of Plant-Wide Conditions (Section III of Part 70 Operating Permit)

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

1. Particulate Matter from Construction and Demolition [COMAR 26.11.06.03D]

Permit Term	Compliance and Method
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.	Compliant. Paragraph 2-5 of APG Regulation 200-30 "Environmental Quality Air Quality Management at Aberdeen Proving Ground", dated 01 May 2016, preceded by APG Regulation 200-30 dated 01 April 2012, includes actions necessary to comply with federal and state regulations pertaining to particulate matter.

2. Open Burning [COMAR 26.11.07]

Permit Term	Compliance and Method
Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from May 1 through September 30 of any calendar year. Prior to open burning, the Permittee shall require and receive approval from the Department.	Compliant. Open Fires and Safety Determinations permits of anticipated or expected safety determinations were granted by Harford County Health Department.

3. Air Pollution Episode [COMAR 26.11.05.04]

Permit Term	Compliance and Method
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.	Compliant. Not requested by the Department.



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:

Permit Term	Compliance and Method
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.	Compliant. There were no deviations that could endanger human health or the environment. Paragraph 2-11 of APG Regulation 200-30 “Environmental Quality Air Quality Management at Aberdeen Proving Ground”, dated 01 May 2016, preceded by APG Regulation 200-30 dated 01 April 2012, includes actions necessary to comply with federal and state regulations pertaining to reporting and record keeping in general terms.
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.	Compliant. There were no excess emissions that lasted for one hour or longer. Paragraph 2-11 of APG Regulation 200-30 “Environmental Quality Air Quality Management at Aberdeen Proving Ground”, dated 01 May 2016, preceded by APG Regulation 200-30 dated 01 April 2012, includes actions necessary to comply with federal and state regulations pertaining to reporting and record keeping in general terms.
c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributable 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 must include the cause, dates and times of the onset and termination of the deviation, as well as the action planned or taken to reduce, eliminate, and prevent the recurrence of the deviation.	Compliant. Written reports of deviations were not requested by the Department. Paragraph 2-11 of APG Regulation 200-30 “Environmental Quality Air Quality Management at Aberdeen Proving Ground”, dated 01 May 2016, preceded by APG Regulation 200-30 dated 01 April 2012, includes actions necessary to comply with federal and state regulations pertaining to reporting and record keeping in general terms.
d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required	Compliant. SIXMON reports were submitted as required. Paragraph 2-11 of



Permit Term	Compliance and Method
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.	APG Regulation 200-30 "Environmental Quality Air Quality Management at Aberdeen Proving Ground", dated 01 May 2016, preceded by APG Regulation 200-30 dated 01 April 2012, includes actions necessary to comply with federal and state regulations pertaining to reporting and record keeping in general terms.
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).	Compliant. Written reports concerning occurrences of excess emissions were not requested by the Department. Paragraph 2-11 of APG Regulation 200-30 "Environmental Quality Air Quality Management at Aberdeen Proving Ground", dated 01 May 2016, preceded by APG Regulation 200-30 dated 01 April 2012, includes actions necessary to comply with federal and state regulations pertaining to reporting and record keeping in general terms.

5. Accidental Release Provisions [COMAR 26.11.03.03B(23) and [40 CFR 68]

Permit Term	Compliance and Method
The Permittee shall submit risk management plans by the date specified in 40 CFR Part 68.150.	Compliant. Plan submitted per 40 CFR Part 68.150.
The Permittee shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR Part 70.	Compliant. Certified by this report.

6. General Testing Requirements [COMAR 26.11.01.04]

Permit Term	Compliance and Method
The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with the Part 70 permit. The Department, as 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.	Compliant. No testing was required by the Department.

7. Emissions Test Methods [COMAR 26.11.01.04]

Permit Term	Compliance and Method
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 Part 60, Appendix A b. 40 CFR Part 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)	Compliant. No such testing was required or conducted.

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.

Permit Term	Compliance and Method
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.	Compliant. Facility certifies actual annual emissions as permitted/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 certification form is submitted, and (2) Responsible for the accuracy of the emissions information.	Compliant. Certifying individual is familiar with each source and responsible for the accuracy of information.



Permit Term	Compliance and Method
c. The Permittee shall maintain records necessary to support the emission certification including, 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 emission monitors that are required by this permit, including monitor calibration and malfunction information; (5) identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including: (a) Significant maintenance performed, (b) Malfunctions and downtime, and (c) Episodes of reduced efficiency of all equipment; (6) Limitations on source operation or any work practice standards that significantly affect emissions; and (7) other relevant information as required by the Department.	Compliant. Source specific records are used for emission certification preparation and are maintained. This is verified during quarterly inspections.

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, emission limitation, and work practice by April 1 of each year.

Permit Term	Compliance and Method
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 the 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.	Compliant. Per this certification.
b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.	Compliant. Per this certification.

10. Certification by Responsible Official [COMAR 26.11.02.02F]

Permit Term	Compliance and Method
All application forms, reports, and compliance certifications submitted pursuant 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.	Compliant. Per this certification.
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."	Compliant. Per MDE letter (annual emissions certification and Title V certification request), required to use form and certification with similar statement. A certification that meets this requirement is included.

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:

Permit Term	Compliance and Method
a. The location as specified by this permit, and the date and time that samples and measurements are taken;	Compliant. Quarterly inspections for emission sources where sampling or testing was conducted.
b. All pertinent operating conditions existing at the time that samples and measurements are taken;	Compliant. Quarterly inspections for emission sources where sampling or testing was conducted.
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;	Compliant. Quarterly inspections for emission sources where sampling or testing was conducted.
d. The identity of the Permittee, individual, or other entity that performed the analysis;	Compliant. Quarterly inspections for emission sources where sampling or testing was conducted.



Permit Term	Compliance and Method
e. The analytical techniques and methods used; and	Compliant. Quarterly inspections for emission sources where sampling or testing was conducted.
f. The results of each analysis.	Compliant. Quarterly inspections for emission sources where sampling or testing was conducted.

12. General Record Keeping [COMAR 26.11.03.06C(6)] - The Permittee shall retain records of all monitoring data and support information that supports 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.

Permit Term	Compliance and Method
a. All calibration and maintenance records;	Compliant. Interviews with personnel and quarterly inspections.
b. All original data collected from continuous monitoring instrumentation;	Compliant. Interviews with personnel and quarterly inspections.
c. Records which support the annual emissions certification; and	Compliant. Interviews with personnel and quarterly inspections.
d. Copies of all reports required by this permit.	Compliant. Interviews with personnel and quarterly inspections.

13. General Conformity [COMAR 26.11.26.09]

Permit Term	Compliance and Method
The Permittee shall comply with the general conformity requirements of 40 CFR Part 93, Subpart B and COMAR 26.11.26.09.	Compliant. Paragraph 2-3 of APG Regulation 200-30 "Environmental Quality Air Quality Management at Aberdeen Proving Ground", dated 01 May 2016, preceded by APG Regulation 200-30 dated 01 April 2012, includes actions necessary to comply with federal and state regulations pertaining to general conformity. APG maintains records of RONA documentation.

14. Asbestos Provisions [40 CFR 61, Subpart M]

Permit Term	Compliance and Method
The Permittee shall comply with 40 CFR Part 61, Subpart M when conducting any renovation or demolition activities at the facility.	Compliant. The facility adheres to APG Asbestos Management Plan dated 2006 and Garrison APG Asbestos Management Policy dated 06 October 2011.

15. Ozone Depleting Regulations [40 CFR 82, Subpart F] - The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

Permit Term	Compliance and Method
a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.	Compliant. APG Policy #DPW-24 for Clean Air Act (CAA) Compliance Management, Recordkeeping, and Reporting Requirements for Refrigeration Systems was signed in December 2015 and revised in October 2019, to ensure compliance with the recordkeeping and reporting requirements specified in the Title V permits for APG and applicable regulations.
b. Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.	Compliant. All recycling and recovery equipment has been certified by the manufacturer to meet the technical specifications outlined in 40 CFR, Part 82.158 and is labelled by the manufacturer with the appropriate certification.
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.	Compliant. Review of technician's certificates provided by DPW-Environmental for an approved technician certification program.
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.	Compliant. APG Policy #DPW-24 for Clean Air Act (CAA) Compliance Management, Recordkeeping, and Reporting Requirements for Refrigeration Systems was signed in December 2015 and revised in October 2019, to ensure compliance with the recordkeeping and reporting requirements specified in the Title V permits for APG and applicable regulations.



Permit Term	Compliance and Method
e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.157.	Non - Compliant. R-22 service and maintenance log did not include the required annualized leakage rate % calculation. The repair logs were corrected to display the annualized % leak rate March 10, 2022.
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 §82.166.	Compliant. APG Policy #DPW-24 for Clean Air Act (CAA) Compliance Management, Recordkeeping, and Reporting Requirements for Refrigeration Systems was signed in December 2015 and revised in October 2019, to ensure compliance with the recordkeeping and reporting requirements specified in the Title V permits for APG and applicable regulations.

16. Acid Rain Permit – Not applicable.

5 A-COMP Form, Part A. General Information (EPA Form 5900-04)



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

Federal Operating Permit Program (40 CFR Part 71)

ANNUAL COMPLIANCE CERTIFICATION (A-COMP)

A. GENERAL INFORMATION

Permit No. 24-025-00081 (Aberdeen Area)

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

Source / Company Name U.S. Army Garrison Aberdeen Proving Ground, Directorate of Public Works

Mailing Address: Street or P.O. Box ATTN: AMIM-APP-E

City Aberdeen Proving Ground State MD ZIP 21005 -1946

Contact person Dr. Hazoor B. Khan Title Air Quality Program Manager, USAGAPG, DPW

Telephone (410) 306 – 2278 Ext. _____

6 A-COMP Form Part B – Compliance Status

6.1 Space Heating Boilers

1.0 SPACE HEATING BOILERS

Emission Unit ID(s): (Space Heating Boilers) 0030-A01 & A02 (12-4-0619), 0045-A01 (12-4-0619), 0269C-A01 (25-0081-4-0619), 0280B-A01 (25-0081-4-0619), 0384-A01 (12-4-0619), 0402-A03 (12-4-0619), 0456-A01 (12-4-0619), 26-0699A-A01 (12-4-0619), 26-0702-A01 (12-4-0619), 0733A-A01 (12-4-0619), 0740B-A01 (12-4-0687), 0740C-A01 (12-4-0619), 26-0860-A01 (12-4-0619), 26-0896-A01 (12-4-0619), 26-1064-A01 (12-4-0619), 26-1064-A02 (12-4-0619), 26-1100F-A01 (12-4-0619), 1134-A01 (12-4-0619), 26-2184-A01 (12-4-0619), 26-2207-A03 (12-4-0619), 0383A-A01 & A02 (025-0081-5-0376), 26-2312-A02 (12-4-0619), 26-2377-A02 (12-4-0619), 3070-A01 (12-5-0152), 26-3011-A01 (025-0081-4-0726), 26-4728-A02 (025-0081-4-0619), 26-2485-A01 (025-0081-5-0367), 26-5046-A01 (025-0081-4-0619), 26-5046-A02 & A03 (025-0081-4-0619), 26-745A-A01 (025-0081-4-0619), 0445-A01 (12-4-0707), 0394-A01 (12-4-0708), 0339-A01 (12-4-0710), 0507-A05 (025-0081-4-0717), 0507-A03 (12-4-0104N), 0642-A01 (12-4-0689), 0643-A01 (12-4-0721), 0644-A01 (12-4-0619), 0688-A01 (025-0081-4-0720), 0670-A01 (025-0081-4-0719), 5116-A01 (12-4-0619), 26-0120-A01 & A02 (12-5-0152), 26-0402-A01 & A02 (12-5-0152), 26-0436-A01 (025-0081-5-0152), 26-0436-A02 (12-5-0152), 26-0449-A01 (025-0081-4-0722), 26-0455-A01 & A02 (12-5-0152), 26-0459-A02 (12-5-0337), 26-0525-A01 & A03 (12-5-0335 & 12-5-0334), 26-0525-A02 (12-5-0315), 26-2312-A01 (12-4-0619), 26-2352-A01 (12-5-0152), Bldg 906C (025-0081-4-0724), 26-3062-A01 (12-5-0152), 26-4304-A02 (25-0081-5-0152), 26-4727-A01 (025-0081-5-0152), 26-5014-A03 (12-5-0152), 26-C2CNT West-A01 thru A04 (025-0081-5-0298), 26-GMS Tower-A01 thru A03 (025-0081-5-0299), 26-HQ Building-A01 thru A05 (025-0081-0300), 26-GMS Lab-A01 thru A03 (025-0081-5-0301), 2202-A01 & 2202-A02 (12-5-0322), 3144-A01 (12-5-0152), 26-3660-A01 (025-0081-5-0371), 26-04119-A02 (12-5-0152), 26-04119-A03 (12-5-0336), 5100-A01 & A02 (12-5-0309 & 12-5-0310), Bldg 367- Boiler #1 (025-0081-5-0352), 0400-A02 & A03 (025-0081-5-0384)

Removed from Permit No. 24-025-00081: (Space Heating Boilers) 0400-A01 (12-4-0546)

Permit Term (Describe requirements and cross-reference):

1.1A. Applicable Standards/Limits: Control of Visible Emissions.

COMAR 26.11.09.05A – 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 loading 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 more than 6 consecutive minutes in any sixty minute period.”



Compliance Methods for the Above (Description and Citation): Visible emissions verified by periodic observations and annual Method 9 survey is performed. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A. Condition 1.1B applies to No. 2 oil-fired boilers only. Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A. Permit Term (Describe requirements and cross-reference): 1.1B. <u>Applicable Standards/Limits: Control of Sulfur Oxide Emissions.</u> COMAR 26.11.09.07A(2) – 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.” Compliance Methods for the Above (Description and Citation): Fuel specifications are maintained by DPW-Environmental. All fuel used at the Aberdeen Area contains a sulfur content of less than 0.3% by weight. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A. Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A. Permit Term (Describe requirements and cross-reference): 1.1C. <u>Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.</u> COMAR 26.11.09.08B(5) – Operator Training. “(a) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. (b) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.” Compliance Methods for the Above (Description and Citation): (a) Review of combustion optimization training records. Training records maintained for equipment operators. (b) The operator training course has been approved by the Department. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A. Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A. Permit Term (Describe requirements and cross-reference): 1.1C. <u>Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.</u> COMAR 26.11.09.08F – Requirements for Space Heaters. “(1) A person who owns or operates a space heater as defined in Regulation .01 B of this



chapter shall:

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

Compliance Methods for the Above (Description and Citation):

- (1)(a) Space heaters have been properly registered with the Department.
- (1)(b) and (c) Verified by DPW-Environmental quarterly inspections. O&M Plan includes NO_x emissions minimization and is maintained.
- (1)(d) and (e) Verified by combustion optimization training records. Combustion optimization training was completed in May 2022. Training program attendance records were not requested by the Department.
- (2) The fuel-burning equipment under Permit Term 1.1A qualify as space heaters, so the Department was not required to be notified.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A.
Condition 1.1D only applies to the boilers at the C4ISR Facility under MDE Reg. No. 025-0081-0298 thru 5-0301.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A.

Permit Term (Describe requirements and cross-reference):

1.1D. Applicable Standards/Limits: Operational Limits.

[Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued October 2009]

- (1) The boilers equipped with low NOR_xR burners not to exceed 30ppm shall only burn natural gas or No.2 fuel oil.
- (2) The boilers shall not burn any No.2 fuel oil with sulfur content greater than 0.3% by weight.
- (3) For the purpose of maintaining synthetic minor status for the C4ISR-Phase I Facility, the combined NOR_xR emissions from all fuel burning equipment (boilers and generators) at the facility must be less than 25 tons in any rolling 12-month period.
- (4) The total fuel oil and natural gas usage for the fifteen (15) boilers shall not exceed the following limits unless the Permittee can demonstrate, to the satisfaction of the Department, that the NOR_xR emissions for the C4ISR-Phase I Facility are less than 25 tons in any rolling 12-month period at a higher usage rate:



MDE PTC No.	Location	Proposed Limit		Quantity and Size
		Natural gas (ftP ³ P/yr)	No. 2 fuel oil (gallons)	
025-0081-5-0298	C2CNT West Building (Bldg 6007)	82,355,000	160,000	Four (4) 3.5 MMBtu/hr boilers
025-0081-5-0299	GMS Tower Building (Bldg 6006)	61,765,000	120,000	Three (3) 3.5 MMBtu/hr boilers
025-0081-5-0300	HQ Building 1 (Bldg 6002)	102,942,000	200,000	Five (5) 3.5 MMBtu/hr boilers
025-0081-5-0301	GMS Lab Building (Bldg 6003)	61,765,000	120,000	Three (3) 3.5 MMBtu/hr boilers

Compliance Methods for the Above (Description and Citation):

- (1) The boilers burn either natural gas or No. 2 fuel oil.
- (2) Review of certification from fuel supplier for sulfur content.
- (3) C4ISR-Phase I Facility NO_x emissions totals for boilers and generators were estimated on a monthly basis using fuel usage records to verify that the annual emissions do not exceed 25 tons in any rolling 12-month period.
- (4) Review of fuel use records to verify that the limits above on natural gas and No. 2 fuel oil fuel consumption were not exceeded, and information is submitted to the Department in SIXMON report.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A.

Permit Term (Describe requirements and cross-reference):

1.3A. Monitoring Requirements: Control of Visible Emissions. The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions, in accordance with the operation and maintenance manual. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Visible emissions verified by periodic observations and annual Method 9 survey is performed.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A.



Permit Term (Describe requirements and cross-reference): 1.3B. <u>Monitoring Requirements: Control of Sulfur Oxide Emissions</u>. The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitations on the sulfur content in fuel oil. [Reference: COMAR 26.11.03.06C] Compliance Methods for the Above (Description and Citation): Certification from fuel supplier maintained by DPW. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Space Heating Boilers Boilers) See list of EU IDs for Permit Term 1.1A. Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A. Permit Term (Describe requirements and cross-reference): 1.3C. <u>Monitoring Requirements: Control of Nitrogen Oxide Emissions</u>. The Permittee shall develop and maintain an operating and maintenance plan to minimize NO_x emissions. [Reference: COMAR 26.11.09.08F(1)(b)] Compliance Methods for the Above (Description and Citation): Verified by DPW-Environmental quarterly inspections. O&M Plan to minimize NO_x emissions is maintained. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A. Only for the 15 boilers at the C4ISR Facility under MDE Reg. No. 025-0081-0298 thru 5-0301. Permit Term (Describe requirements and cross-reference): 1.3D <u>Monitoring Requirements. Operational Limits</u>. The Permittee shall calculate the NOR_xR emissions for the previous calendar month and a total for the previous 12 consecutive months for the C4ISR facility. The calculations shall be updated monthly within 30 days of each following month. [Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued July 16, 2009, Part E, Condition 2] Compliance Methods for the Above (Description and Citation): Review of NO_x emissions calculations on a quarterly basis. Calculations are performed monthly. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A. Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A. Permit Term (Describe requirements and cross-reference): 1.4A. <u>Record Keeping Requirements: Control Visible Emissions</u>. The Permittee shall maintain operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. [Reference: COMAR 26.11.03.06C]

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):
Verified by DPW-Environmental quarterly inspections. O&M Plan and maintenance log maintained.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A.

Permit Term (Describe requirements and cross-reference):

1.4B. Record Keeping Requirements: Control of Sulfur Oxide Emissions. The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with this regulation. **[Reference COMAR 26.11.09.07C]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):
Fuel supplier certifications maintained by DPW - Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A.

Permit Term (Describe requirements and cross-reference):

1.4C. Record Keeping Requirements: Control of Nitrogen Oxide Emissions.

The Permittee shall maintain:

- (1) Records of maintenance performed that relates to combustion performance in keeping with the requirements of an operations and maintenance plan. **[Reference: COMAR 26.11.09.08F(1)(c)]**
- (2) Records of training program attendance for each operator. **[Reference: COMAR 26.11.09.08F(1)(e)]**
- (3) An operations manual and preventive maintenance plan. **[Reference: COMAR 26.11.09.08F(1)(b)]**
- (4) Records of fuel use that demonstrate that the boiler meets the definition of a space heater. **[References: COMAR 26.11.09.08K(3) and COMAR 26.11.03.06C]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

- (1) Maintenance records maintained by DPW.
- (2) Review of combustion optimization training program. Attendance records maintained by



DPW. (3) Verified by DPW-Environmental quarterly inspections. O&M Plan to minimize NOx emissions is maintained. (4) Review of fuel usage records that demonstrate that the boiler meets the definition of a space heater. Records maintained by DPW. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A. Condition 1.4D applies to the boilers at the C4ISR Facility under MDE Reg. No. 025-0081-0298 thru 5-0301 only. Permit Term (Describe requirements and cross-reference): 1.4 D. <u>Record Keeping Requirements: Operational Limits</u>. The Permittee shall maintain on site and make available to the Department upon request, records of the monthly and rolling 12-month total natural gas in million cubic feet and the No. 2 fuel oil usage in gallons. [Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued July 16, 2009, Part E, Condition 1] The Permittee shall keep records of the NO_x emissions for each calendar month and update them monthly with 30 days of each following month. [Reference: MDE Reg. No. 025-0081-5-0298 thru 5-0301 issued July 16, 2009, Part E, Condition 2] All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06C(5)(g)] Compliance Methods for the Above (Description and Citation): Records of monthly and rolling 12-month total natural gas and No. 2 fuel oil are maintained by the C4ISR Facility and reviewed by DPW-Environmental. NOx emissions are estimated on a monthly basis based on the fuel usage records. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A. Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A. Permit Term (Describe requirements and cross-reference): 1.5A. <u>Reporting Requirements: Control of Visible Emissions</u>. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations." Compliance Methods for the Above (Description and Citation): Visible emissions did not occur and a Report of Excess Emissions and Deviations was not filed. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A. Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A.



Permit Term (Describe requirements and cross-reference):

1.5B. Reporting Requirements: Control of Sulfur Oxide Emissions. The Permittee shall report fuel supplier certifications to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

Compliance Methods for the Above (Description and Citation):

The fuel supplier certifications were not requested by the Department; however, they were included as an attachment to the Semi-Annual NSPS Boilers Report.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A.

Permit Term (Describe requirements and cross-reference):

1.5C. Reporting Requirements: Control of Nitrogen Oxide Emissions. 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)]**

Compliance Methods for the Above (Description and Citation):

A record of training program attendance was not requested by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Space Heating Boilers) See list of EU IDs for Permit Term 1.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 1.1A.

Permit Term (Describe requirements and cross-reference):

1.5D. Reporting Requirements: Operational Limits. The Permittee shall report fuel consumption to the Department upon request. The Permittee shall submit the records to the Department as part of the semi-annual report. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Fuel consumption data for the 15 boilers at the C4ISR-Phase I Facility are submitted to the Department as part of the SIXMON report. Fuel consumption data for the other boilers was not requested by the Department. Annual fuel consumption data is submitted to the Department as part of the Annual Title V Emission Certification Report.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.2 Process Boilers

2.0 PROCESS BOILERS

Emission Unit ID(s): (Process Boilers) 26-03062-A02 (12-5-0167), 26-04219-A02 (12-5-0522), 26-04219-A03 (12-5-0308), 26-04312-A01 & A02 (025-0081-5-0364), 26-4404-A04 (12-5-0152), 4404-A06 (12-5-0152)

Permit Term (Describe requirements and cross-reference):

2.1A. Applicable Standards/Limits: Control of Visible Emissions.

COMAR 26.11.09.05A – 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 loading 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 more than 6 consecutive minutes in any sixty minute period.”

Compliance Methods for the Above (Description and Citation):

Visible emissions verified by periodic observations and annual Method 9 survey is performed.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.1B. Applicable Standards/Limits: Control of Sulfur Oxide Emissions.

COMAR 26.11.09.07A(2) – 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

Compliance Methods for the Above (Description and Citation):

Fuel specifications are maintained by DPW-Environmental. All fuel used at the Aberdeen Area contains a sulfur content of less than 0.3% by weight.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.1C. Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.

COMAR 26.11.09.08B(5) – Operator Training.

“(a) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.



(b) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."

Compliance Methods for the Above (Description and Citation):

- (a) Review of combustion optimization training records. Training records maintained for equipment operators.
- (b) The operator training course has been approved by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.1C. Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.

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 Methods for the Above (Description and Citation):

- (1) Process boilers are properly registered with the Department.
- (2) Verified by DPW-Environmental quarterly inspections. Combustion optimizations are performed once a year.
- (3) Results of the combustion analysis are maintained on site. Combustion analysis records have not been requested by the Department or EPA.
- (4) Verified by reviewing training records. Combustion optimization training was completed in May 2022.
- (5) Combustion optimization training program attendance records are maintained, but were not requested by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.2C. Testing Requirements: Control of Nitrogen Oxide Emissions. The Permittee shall perform a combustion analysis once a year. **[Reference: COMAR 26.11.09.08E(2)]**

Compliance Methods for the Above (Description and Citation): Verified by DPW-Environmental during quarterly inspections. Combustion analyses are performed once a year. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A. Permit Term (Describe requirements and cross-reference): 2.3A(1). <u>Monitoring Requirements: Control of Visible Emissions.</u> The Permittee shall: (1) Properly operate and maintain the boilers in a manner to prevent visible emissions; and (2) Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation 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 emissions are visible: (1) Inspect combustion control system and boiler operations; (2) Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; (3) Document in writing the results of the inspections, adjustments, and/or repairs to the boiler; and (4) After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. [Reference: COMAR 26.11.03.06C] Compliance Methods for the Above (Description and Citation): Verified by DPW-Environmental during quarterly inspections. Visible emissions verified by periodic observations and annual Method 9 survey is performed. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A. Permit Term (Describe requirements and cross-reference): 2.3B. <u>Monitoring Requirements: Control of Sulfur Oxide Emissions.</u> The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. [Reference: COMAR 26.11.03.06C] Compliance Methods for the Above (Description and Citation): Fuel specifications are maintained by DPW-Environmental. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A. Permit Term (Describe requirements and cross-reference): 2.3C. <u>Monitoring Requirements: Control of Nitrogen Oxide Emissions.</u> The Permittee shall optimize combustion based on the annual combustion analysis. [Reference: COMAR 26.11.09.08E(2)]

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Combustion is optimized based on the annual combustion analyses.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.4A. Record Keeping Requirements: Control of Visible Emissions. The Permittee shall:

- (1) Maintain an operation manual and prevention maintenance plan on site;
- (2) Maintain a record of the maintenance performed that relates to combustion performance;
- (3) Maintain a log of visible emissions observations performed and make it available to the Department's representative upon request;
- (4) Maintain a record of the hours that No. 2 fuel oil is burned.

[Reference: COMAR 26.11.03.06C]

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. O&M Plan and maintenance logs maintained.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.4B. Record Keeping Requirements: Control of Sulfur Oxide Emissions. The Permittee shall maintain records of fuel supplier's certification and shall make records available to the Department upon request. **[Reference COMAR 26.11.03.06C]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

Fuel supplier certifications are maintained by DPW - Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.4C. Record Keeping Requirements: Control of Nitrogen Oxide Emissions.

The Permittee shall maintain:

- (1) Records of the results of the annual combustion analysis on site. **[Reference: COMAR 26.11.09.08E(5)]**

(2) Records of combustion optimization training program attendance for each operator at the site for at least five years and make available to the Department upon request. **[Reference: COMAR 26.11.09.08E(5)]**

Compliance Methods for the Above (Description and Citation):

- (1) Annual combustion analysis results maintained on site.
- (2) Review of combustion optimization training program. Attendance records maintained by DPW-Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.5A. Reporting Requirements: Control of Visible Emissions. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."

Compliance Methods for the Above (Description and Citation):

Visible emissions did not occur and a Report of Excess Emissions and Deviations was not filed.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.5B. Reporting Requirements: Control of Sulfur Oxide Emissions. The Permittee shall report fuel supplier certifications to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

Compliance Methods for the Above (Description and Citation):

The fuel supplier certifications were not requested by the Department; however, they were included as an attachment to the Semi-Annual NSPS Boilers Report.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Process Boilers) See list of EU IDs for Permit Term 2.1A.

Permit Term (Describe requirements and cross-reference):

2.5C. Record Keeping Requirements: Control of Nitrogen Oxide Emissions.

The Permittee shall submit:

- (1) The results of combustion analysis to the Department and the EPA upon request. **[Reference: COMAR 26.11.09.08E(3)]**
- (2) A record of training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08E(5)].**

Compliance Methods for the Above (Description and Citation):

- (1) The results of combustion analysis were not requested by the Department or EPA.
- (2) Records of training program attendance were not requested by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.3 NSPS Boilers

3.0 NSPS BOILERS

Emission Unit ID(s): Emission Unit ID(s): (NSPS Boilers) 26-0345-A01 & A02 (12-5-0079 & 12-5-0080), 26-0345-A03 (12-5-0081), 26-4600-A06 (12-5-0085), 26-4600-A09 (025-0081-5-0370), 26-4600-A08 (12-5-0087), 26-5014-A01 & A02 (12-5-0164 & 12-5-0165)

Permit Term (Describe requirements and cross-reference):

3.1A. Applicable Standards/Limits: Control of Visible Emissions.

COMAR 26.11.09.05A – 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 loading 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 more than 6 consecutive minutes in any sixty minute period.”

The Federal New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 million Btu/hour but greater than 10 million Btu/hour for which construction began after June 9, 1989, 40 CFR 60, Subpart Dc, which contains the following:

§60.43c - "(c) On and after the date on which the initial performance test is completed or required to be completed under Sec. 60.8 of this part, 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 million Btu/hr) 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. (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" requirement of COMAR 26.11.09.05A(2) will be used to show compliance with this NSPS standard.



Compliance Methods for the Above (Description and Citation):

Visible emissions verified by periodic observations and annual Method 9 survey is performed.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.1B. Applicable Standards/Limits: Control of Sulfur Oxide Emissions.

COMAR 26.11.09.07A(2) – 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

The Federal New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity less than 100 million Btu/hour but greater than 10 million Btu/hour for which construction began after June 9, 1989, 40 CFR 60, Subpart Dc, which contains the following:

§60.42c - Standard for sulfur dioxide "(d) On and after the date on which the initial performance test is

completed or required to be completed under §60.8 of this part, 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/million Btu) heat input; or 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 percent 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), or (3) 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 the NSPS sulfur in fuel standard.

Compliance Methods for the Above (Description and Citation):

Fuel specifications are maintained by DPW-Environmental. SO₂ emissions limits were met at all times.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.1C. Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.

COMAR 26.11.09.08B(5) – Operator Training.

- “(1) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
(2) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.”

Compliance Methods for the Above (Description and Citation):

- (1) Review of combustion optimization training records. Training records maintained for equipment operators.
(2) The operator training course has been approved by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.1C. Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.

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 Methods for the Above (Description and Citation):

- (1) NSPS boilers are properly registered with the Department.
(2) Verified by DPW-Environmental quarterly inspections. Combustion optimizations are performed once a year.
(3) Results of the combustion analysis are maintained on site. Combustion analysis records have not been requested by the Department or EPA.
(4) Verified by reviewing training records. Combustion optimization training was completed in May 2022.
(5) Combustion optimization training program attendance records are maintained, but were not requested by the Department.

Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance

Note: Intermittent Compliance for units 345-A01, 4600-A06.

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.2B. Testing Requirements: Control of Sulfur Oxide Emissions.

§60.44c(h) – Compliance and performance test methods and procedures for sulfur dioxide. “For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f)(1), (2), or (3), as applicable.”

Compliance Methods for the Above (Description and Citation):

Fuel specifications are maintained by DPW-Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.2C. Testing Requirements: Control of Nitrogen Oxide Emissions. The Permittee shall perform a combustion analysis once a year. **[Reference COMAR 26.11.09.08E(2)]**

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Combustion analyses performed once a year.

Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance

Note: Intermittent Compliance for units 345-A01, 4600-A06.

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.3A. Monitoring Requirements: Control of Visible Emissions.

The Permittee shall:

- (1) Properly operate and maintain the boilers in a manner to prevent visible emissions; and
- (2) Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation 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 emissions are visible:

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

[Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation): Verified by DPW-Environmental during quarterly inspections. Visible emissions verified by periodic observations and annual Method 9 survey is performed. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A. Permit Term (Describe requirements and cross-reference): 3.3B. <u>Monitoring Requirements: Control of Sulfur Oxide Emissions.</u> §60.46c – <u>Emission monitoring for sulfur dioxide.</u> “(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under §60.48c(f)(1), (2), or (3), as applicable.” Compliance Methods for the Above (Description and Citation): Fuel supplier certifications are maintained by DPW - Environmental. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A. Permit Term (Describe requirements and cross-reference): 3.3C. <u>Monitoring Requirements: Control of Nitrogen Oxide Emissions.</u> The Permittee shall optimize combustion based on the annual combustion analysis. [Reference: COMAR 26.11.09.08E(2)] Compliance Methods for the Above (Description and Citation): Verified by DPW-Environmental quarterly inspections. Combustion is optimized based on the annual combustion analyses. Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance Note: Intermittent Compliance for units 345-A01, 4600-A06.
Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A. Permit Term (Describe requirements and cross-reference): 3.4A. <u>Record Keeping Requirements: Control of Visible Emissions.</u> The Permittee shall: (1) Maintain an operation manual and prevention maintenance plan on site; (2) Maintain a record of the maintenance performed that relates to combustion performance; (3) Maintain a log of visible emissions observations performed and make it available to the Department's representative upon request; (4) Maintain a record of the hours that No. 2 fuel oil is burned. [Reference: COMAR 26.11.03.06C] All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06C(5)(g)] Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. O&M Plan and maintenance logs maintained.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.4B. Record Keeping Requirements: Control of Sulfur Oxide Emissions.

§60.48c – Reporting and record keeping requirements.

“(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.”

“(c) The owner or operator of each coal-fired, **oil-fired**, or wood-fired affected facility subject to the opacity limits under §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period.”

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

“(f) Fuel supplier certification shall include the following information: (1) For distillate oil: (i) The name of the oil supplier; and (ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c.”

“(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.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this Section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in Sec. 60.42C to use

fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of

the total amount of each steam generating unit fuel delivered to that property during each calendar month.”

“(i) All records required under this section shall be maintained by the owner or operator of the

affected facility for a period of two years following the date of such record."

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

The required information was provided in the Permits to Construct. Fuel supplier certifications are maintained by DPW - Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.4C. Record Keeping Requirements: Control of Nitrogen Oxide Emissions.

The Permittee shall maintain:

(1) Records of the results of the annual combustion analysis on site. **[Reference: COMAR 26.11.09.08E(5)]**

(2) Records of training program attendance for each operator at the site. **[Reference: COMAR 26.11.09.08E(5)]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

(1) Annual combustion analysis results maintained on site.

(2) Review of combustion optimization training program. Training program attendance records are maintained by DPW-Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.5A. Reporting Requirements: Control of Visible Emissions. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."

Compliance Methods for the Above (Description and Citation):

Visible emissions did not occur and a Report of Excess Emissions and Deviations was not filed.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):

3.5B. Reporting Requirements: Control of Sulfur Oxide Emissions.

§60.48c – Reporting and record keeping requirements.

"(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." The Permittee shall report fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

Compliance Methods for the Above (Description and Citation):
Fuel supplier certification was not requested by the Department. Both Semi-Annual NSPS Boilers Reports were submitted to the Administrator prior to the due dates.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

Permit Term (Describe requirements and cross-reference):
3.5C. Record Keeping Requirements: Control of Nitrogen Oxide Emissions.

The Permittee shall submit:

(1) The results of combustion analysis to the Department and the EPA upon request.

[Reference: COMAR 26.11.09.08E(3)]

(2) A record of training program attendance for each operator to the Department upon request.

[Reference: COMAR 26.11.09.08E(5)].

Compliance Methods for the Above (Description and Citation):

(1) The results of combustion analysis were not requested by the Department or EPA.

(2) Records of training program attendance were not requested by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.4 All Oil Fired Boilers

4.0 ALL OIL-FIRED BOILERS: SPACE HEATERS, PROCESS BOILERS, & NSPS BOILERS

Emission Unit ID(s): (All Oil-Fired Boilers: Space Heaters, Process Boilers & NSPS Boilers) 0030-A01 & A02 (12-4-0619), 0045-A01 (12-4-0619), 0269C-A01 (25-0081-4-0619), 0280B-A01 (25-0081-4-0619), 0384-A01 (12-4-0619), 0456-A01 (12-4-0619), 26-0699A-A01 (12-4-0619), 26-0702-A01 (12-4-0619), 0733A-A01 (12-4-0619), 0740B-A01 (12-4-0687), 0740C-A01 (12-4-0619), 26-0860-A01 (12-4-0619), 26-0896-A01 (12-4-0619), 26-1064-A01 (12-4-0619), 26-1064-A02 (12-4-0619), 26-1100F-A01 (12-4-0619), 1134-A01 (12-4-0619), 26-2184-A01 (12-4-0619), 26-2207-A03 (12-4-0619), 26-2377-A02 (12-4-0619), 3070-A01 (12-5-0152), 26-3011-A01 (12-4-0726), 26-4728-A02 (025-0081-4-0619), 26-745A-A01 (025-0081-4-0619), 0445-A01 (12-4-0707), 0394-A01 (12-4-0708), 0507-A05 (025-0081-4-0717), 0507-A03 (12-5-0104), 0642-A01 (12-4-0689), 0643-A01 (12-4-0721), 0644-A01 (12-4-0619), 0688-A01 (025-0081-4-0720), 0670-A01 (025-0081-4-0719), 5116-A01 (12-4-0619), 26-0120-A01 & A02 (12-5-0152), 26-0402-A01 & A02 (12-5-0152), 26-0436-A01 (025-0081-5-0152), 26-0436-A02 (12-5-0152), 26-0449-A01 (025-0081-4-0722), 26-0455-A01 & A02 (12-5-0152), 26-0525-A01 & A03 (12-5-0335 & 12-5-0334), 26-0525-A02 (12-5-0315), 26-2312-A01 & 26-2312-A02 (12-4-0619), 26-2352-A01 (12-5-0152), Bldg 906C (025-0081-4-0724), 26-3062-A01 (12-5-0152), 26-4727-A01 (025-0081-5-0152), 26-5014-A03 (12-5-0152), 26-C2CNT West-A01 thru A04 (025-0081-5-0298), 26-GMS Tower-A01 thru A03 (025-0081-5-0299), 26-HQ Building-A01 thru A05 (025-0081-0300), 26-GMS Lab-A01 thru A03 (025-0081-5-0301), 26-04119-A02 (12-5-0152), 26-03062-A02 (12-5-0167), 26-04219-A02 (12-5-0552), 26-04219-A03 (12-5-0308), 26-04312-A01 & A02 (025-0081-5-0364), 26-4404-A04 (12-5-0152),

4404-A06 (12-5-0152), 26-0345-A01 & A02 (12-5-0079 & 12-5-0080), 26-0345-A03 (12-5-0081), 26-4600-A06 (12-5-0085), 26-4600-A09 (025-0081-5-0370), 26-4600-A08 (12-5-0087), 26-5014-A01 & A02 (12-5-0164 & 12-5-0165), 0392-A01 (12-4-0709), 0402-A03 (12-4-0619)

Permit Term (Describe requirements and cross-reference):

4.1 Applicable Standards/Limits: Control of HAPs. U

40 CFR Part 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.

§63.11193 – Am I subject to this subpart?

“You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in §63.2, except as specified in §63.11195.”

§63.11194 – What is the affected source of this subpart?

“(a) This subpart applies to each new, reconstructed, or existing affected source as defined in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection of all existing industrial, commercial, and institutional boilers within a subcategory as listed in §63.11200 and defined in §63.11237, located at an area source.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, and institutional boiler within a subcategory as listed in §63.11200 and defined in §63.11237, located at an area source.

(b) An affected source is an existing source if you commenced construction or reconstruction of the affected source on or before June 4, 2010.

(c) An affected source is a new source if you commenced construction of the affected source after June 4, 2010, and the boiler meets the applicability criteria at the time you commence construction.”

§63.11196 – What are my compliance dates?

“(a) If you own or operate an existing affected boiler, you must achieve compliance with the applicable provisions in this subpart as specified in paragraphs (a)(1) through (3) of this section.

(1) If the existing affected boiler is subject to a work practice or management practice standard of a tune-up, you must achieve compliance with the work practice or management practice standard no later than March 21, 2014.

(2) If the existing affected boiler is subject to emission limits, you must achieve compliance with the emission limits no later than March 21, 2014.

(3) If the existing affected boiler is subject to the energy assessment requirement, you must achieve compliance with the energy assessment requirement no later than March 21, 2014.

(c) If you start up a new affected source after May 20, 2011, you must achieve compliance with the provisions of this subpart upon startup of your affected source.”

§63.11201 – What standards must I meet?

“(a) You must comply with each emission limit specified in Table 1 to this subpart that applies to your boiler.

(b) You must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies to your boiler. An energy assessment completed on or after January 1, 2008 that meets or is amended to meet the energy assessment requirements in Table 2 to this subpart satisfies the energy assessment requirement. A facility that operates under an energy management program established through

energy management systems compatible with ISO 50001, that includes the affected units, also satisfies the energy assessment requirement.

(c) You must comply with each operating limit specified in Table 3 to this subpart that applies to your boiler.

(d) These standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time you must comply only with Table 2 to this subpart.”

Table 1 to Subpart JJJJJJ of Part 63 – Emission Limits

“As stated in §63.11201, you must comply with the following applicable emission limits:”

If your boiler is in this subcategory	For the following pollutants	You must achieve less than or equal to the following emission limits, except during periods of startup and shutdown
5. New oil-fired boilers with heat input capacity of 10 MMBtu/hr or greater that do not meet the definition of seasonal boiler or limited-use boiler.	PM (Filterable)	3.0E-02 lb per MMBtu of heat input.

Table 2U to Subpart JJJJJJ of Part 63—Work Practice Standards, Emission Reduction Measures, and Management Practices

“As stated in §63.11201, you must comply with the following applicable work practice standards, emission reduction measures, and management practices:”

If your boiler is in this subcategory	You must meet the following
4. Existing oil-fired boilers with heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio	Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223.
5. New oil-fired boilers with heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio	Conduct a tune-up of the boiler biennially as specified in §63.11223.
12. Existing oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr	Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every 5 years as specified in §63.11223.
13. New oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr	Conduct a tune-up of the boiler every 5 years as specified in §63.11223.



16. Existing coal-fired, biomass-fired, or oil-fired boilers (units with heat input capacity of 10 MMBtu/hr and greater), not including limited-use boilers	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used to meet the energy assessment requirements. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items (1) to (4) appropriate for the on-site technical hours listed in §63.11237:
	(1) A visual inspection of the boiler system,
	(2) An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints,
	(3) An inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator,
	(4) A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage,
	(5) A list of major energy conservation measures that are within the facility's control,
	(6) A list of the energy savings potential of the energy conservation measures identified, and
	(7) A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
Compliance Methods for the Above (Description and Citation): Verified by DPW-Environmental quarterly inspections. The boilers comply with each work practice standard, emission reduction measure, and management practice specified in Table 2. Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance Note: Intermittent Compliance for units 0896-A01, 4600-A06	

Emission Unit ID(s): (All No. 2 Fuel Oil-Fired and Dual Fired Boilers) See list of EU IDs for Permit Term 4.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 4.1A

Permit Term (Describe requirements and cross-reference):

4.2 Testing Requirements: Control of HAPs. Continuous Compliance Requirements.

§63.11220 – When must I conduct subsequent performance tests or fuel analyses?

"(a) If your boiler has a heat input capacity of 10 million British thermal units per hour or greater, you must conduct all applicable performance (stack) tests according to §63.11212 on a triennial basis, except as specified in paragraphs (b) through (d) of this section. Triennial performance tests must be completed no more than 37 months after the previous performance test.

(b) When demonstrating initial compliance with the PM emission limit, if your boiler's performance test results show that your PM emissions are equal to or less than half of the PM emission limit, you do not need to conduct further performance tests for PM but must continue to comply with all applicable operating limits and monitoring requirements. If your initial performance test results show that your PM emissions are greater than half of the PM emission limit, you must conduct subsequent performance tests as specified in paragraph (a) of this section."

"(d) For existing affected boilers that have not operated since the previous compliance demonstration and more than 3 years have passed since the previous compliance demonstration, you must complete your subsequent compliance demonstration no later than 180 days after the re-start of the affected boiler."

§63.11222 – How do I demonstrate continuous compliance with the emission limits?

"(a) You must demonstrate continuous compliance with each emission limit and operating limit in Tables 1 and 3 to this subpart that applies to you according to the methods specified in Table 7 to this subpart and to paragraphs (a)(1) through (4) of this section.

(2) If you have an applicable mercury or PM emission limit, you must keep records of the type and amount of all fuels burned in each boiler during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in lower emissions of mercury than the applicable emission limit (if you demonstrate compliance through fuel analysis), or result in lower fuel input of mercury than the maximum values calculated during the last performance stack test (if you demonstrate compliance through performance stack testing).

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 and 3 to this subpart that apply to you. These instances are deviations from the emission limits in this subpart. These deviations must be reported according to the requirements in §63.11225."

§63.11223 – How do I demonstrate continuous compliance with the work practice and management practice standards?

"(a) For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to paragraph (b) of this section and keep records as required in §63.11225(c) to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up."

"(b) Except as specified in paragraphs (c) through (f) of this section, you must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in paragraphs (b)(1) through (7) of this section. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. For a new or reconstructed boiler, the first biennial tune-up must be no later than 25 months after the initial startup of the new or reconstructed boiler.

(1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection.

(2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturers specifications, if available.

(3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection.

(4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.

(5) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made).

Measurements may be taken using a portable CO analyzer.

(6) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (b)(6)(i) through (iii) of this section.

(i) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler.

(ii) A description of any corrective actions taken as a part of the tune-up of the boiler.

(iii) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units

sharing a fuel meter may estimate the fuel use by each unit.

(7) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup."

"(e) Oil-fired boilers with a heat input capacity of equal to or less than 5 million Btu per hour must conduct a tune-up every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up

must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed oil-fired boiler with a heat input capacity of equal to or less than 5 million Btu per hour, the first 5-year tune-up must

be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months."



Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Tune-ups were performed in 2022 as required. See the table below. Subsequent tune-ups will be performed in accordance with DPW's maintenance schedule.

<u>Emission Unit ID</u>	<u>MDE Registration #</u>	<u>Year Installed</u>	<u>Size (MMBtu/ hr)</u>	<u>Date of 5- year Tune-Up</u>	<u>Date Next Tune-Up Due</u>
0030-A01	25-0081-4-0619	2012	2.10	12/6/2022	12/6/2027
0030-A02	25-0081-4-0619	2012	2.10	11/23/2022	11/23/2027
0045-A01	25-0081-4-0619	2006	0.96	12/12/2022	12/12/2027
0269B-A01	25-0081-4-0619	2016	2.72	12/19/2022	12/19/2027
0280B-A01	25-0081-4-0619	2016	1.46	12/3/2022	12/3/2027
0384-A01	025-0081-4-0619	2016	2.72	11/26/2022	11/26/2027
0392-A01	12-4-0709	2005	2.09	12/23/2022	12/23/2027
0394-A01	12-4-0708	2010	2.72	3/1/2022	3/1/2027
0402-A03*	12-4-0619	1985	3.20	Inoperable	N/A
0445-A01	12-4-0707	Unknown	1.11	11/17/2022	11/17/2027
0449-A01	25-0081-4-0722	2016	2.09	12/9/2022	12/9/2027
0456-A01	25-0081-4-0169	2004	1.40	12/15/2021	12/15/2026
0642-A01	12-4-0689	2009	1.53	12/20/2022	12/20/2027
0643-A01	025-0081-4-0721	2016	1.14	11/16/2022	11/16/2027
0644-A01	25-0081-4-0619	2006	0.96	3/16/2022	3/16/2027
0670-A01	025-0081-4-0719	2016	2.09	11/17/2022	11/17/2027
0688-A01	025-0081-4-0720	2016	1.77	11/22/2022	11/22/2027
0699A-A01	025-0081-4-0619	2016	3.45	11/18/2022	11/18/2027
26-0702-A01	12-4-0619	2002	1.25	2/11/2021	2/11/2026
0733A-A01	25-0081-4-0169	2006	0.96	1/9/2023	1/9/2028
0740B-A01	25-4-0687	2006	0.72	12/19/2022	12/19/2027
0740C-A01	25-4-0619	2010	1.80	3/16/2022	3/16/2027
0745-A01**	Unknown	Unknown	1.68	5/9/2013	5/9/2018
26-0860-A01	12-4-0619	2003	1.29	3/16/2022	3/16/2027
26-0896-A01***	12-4-0619	1998	1.50	12/28/2015	N/A
Building 906C	25-0081-4-0724	2018	0.991	3/18/2022	3/18/2027
1064-A01	12-4-0619	2009	3.36	12/22/2022	12/22/2027
1064-A02	12-4-0619	2009	3.36	2/18/2022	2/18/2027
26-1100F-A01	26-1100F-A01	1996	0.90	3/18/2022	3/18/2027
1134-A01	12-4-0619	2006	1.11	11/18/2022	11/18/2027
2207-A03	12-4-0619	1999	2.37	2/5/2021	2/5/2026
26-2377-A02	12-4-0619	2009	1.26	3/21/2022	3/21/2027
3011-A01	12-4-0619	2005	1.14	3/23/2022	3/23/2027



4728-A02	025-0081-4-0619	2016	2.70	3/1/2022	3/1/2027
5116-A01	25-0081-4-0619	2011	1.68	12/17/2021	12/17/2026
26-0120-A01	12-5-0152	2008	2.51	11/18/2022	11/18/2027
26-0120-A02	12-5-0152	2008	2.51	11/29/2022	11/29/2027
26-0402-A02	12-5-0152	1996	3.27	12/16/2022	12/16/2027
26-0402-A01	12-5-0152	1996	3.27	4/10/2013	4/10/2018
26-0436-A02	12-5-0152	1995	2.10	11/15/2022	11/15/2027
26-2184-A01	12-4-0619	(Unknown)	0.40	3/21/2022	3/21/2027
26-2312-A01	12-4-0619	1996	2.10	12/5/2022	12/5/2027
26-2312-A02	12-4-0619	2009	2.10	10/26/2021	10/26/2026
26-04312-A02	025-0081-5-0364	2015	4.18	12/13/2022	12/13/2027
26-04312-A01	025-0081-5-0364	2015	4.18	12/15/2022	12/15/2027
26-4727-A01	025-0081-5-0152	2016	4.00	12/12/2022	12/12/2027
26-HQBuilding-A01	25-0081-5-0300	2009	3.50	12/10/2019	12/10/2024
26-HQBuilding-A02	25-0081-5-0300	2009	3.50	12/10/2019	12/10/2024
26-HQBuilding-A03	25-0081-5-0300	2009	3.50	12/10/2019	12/10/2024
26-HQBuilding-A04	25-0081-5-0300	2009	3.50	12/2/2019	12/2/2024
26-HQBuilding-A05	25-0081-5-0300	2009	3.50	12/10/2019	12/10/2024
26-GMSLab-A01	25-0081-5-0301	2009	3.50	12/12/2019	12/12/2024
26-GMSLab-A02	25-0081-5-0301	2009	3.50	12/12/2019	12/12/2024
26-GMSLab-A03	25-0081-5-0301	2009	3.50	12/12/2019	12/12/2024
26-GMSTower-A01	25-0081-5-0299	2009	3.50	11/30/2019	11/30/2024
26-GMSTower-A02	25-0081-5-0299	2009	3.50	11/30/2019	11/30/2024
26-GMSTower-A03	25-0081-5-0299	2009	3.50	11/30/2019	11/30/2024
26-C2CNTWest-A01	25-0081-5-0298	2009	3.50	11/19/2018	11/19/2023
26-C2CNTWest-A02	25-0081-5-0298	2009	3.50	12/7/2019	12/7/2024
26-C2CNTWest-A03	25-0081-5-0298	2009	3.50	12/7/2019	12/7/2024
26-C2CNTWest-A04	25-0081-5-0298	2009	3.50	12/7/2019	12/7/2024
* Not operating					
** Not operating, building vacant.					
*** Tune-up not performed due to incorrect classification of unit as a 1.5mmBTU boiler. Unit is actually a radiant tube space heater.					
.					
Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance					
Note: Intermittent compliance for units 26-0896-A01					

Emission Unit ID(s): (All No. 2 Fuel Oil-Fired and Dual Fired Boilers) See list of EU IDs for Permit Term 4.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 4.1A

Permit Term (Describe requirements and cross-reference):

4.3. Monitoring Requirements: Control of HAPs:

The Permittee must operate and maintain, at all times, any affected source, including air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. **[Reference: 40 CFR §63.11205(a)]**

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (All No. 2 Fuel Oil-Fired and Dual Fired Boilers) See list of EU IDs for Permit Term 4.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 4.1A

Permit Term (Describe requirements and cross-reference):

4.4. Record Keeping Requirements: Control of HAPs.

§63.11225 – What are my notifications, reporting and recordkeeping requirements?

“(c) You must maintain the records specified in paragraphs (c)(1) through (7) of this section.

(1) As required in §63.10(b)(2)(xiv), you must keep a copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.

(2) You must keep records to document conformance with the work practices, emission reduction measures, and management practices required by §63.11214 and §63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section.

(i) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.

(ii) Not Applicable.

(iii) For each boiler required to conduct an energy assessment, you must keep a copy of the energy assessment report.

(iv) For each boiler subject to an emission limit in Table 1 to this subpart, you must also keep records of monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used.

(v) For each boiler that meets the definition of seasonal boiler, you must keep records of days of operation per year.

(vi) For each boiler that meets the definition of limited-use boiler, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and records of fuel use for the days the boiler is operating.

(3) For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation that were done to demonstrate compliance with the mercury emission limits. Supporting documentation should include results of any fuel analyses. You can use the results from one fuel analysis for multiple boilers provided they are all burning the same fuel type.

- (4) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.
- (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.
- (6) You must keep the records of all inspection and monitoring data required by §§63.11221 and 63.11222, and the information identified in paragraphs (c)(6)(i) through (vi) of this section for each required inspection or monitoring.
- (i) The date, place, and time of the monitoring event.
- (ii) Person conducting the monitoring.
- (iii) Technique or method used.
- (iv) Operating conditions during the activity.
- (v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation.
- (vi) Maintenance or corrective action taken (if applicable).
- (7) Not Applicable.
- (d) Your records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years."

Compliance Methods for the Above (Description and Citation):
Records are maintained by DPW-Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (All No. 2 Fuel Oil-Fired and Dual Fired Boilers) See list of EU IDs for Permit Term 4.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 4.1A

Permit Term (Describe requirements and cross-reference):

4.5. Reporting Requirements: Control of HAPs.

§63.11225 – What are my notification, reporting, and recordkeeping requirements?

"(a) You must submit the notifications specified in paragraphs (a)(1) through (5) of this section to the administrator.

(1) You must submit all of the notifications in §§63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply to you by the dates specified in those sections except as specified in paragraphs (a)(2) and (4) of this section.

(2) An Initial Notification must be submitted no later than January 20, 2014 or within 120 days after the source becomes subject to the standard.

(3) If you are required to conduct a performance stack test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin.

(4) You must submit the Notification of Compliance Status no later than 120 days after the applicable compliance date specified in §63.11196 unless you must conduct a performance stack test. If you must conduct a performance stack test, you must submit the Notification of Compliance Status within 60 days of completing the performance stack test. You must submit



the Notification of Compliance Status in accordance with paragraphs (a)(4)(i) and (vi) of this section. The Notification of Compliance Status must include the information and certification(s) of compliance in paragraphs (a)(4)(i) through (v) of this section, as applicable, and signed by a responsible official.

(i) You must submit the information required in §63.9(h)(2), except the information listed in §63.9(h)(2)(i)(B), (D), (E), and (F). If you conduct any performance tests or CMS performance evaluations, you must submit that data as specified in paragraph (e) of this section. If you conduct any opacity or visible emission observations, or other monitoring procedures or methods, you must submit that data to the Administrator at the appropriate address listed in §63.13."

(ii) "This facility complies with the requirements in §63.11214 to conduct an initial tune-up of the boiler."

(iii) "This facility has had an energy assessment performed according to §63.11214(c)."

(iv) For units that install bag leak detection systems: "This facility complies with the requirements in §63.11224(f)."

(v) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."

(vi) The notification must be submitted electronically using 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 Notification of Compliance Status must be submitted to the Administrator at the appropriate address listed in §63.13.

(5) If you are using data from a previously conducted emission test to serve as documentation of conformance with the emission standards and operating limits of this subpart, you must include in the Notification of Compliance Status the date of the test and a summary of the results, not a complete test report, relative to this subpart."

Compliance Methods for the Above (Description and Citation):

Copies of notifications and reports are kept on file by DPW.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (All No. 2 Fuel Oil-Fired and Dual Fired Boilers) See list of EU IDs for Permit Term 4.1A.

Removed Emission Unit IDs: See list of Removed EU IDs for Permit Term 4.1A

Permit Term (Describe requirements and cross-reference):

4.5. Reporting Requirements, Control of HAPs (Continued).

§63.11225 – What are my notifications, reporting and recordkeeping requirements?

"(b) You must prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the information specified in paragraphs (b)(1) through (4) of this section. You must submit the report by March 15 if you had any instance described by paragraph (b)(3) of this section. For boilers that are subject only to a requirement to conduct a biennial or 5-year tune-up according to §63.11223(a) and not subject to emission limits or operating limits, you may prepare only a biennial or 5-year compliance report as specified in paragraphs (b)(1) and (2) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with the official's name, title, phone number, email

address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart. Your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) "This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler."

(ii) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."

(iii) "This facility complies with the requirement in §§63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

(3) If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken.

(4) The total fuel use by each affected boiler subject to an emission limit, for each calendar month within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by you or EPA through a petition process to be a non-waste under §241.3(c), whether the fuel(s) were processed from discarded non-hazardous secondary materials within the meaning of §241.3, and the total fuel usage amount with units of measure.

Compliance Methods for the Above (Description and Citation):

APG prepares and submits Compliance Certifications for boilers each year. The Biennial and Five-Year Compliance Certifications are included on an annual basis because not all the boilers are tuned-up in the same year.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.5 Emergency & Non-Emergency Generators

5.0 EMERGENCY & NON-EMERGENCY GENERATORS

Emission Unit ID(s): (Emergency & Non-Emergency Generators) 0120-A01 thru A03 (12-9-0408, 12-9-0433 & 12-9-0434), Bldg 120-Generator #1 (025-0081-9-0503), Bldg 120-Generator #2 (025-0081-9-0504), 03-0328-A01 (12-9-0229), 0328-A02 (025-0081-9-0414), 0328-A03 (025-0081-9-0418), 03-0394-A01 (12-9-0227), 03-0394-A02 (12-9-0228), 03-4600-A04 (12-9-0276), 03-4600-A05 (12-9-0277), 03-0394-A03 thru A07 (25-0081-9-0386 thru 9-0390), C2CNT East-SEC (9-0412), C2CNT East (025-0081-9-411), 26-GMS Lab-A04 (025-0081-9-0393), 26-C2CNT West-A05 (25-0081-9-0394), 26-GMS Tower-A04 (25-0081-9-0395), 26-HQBuilding-A06 (25-0081-9-0396), 2202-A01 (025-0081-9-0499), 0311-A01 (12-9-0419), 0316-A01 (025-0081-9-0408), Bldg 3147 (025-0081-9-0491), 3660-A01 (025-0081-9-0500), Bldg 5016 (025-0081-9-0510), Bldg 5046 (025-0081-9-0511), BSS-01 (9-0435), LWE-01 thru 05 (9-0436), UTF-01 (9-0437), JSEC-01 (025-0081-9-0410)

Permit Term (Describe requirements and cross-reference):

5.1A. Applicable Standards/Limits: Control of Visible Emissions.

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

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

(ii) All other engines: 15 minutes.

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

Compliance Methods for the Above (Description and Citation):

Observations during equipment operation at idle mode and operating mode.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.1B. Applicable Standards/Limits: Control of Sulfur Oxides.

COMAR 26.11.09.07A(2) – 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

Compliance Methods for the Above (Description and Citation):

Fuel supplier certifications are maintained by DPW - Environmental. All fuel used at the Aberdeen Area contains a sulfur content of less than 0.3% by weight.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.1C. Applicable Standards/Limits: 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 the calendar year,



- perform a combustion analysis and optimize combustion at least once annually;
- (c) Maintain the results of combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
 - (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
 - (e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

Compliance Methods for the Above (Description and Citation):

- (a) Capacity factor is certified in the Annual Emissions Certification.
- (b) and (c) Generators operated less than 500 hours during 2022 based on review of operating data, therefore no combustion analysis is required.
- (d) and (e) Verified by review of training records. Combustion optimization training was completed in May 2022.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.2C. Testing Requirements: Control of Nitrogen Oxides.

The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year.

[Reference: COMAR 26.11.09.08G(1)(b)]

Compliance Methods for the Above (Description and Citation):

Generators operated less than 500 hours during 2022 based on review of operating data, therefore no combustion analysis is required.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.3A. Monitoring Requirements: Control of Visible Emissions.

The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions.

[Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

The engines are operated and maintained in accordance with manufacturer specifications, as verified by DPW-Environmental quarterly inspections.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.3B. Monitoring Requirements: Control of Sulfur Oxides.

The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil complies with the limitation on sulfur content of the fuel oil. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Fuel supplier certifications are maintained by DPW - Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.3C. Monitoring Requirements: Control of Nitrogen Oxides.

For engines that operate more than 500 hours during a calendar year, the Permittee shall perform a combustion analysis and optimize combustion. **[Reference: COMAR 26.11.03.06C]**
The Permittee shall calculate the capacity factor of the engine within 30 days after the end of each month. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Generators operated less than 500 hours during 2022 based on a review of operating data; therefore, no combustion analyses were performed in 2022. The generators have capacity factors under 15%.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.4A. Record Keeping Requirements: Control of Visible Emissions.

The Permittee shall retain records of preventive maintenance on site for at least five years and make these records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Preventive maintenance records are retained on site for at least five years. Records were not requested by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.4B. Record Keeping Requirements: Control of Sulfur Oxides.

The Permittee shall retain annual fuel supplier certifications stating that the fuel oil is in compliance with this regulation, that must be maintained for at least 5 years. **[Reference: COMAR 26.11.09.07C]**

Compliance Methods for the Above (Description and Citation):

Fuel supplier certifications are maintained by DPW - Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.4C. Record Keeping Requirements: Control of Nitrogen Oxides.

The Permittee shall maintain records of the results of the combustion analyses and any stack tests on site for at least five years and make them available to the Department and EPA upon request. **[Reference: COMAR 26.11.09.08G(1)(c) & COMAR 26.11.03.06C]** The Permittee shall maintain a record of the calculated capacity factor. **[Reference: COMAR 26.11.09.08G(1)(c)]** The Permittee shall maintain records of training program attendance for each operator on site for at least five years and make the records available to the Department upon request. **[Reference: COMAR 26.11.09.08G(e) & COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Test records maintained by DPW on site for at least five years. Combustion analyses and stack test results were not requested by the Department or EPA. Certification of the capacity factor of the equipment is provided in the Annual Emissions Certification report. Training program attendance records are maintained for each operator on site for at least five years. The training records were not requested by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.5A. Reporting Requirements: Control of Visible Emissions.

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

Compliance Methods for the Above (Description and Citation):

There were no reportable incidences of visible emissions.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.5B. Reporting Requirements: Control of Sulfur Oxides.

The Permittee shall report annual fuel supplier certification to the Department upon request. [Reference: COMAR 26.11.09.07C]

Compliance Methods for the Above (Description and Citation):

Fuel supplier certification was not requested by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Emergency & Non-Emergency Generators) See list of EU IDs for Permit Term 5.1A

Permit Term (Describe requirements and cross-reference):

5.5C. Reporting Requirements: Control of Nitrogen Oxides.

The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. [Reference: COMAR 26.11.03.06C] The Permittee shall submit a list of trained operators to the Department upon request. [Reference: COMAR 26.11.09.08G(e) and COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

Certification of the capacity factor of the equipment is provided in the Annual Emissions Certification report. The Department did not request a list of trained operators.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.6 NSPS Generators

5a.0 NSPS GENERATORS

Emission Unit ID(s): (NSPS Generators) 0120-01 thru 0120-03 (12-9-0408, 12-9-0433 & 12-9-0434), Bldg 120-Generator #1 (025-0081-9-0503), Bldg 120 – Generator #2 (025-0081-9-0504), 0328-A02 (025-0081-9-0414), 0328-A03 (025-0081-9-0418), 03-0394-A03 thru A07 (25-0081-9-0386 thru 9-0390), C2CNT East-SEC (9-0412), C2CNT East (025-0081-9-0411), 26-GMS Lab-A04 (025-0081-9-0393), 26-C2CNT West-A05 (25-0081-9-0394), 26-GMS Tower-A04 (25-0081-9-0394), 26-HQ Building-A06 (25-0081-9-0395), 2202-A01 (025-0081-9-0499), Bldg 3147 (025-0081-9-0491), 0316-A01 (025-0081-9-0409), Bldg 5016 (025-0081-9-0510), Bldg 5046 (025-0081-9-0509), JSEC-01 (025-0081-9-0410)

Permit Term (Describe requirements and cross-reference):

5a.1A. Applicable Standards/Limits: NSPS under 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.

Note: Beginning October 1, 2010, installations subject to 40 CFR Part 60, Subpart IIII must comply with the fuel standards of §60.4207 which limit the maximum sulfur content of the fuel to 15 ppm.

Compliance Methods for the Above (Description and Citation):
Fuel supplier certifications are maintained by DPW - Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):
5a.1A(1) Applicable Standards/Limits: NSPS under 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.
This permit is valid only for the installation of an emergency diesel generator with piston displacement less than 10 liters per cylinder.

Compliance Methods for the Above (Description and Citation):
Review of specification from engine manufacturer to verify that piston displacement less than 10 liters per cylinder.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):
5a.1A(2) Applicable Standards/Limits: NSPS under 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.
The provisions of 40 CFR Part 60, Subpart IIII apply if the emergency diesel generator uses a diesel engine manufactured after April 1, 2006 **[Reference: 40 CFR §60.4200]**

Compliance Methods for the Above (Description and Citation):
Review of specifications from engine manufacturers.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):
5a.1A(3) Applicable Standards/Limits: NSPS under 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.
An emergency diesel generator or diesel engine subject to the requirements of 40 CFR 60, Subpart IIII ("NSPS emergency diesel generator" or "NSPS emergency diesel engine") shall be equipped with a non-resettable hour meter. **[Reference: 40 CFR §60.4209(a)]**

Compliance Methods for the Above (Description and Citation):
Verified by DPW-Environmental quarterly inspections. Visual inspection of engines or specifications from manufacturer that engines are equipped with a non-resettable hour meter.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance



Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A Permit Term (Describe requirements and cross-reference): <u>5a.1A(4) Applicable Standards/Limits: NSPS under 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.</u> The Permittee shall only purchase emergency generator sets certified to meet the emission standards of §60.4205(b). The generators must be installed and configured according to the manufacturer's specifications [Reference: 40 CFR §60.4211(c)] Compliance Methods for the Above (Description and Citation): Review of specifications from engine manufacturer and visual inspections were conducted to verify that the emergency generator sets are certified to meet the emission standards of §60.4205(b). The generators must be installed and configured according to the manufacturer's specifications. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A Permit Term (Describe requirements and cross-reference): <u>5a.1A(5) and (6) Applicable Standards/Limits: NSPS under 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.</u> The Permittee must purchase and install emergency generator sets certified to the emission standards for new nonroad diesel engines in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants. [Reference: 40 CFR §62.4202(b)(2)] The requirements for condition (5) do not apply to owners or operators of NSPS emergency diesel engines that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled in another location. [Reference: 40 CFR §60.4208] Compliance Methods for the Above (Description and Citation): Review of specifications from engine manufacturer and visual inspections were conducted to verify that emergency generator sets are certified to the emission standards for new nonroad diesel engines in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A Removed Emission Unit IDs: <u>LWE-01 thru 05 (9-0436) and UTF-01 (9-0437)</u> Permit Term (Describe requirements and cross-reference): <u>5a.1B. Applicable Standards/Limits: National Emissions Standards for Hazardous Air Pollutants (NESHAP) promulgated under 40 CFR 63, Subparts A and ZZZZ for Reciprocating Internal Combustion Engines.</u> §63.6590 – What parts of my plant does this part cover? This subpart applies to each affected source. “(c) <u>Stationary RICE subject to Regulation under 40 CFR Part 60.</u> An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of



this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. *No further requirements apply for such engines under this part.*

(1) A new or reconstructed stationary RICE located at an area source.”

Compliance Methods for the Above (Description and Citation):

Review of equipment specifications to verify that they meet the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.1C(1). Applicable Standards/Limits: Operational Limits.

“The Permittee must operate and maintain an NSPS emergency diesel generator and control devices according to the manufacturer’s written instructions or according to procedures developed by the owner or operator that are approved by the manufacturer. Additionally, the Permittee may change only those settings that are permitted by the manufacturer. The Permittee must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they may apply to an owner or operator.” **[Reference: 40 CFR §60.4211]**

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental during quarterly inspections. Equipment was operated and maintained in accordance with manufacturer’s procedures according to DPW personnel.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.1C(2). Applicable Standards/Limits: Operational Limits.

“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.”

U[Reference: 40 CFR §60.4207(b) and §80.510(b)]

Note: Compliance with this requirement demonstrates compliance with COMAR 26.11.09.07A(2)(b) which limits the sulfur content of diesel fuel (No. 2 fuel oil) to 0.3 percent by weight.

Compliance Methods for the Above (Description and Citation):

Fuel supplier certifications are maintained by DPW - Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.1C(3). Applicable Standards/Limits: Operational Limits.

"The Permittee must comply with the following emission standards for the emergency generator set:

(a) Non-methane Hydrocarbons and NO_x (NMHC+NO_x): 6.4 grams per kilowatt-hour (g/kW-hr)

(b) Carbon Monoxide (CO): 3.5 g/kW-hr

(c) Particulate Matter (PM): 0.2 g/kW-hr"

[Reference: 40 CFR §60.4205(b), §60.4202(b)(2), §89.112]

Note: Compliance is demonstrated by maintaining documentation that the engine is certified to meet these limits by the manufacturer.

Compliance Methods for the Above (Description and Citation):

Documentation that engines are certified by the manufactures is maintained.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.1C(4). Applicable Standards/Limits: Operational Limits.

"The exhaust opacity from the emergency generator shall not exceed:

(a) 20 percent during the acceleration mode;

(b) 15 percent during the lugging mode; and

(c) 50 percent during the peaks in either the acceleration or lugging modes."

[Reference: 40 CFR §60.4205(b), §60.4202(b)(2), and §89.113]

Compliance Methods for the Above (Description and Citation):

Visible emissions are checked on a periodic basis by operators.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.1C(5). Applicable Standards/Limits: Operational Limits.

"The Permittee must use diesel fuel in the emergency generator set that meets the requirements of 40 CFR §80.510(b) (diesel fuel that has a per-gallon sulfur content that does not exceed 15 ppm, and that either has a minimum per-gallon cetane index of 40 or a maximum per-gallon aromatic content of 35 volume percent), unless a waiver is obtained from the Department and/or the EPA Administrator." **[Reference: 40 CFR §60.4207]**

Compliance Methods for the Above (Description and Citation):

Fuel specifications meet the requirements of 40 CFR §80.510(b) and are maintained by DPW-Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.1C(6). Applicable Standards/Limits: Operational Limits.

"In accordance with 40 CFR §60.4211(f), non-emergency use of the emergency diesel generator for the purpose of maintenance checks and readiness testing is limited to 100 hours per year or less unless prior approval is received from the Department."

Compliance Methods for the Above (Description and Citation):

Review of emergency generator operating logs. Emergency generators were used for ≤ 100 hours per year for non-emergency purposes.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.1C(7). Applicable Standards/Limits: Operational Limits.

There is no time limit on the use of the emergency generator in emergency situations.

[Reference: 40 CFR §60.4211(f)(1)]

Compliance Methods for the Above (Description and Citation):

Records of emergency generator hours for emergency and non-emergency use are maintained by DPW-Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A.

Permit Term (Describe requirements and cross-reference):

5a.1C(8). Applicable Standards/Limits: Operational Limits.

The Permittee may operate the emergency stationary ICE for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the 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)(2)(i)]**

Note: Effective May 2, 2016 emergency generators are no longer allowed to participate for emergency demand response operation unless they meet the requirements of a non-emergency generator of the same model year. This engine does not meet the standards for a non-emergency generator; therefore, operation for emergency demand response or periods of voltage deviation is not allowed.

Compliance Methods for the Above (Description and Citation): Emergency stationary ICE were not operated for more than 100 hours in the calendar year for maintenance checks and readiness testing. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A Permit Term (Describe requirements and cross-reference): 5a.1C(9). <u>Applicable Standards/Limits: Operational Limits.</u> For the purpose of maintaining synthetic minor status for the C4ISR Phase I Facility, the combined NOx emissions from all fuel burning equipment (boilers and generators) at the facility must be less than 25 tons in any rolling 12-month period. [Reference: MDE PTC 025-0081-9-0393 thru 025-0081-9-0396 issued July 15, 2009, Part D-Operating Conditions, Condition 7] Compliance Methods for the Above (Description and Citation): Review of emergency generator operating logs and calculations of NOx emissions. NOx emissions totals were estimated on a monthly basis using fuel usage records to verify that the annual emissions do not exceed 25 tons in any rolling 12-month period. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A Permit Term (Describe requirements and cross-reference): 5a.4A(1). <u>Record Keeping Requirements: NSPS.</u> The Permittee shall maintain a log for the emergency generator indicating the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.). [Reference: MDE PTC 025-0081-9-0393 thru 025-0081-9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 1] All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06C(5)(g)] Compliance Methods for the Above (Description and Citation): Verified by review of emergency generator operating logs. Records maintained by DPW-Environmental for at least 5 years. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A Permit Term (Describe requirements and cross-reference): 5a.4A(2). <u>Record Keeping Requirements: NSPS.</u> The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s): (a) Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006 and the manufacturer model year of the diesel engine;

(b) The installation date of each emergency diesel generator; and
(c) The certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211 and §60.4214(b). **[Reference: MDE PTC 025-0081-9-0393 thru 025-0081-9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 2]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

Review of maintenance records to verify documentation of the manufacture date of the diesel engine if manufactured prior to April 1, 2006 and the manufacture model year of the diesel engine; the installation date of each emergency diesel generator; and the certifications of compliance or manufacturer engine test data required by 40 CFR 60.4211 and 60.4214(b). Records maintained by DPW-Environmental for at least 5 years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.4A(3). Record Keeping Requirements: NSPS.

Beginning October 1, 2007, for any NSPS emergency diesel generator the Permittee shall for each fuel delivery obtain 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. The Permittee shall maintain the required records on site for at least five (5) years. **[Reference: MDE PTC 025-0081-9-0393 thru 025-0081-9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 3]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

Certification obtained from fuel supplier. Records maintained by DPW-Environmental for at least 5 years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.4C. Record Keeping Requirements: Operational Limits.

In order to demonstrate compliance with the annual emissions limitations, the Permittee shall calculate and record the NOx emissions for each previous calendar month and a total for the previous 12 consecutive calendar months for the C4ISR Phase I Facility. The calculations and records shall be updated monthly, within the first 15 days of each following month. These records shall be submitted to the Department as part of the semi-annual report. **[Reference: MDE PTC 025-0081-9-0393 thru 025-0081-9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 4]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

Review of emergency generator operating logs and calculations of NOx emissions. NOx emissions are estimated on a monthly basis using fuel usage records to verify that the annual emissions do not exceed 25 tons in any rolling 12-month period. Records are kept onsite at the C4ISR facility and calculations are maintained by DPW-Environmental for at least 5 years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (NSPS Generators) See list of EU IDs for Permit Term 5a.1A

Permit Term (Describe requirements and cross-reference):

5a.5C. Reporting Requirements: Operational Limit.

The Permittee shall report the amounts of fuel oil combusted or the hours of operation, and reason for generator operation (i.e., maintenance or operational testing, power outage, etc.) to the Department in the annual emission certification report due on April 1 of each year.

[Reference: MDE PTC 025-0081-9-0393 thru 025-0081-9-0396 & 9-0410 thru 9-0412, Part E-Record Keeping and Reporting Requirements, Condition 1]

Compliance Methods for the Above (Description and Citation):

The hours of operation are logged, and are used to calculate the emissions reported in the annual air emissions certification.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.7 Generators/Engines Subject to NESHAP Subpart ZZZZ

5b.0 GENERATORS/ENGINES SUBJECT TO NESHAP SUBPART ZZZZ

(1) Emission Units (Unit IDs): (Generators/Engines Subject to NESHAP Subpart ZZZZ) 07-00316-A01 (12-9-0409), 03-0328-A01 (12-9-0229), 0328-A02 (025-0081-9-0414), 0328-A03 (025-0081-9-0418), 03-0394-A01 & A02 (12-9-0227 & 12-9-0228), 03-4600-A04 & A05 (12-9-0276 & 12-9-0277), 3660-A01 (025-0081-9-0500), BSS-01 (9-0435), LWE-01 thru 05 (9-0436), UTF-01 (9-0437)

Permit Term (Describe requirements and cross-reference):

(2) 05b.1. Applicable Standards/Limits:

(3) **§63.6595** – When do I have to comply with this subpart?

(4) “(a) Affected sources. (1) “...If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013...”

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

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

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

(5)

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

“As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:”

For each.	You must meet the following requirement, except during periods of startup.	During periods of startup you must.
1. Non-emergency , non-black start CI stationary RICE ≤ 300 HP	a. Change oil and filter every 500 hours of operation or annually, whichever comes first ¹ ; b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-emergency , non-black start CI stationary RICE $300 < HP \leq 500$	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or b. Reduce CO emissions by 70 percent or more.	
3. Non-emergency , non-black start CI stationary RICE > 500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.P ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;P ¹ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

¹ Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

² If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

§63.6605 – What are my general requirements for complying with this subpart?

“(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.”

Compliance Methods for the Above (Description and Citation):

RICE MACT tune-ups are performed as follows: Change oil and filter every 500 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. The requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart, that apply, are met.

Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance

Note: Intermittent compliance for units BSS-01 (9-0435), and LWE-01 thru 05 (9-0436)

Emission Unit ID(s): (Generators/Engines Subject to NESHAP Subpart ZZZZ) See list of EU IDs for Permit Term 5b.1.

Permit Term (Describe requirements and cross-reference):

5b.2. Testing Requirements:

§63.6615 – When must I conduct subsequent performance tests?

“If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.”



Compliance Methods for the Above (Description and Citation):

Units UTF-01 (9-0437), LWE-01 thru 05 (9-0436), and BSS-01 (9-0435) have emission and operating limitations. Initial performance tests for units UTF-01 (9-0437), LWE-01 thru 05 (9-0436), and unit BSS-01 (9-0435) were conducted in August 2019, May 2017, and November 2019, respectively. Subsequent performance tests for units LWE-01 thru 05 (9-0436) and unit BSS-01 (9-0435) are required to be conducted every 8,760 hours or 3 years, whichever comes first. Subsequent performance tests for units LWE-01 thru 05 (9-0436) were conducted in August 2020. Unit UTF-01 (9-0437) is not subject to subsequent performance tests due to its size of 500 hp.

Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance

Note: Intermittent compliance for unit BSS-01 (9-0435)

Emission Unit ID(s): (Generators/Engines Subject to NESHAP Subpart ZZZZ) See list of EU IDs for Permit Term 5b.1.

Permit Term (Describe requirements and cross-reference):

5b.2. Testing Requirements.

§63.6620 – What performance tests and other procedures must I use?

(a) “You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.”

(b) “Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent or 100 percent load for the stationary RICE listed in paragraphs (b)(1) thru (4) of this section.”

Compliance Methods for the Above (Description and Citation):

(a) Initial performance tests for LWE-01 thru 05 (9-0436) and BSS-01 (9-0435) are required and were conducted in May 2017 and November 2019, respectively.

(b) The performance tests were conducted according to the requirements that this subpart specifies in Table 4 to this subpart.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Generators/Engines Subject to NESHAP Subpart ZZZZ) See list of EU IDs for Permit Term 5b.1.

Permit Term (Describe requirements and cross-reference):

5b.3. Monitoring Requirements:

§63.6625 – What are my monitoring, installation, collection, operation, and maintenance requirements?

“(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements of paragraphs (b)(1) thru (6) of this section. For an affected source that is complying with the emissions limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.



- (1) You must prepare site-specific monitoring plan that addresses the monitoring system design, data collection, and quality assurance and quality control elements outlined in paragraphs (b)(1)(i) thru (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified paragraphs (b)(1) thru (5) of this section in your site-specific monitoring plan.
- (i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
 - (ii) Sampling interface (e.g., the thermocouple) location such as the monitoring system will provide representative measurements;
 - (iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;
 - (iv) Ongoing operation and maintenance procedures in accordance with provisions of §63.8(c)(1)(ii) and (c)(3); and
 - (v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1) and (e)(2)(i).
- (2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.
- (3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).
- (4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.
- (5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.
- (6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan."

Compliance Methods for the Above (Description and Citation):

- (1) Site-specific monitoring plans have been prepared and are maintained for units UTF-01 (9-0437), LWE-01 thru 05 (9-0436), and BSS-01 (9-0435).
- (2) through (4) CPMS units are installed, operated, and maintained in accordance with site-specific monitoring plans and applicable operating requirements.
- (5) and (6) Performance evaluations are performed annually, in accordance with site-specific monitoring plans.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Generators/Engines Subject to NESHAP Subpart ZZZZ) See list of EU IDs for Permit Term 5b.1.

Permit Term (Describe requirements and cross-reference):

5b.3. Monitoring Requirements.

§63.6625 – What are my monitoring, installation, collection, operation, and maintenance requirements?

"(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

- (3) An existing emergency or black start stationary RICE located at an area source of HAP emissions."

“(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.”

“(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacture’s specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crank case filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements...

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.”

“(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine’s time spent at idle during startup and minimize the engine’s startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.”

“(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.”

§63.6640 – How do I demonstrate continuous compliance with emission limitations and operating limitations?

“(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you

change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.”

“(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE 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 paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.”

“(3) Not Applicable.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.”

Compliance Methods for the Above (Description and Citation):

Review of non-resettable hour meter operation, usage and hours logs, and annual tune-up records.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Generators/Engines Subject to NESHAP Subpart ZZZZ) See list of EU IDs for Permit Term 5b.1.

Permit Term (Describe requirements and cross-reference):

5b.4 Record Keeping Requirements.

\$63.6655 – What records must I keep?

“(a) If you must comply with the emission and operating limitations, you must keep the record described in paragraphs (a)(1) thru (a)(5), (b)(1) thru (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification of Notification of Compliance Status you submitted, according to the requirements of §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(vii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunction process and air pollution control and monitoring equipment to its normal or usual manner of operation.”

“(b) For each CEMS or CPMS you must keep records listed in paragraphs (b)(1) thru (3) of this section.

(1) Records described in §63.10(b)(2)(vi) thru (xi).

(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.”

“(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of your gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.”

“(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.”

“(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.”

“(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.”



Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Maintenance records and records of the hours of operation and reasons are kept.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Generators/Engines Subject to NESHAP Subpart ZZZZ) See list of EU IDs for Permit Term 5b.1.

Permit Term (Describe requirements and cross-reference):

5b.5 Reporting Requirements.

"If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable."

[Footnote 2 of Table 2d]

§63.6650 - What reports must I submit and when?

"(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) thru (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for you affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 thru June 30 or the semiannual reporting period from July 1 thru December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR Part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) thru (b)(4) of this section.

(6) For annual Compliance reports, each Compliance report must cover the period beginning on the compliance date that is specified for you affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked of delivered no later than January 31, following the end of the first calendar year after the compliance date that is specified for your source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 thru December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

“(c) The Compliance report must contain information in paragraphs (c) (1) thru (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with the official's name, title, and signature certifying the accuracy and content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and actions taken to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there are no periods during which the continuous monitoring system (CMS) or, including CEMS and CPMS, was out of control, as specified in §63.8(c)(7), a statement that there were no periods during which CMS was out of control during the reporting period.”

“(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) thru (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.”

“(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) thru (4) and (e)(1) thru (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date and time, and duration that each CMS was out-of-control, including information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total duration as a percent of the total source operating time during the reporting period.

- (6) A breakdown of the total duration of the deviations during the reporting period into those that were due to control equipment problems, process problems, or other known causes, and other unknown causes.
- (7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
- (8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.
- (9) A brief description of the stationary RICE.
- (10) A brief description of the CMS.
- (11) The date of the latest CMS certification or audit.
- (12) A description of any changes in CMS, process, or controls since last reporting period."

"(f) Each affected source that has obtained a title V cooperating permit pursuant to 40 CFR Part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation on this subpart, submission for the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual annual monitoring report. However, the submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority."

"(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is 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) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(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 §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).
- (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).
- (vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
- (viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.
- (ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(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 §63.13."

Compliance Methods for the Above (Description and Citation):

Management practices are performed on the required schedule. RICE MACT tune-ups are performed as follows: Change oil and filter every 500 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. Compliance reports for units BSS-01 (9-0435), LWE-01 thru 05 (9-0436), UTF-01 (9-0437) are submitted with the semi-annual monitoring (SIXMON) reports.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.8 Paint Spray Booths

6.0 PAINT SPRAY BOOTHS

Emission Unit ID(s): (Paint Spray Booths) 07-00525-A04 (12-6-0159) & A06 (12-6-0162), 36-02353-A01 (12-6-0207)

Permit Term (Describe requirements and cross-reference):

6.1 Applicable Standards/Limits: Control of Volatile Organic Compounds.

COMAR 26.11.19.23E. General Requirements and Standards.

"(1) VOC Content Limits.

(a) Except as provided in this regulation, effective July 1, 2013, a person who is subject to this regulation may not supply, sell, offer for sale, distribute, or manufacture for use within the State an automotive coating or cleaning solvent with a VOC content in excess of the corresponding limit specified in Table 1 of §E(1) or in §E(5) of this regulation.

(b) A person may not use or apply to a motor vehicle, mobile equipment, or associated parts and components, an automotive coating or cleaning solvent for vehicle refinishing that exceeds the VOC content specified in Table 1 of §E(1) or in §E(5) of this regulation.

Table 1. VOC Content Limits for Automotive Coatings for Motor Vehicle and Mobile Equipment Non-assembly Line Refinishing and Recoating

Coating Category	VOC Content Limit of Coatings as Applied*	
	Pounds per gallon	Grams per liter
Adhesion promoter	4.5	540
Automotive pretreatment coating	5.5	660
Automotive primer	2.1	250
Clear coating	2.1	250
Color coating, including metallic/iridescent color coating	3.5	420
Multicolor coating	5.7	680
Other automotive coating type	2.1	250
Single-stage coating, including single-stage metallic/iridescent coating	2.8	340
Temporary protective coating	0.5	60
Truck bed liner coating	1.7	200
Underbody coating	3.6	430

* The VOC content is determined as the weight of volatile compounds (prepared to manufacturer's maximum VOC content), less water and exempt compounds, as specified in §E(2) of this regulation."

COMAR 26.11.19.23H. Work Practice Standards.

(1) Spray guns used to apply automotive coating components or automotive coatings shall be cleaned by one or a combination of the following:

- (a) A fully enclosed spray gun cleaning system that is kept closed when not in use and is maintained in accordance with the requirements of §L(1)(a)—(c) of this regulation;
- (b) Unatomized discharge of solvent into a paint waste container that is kept closed when not in use;
- (c) Disassembly of the spray gun and cleaning in a vat that is kept closed when not in use; or
- (d) Atomized spray into a paint waste container that is filled with a device designed to capture atomized mist or spray solvent emissions.

(2) The owner or operator of an automotive refinishing facility or non-assembly line operation subject to this regulation shall implement the following work practice standards and training measures:

- (a) Fresh and used automotive coating components, automotive coatings, solvents, and cleaning solvents shall be stored in vapor tight, nonabsorbent, nonleaking containers that shall be kept closed at all times except when filling or emptying;
- (b) Cloth or paper, or absorbent applicators, moistened with automotive coatings components, automotive coatings, solvents, or cleaning solvents shall be stored in closed, vapor tight, nonabsorbent, nonleaking containers;
- (c) Handling and transfer procedures to minimize spills during the transfer of automotive coating components, automotive coatings, solvents, and cleaning solvents; and

(d) Ensure that a person who uses or applies automotive coating components, automotive coatings, solvents, or cleaning solvents has completed training in the proper use and handling of the automotive coating components, automotive coatings, solvents, and waste products in order to minimize the emission of air contaminants and to comply with the provisions of this regulation.

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Review of coatings' VOC content. Use of work practice standard procedure.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Paint Spray Booths) See list of EU IDs for Permit Term 6.1.

Permit Term (Describe requirements and cross-reference):

6.3 Monitoring Requirements: Control of Volatile Organic Compounds.

COMAR 26.11.19.23I. Compliance Procedures and Monitoring Requirements.

“(1) Compliance Statement Requirements.

(a) For each automotive coating product or automotive coating component product, a manufacturer and repackager who is subject to the provisions of this regulation shall include the following information on product data sheets or an equivalent documentation:

(i) The VOC actual content and VOC regulatory content, as supplied, for the coating product or coating component product, expressed in grams per liter, calculated in accordance with §E(2)(a)(i) and (ii) of this regulation;

(ii) The weight percent of volatiles, water, and exempt compounds;

(iii) The volume percent of water and exempt compounds; and

(iv) The density of the material (in grams per liter).

(b) For each ready to spray mixture (based on the manufacturer's and repackager's stated mix ratio) product, the manufacturer and repackager shall include the following information on product data sheets or an equivalent documentation:

(i) The VOC actual content and the VOC regulatory content, as applied, for the coating product or coating component product, expressed in grams per liter;

(ii) The weight percent of volatiles, water, and exempt compounds;

(iii) The volume percent of water and exempt compounds; and

(iv) The density of the material (in grams per liter).

(c) The manufacturer and repackager of cleaning solvents subject to this regulation shall include the VOC content of the cleaning solvents as supplied, calculated in accordance with the requirements of §E(2)(a)(iii) of this regulation, expressed in grams per liter, on product data sheets or an equivalent documentation.

(2) Container Labeling Requirements. The manufacturer and repackager of automotive coatings or automotive coating components shall include the following information on all containers or on a label affixed to the container:

(a) The applicable use category or categories;

(b) The VOC actual content of the coating or coating component, as supplied, calculated in accordance with the requirements of §E(2)(a)(ii) of this regulation) and expressed in grams per liter;

(c) The VOC regulatory content of the coating or coating component as supplied, calculated in accordance with the requirements of §E(2)(a)(i) of this regulation and expressed in grams per liter; and

(d) The manufacturer and repackager of cleaning solvents subject to this rule shall include on all containers, or on a label affixed to the container, the VOC content for cleaning solvents, as

supplied, calculated in accordance with the requirements of §E(2)(a)(iii of this regulation) and expressed in grams per liter.”

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Review of product data sheets.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Paint Spray Booths) See list of EU IDs for Permit Term 6.1.

Permit Term (Describe requirements and cross-reference):

6.4 Record Keeping Requirements: Control of Volatile Organic Compounds.

COMAR 26.11.19.23J. Record Keeping.

“(1) Record-Keeping Requirements for Coatings, Coating Components and Solvents. A person who uses automotive coatings, automotive coating components, ready-to-spray coatings (based on the manufacturer’s stated mix ratio), or cleaning solvents subject to this regulation shall maintain and have available at all times, the following:

(a) A current list of all coatings, coating components and cleaning solvents used that are subject to this regulation which includes the following information for each coating, coating component and cleaning solvent:

(i) Whether the material is a coating, coating component, or cleaning solvent;

(ii) Coating, coating component or cleaning solvent name and manufacturer;

(iii) Application method;

(iv) Coating type;

(v) The mix ratio specific to the coating, coating component or cleaning solvent; and

(vi) The VOC actual content and VOC regulatory content as applied, for each ready to spray or ready to apply coating or cleaning solvent and copies of data sheets documenting how the as applied values were determined;

(b) The VOC actual content and VOC regulatory content as supplied and copies of current manufacturer specification sheets, product data sheets, material safety data sheets, technical data sheets, or air quality data sheets documenting the as supplied value; and

(c) Purchase records identifying the following;

(i) The coating type;

(ii) Coating, coating component, or cleaning solvent name; and

(iii) Volume purchased of the coating, coating component or cleaning solvent.

(2) Record-Keeping Requirements for Emission Control Systems. A person using an emission control system shall maintain daily records of the following key system operating parameters which demonstrate continuous operation and compliance of the emission control system during periods of VOC emission producing activities:

(a) Temperatures;

(b) Pressure drops; and

(c) Air flow rates.

(3) The records under this regulation shall be maintained for not less than 3 years and made available to the Department upon request.”

All records must be maintained for a period of 5 years. [Reference: **COMAR 26.11.03.06C(5)(g)]**



Compliance Methods for the Above (Description and Citation):

Paint booth logs and a table with coatings components and solvents are kept at DPW, but were not requested by the Department. Records are maintained for at least 5 years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Paint Spray Booths) See list of EU IDs for Permit Term 6.1.

Permit Term (Describe requirements and cross-reference):

6.5 Reporting Requirements: Control of Volatile Organic Compounds.

The Permittee shall report material usage and VOC content of coatings to the Department annually in the Emission Certification Report. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

VOCs data are reported in the Annual Emissions Certification Report.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.9 Underground Storage Tanks

7.0 UNDERGROUND STORAGE TANKS

Emission Unit ID(s): (Underground Storage Tanks) 26-04029-A03 & A05 (9-0152)

Permit Term (Describe requirements and cross-reference):

7.1 Applicable Standards/Limits: Control of Volatile Organic Compounds.

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 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 Sec. 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.”

Compliance Methods for the Above (Description and Citation):

The loading system for the storage tank is equipped with a vapor balance line that is properly installed, maintained, and used, as confirmed by interviews with site Point of Contact (POC).

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1.) Permit Term (Describe requirements and cross-reference): 7.1 <u>Applicable Standards/Limits: Operational Limits.</u> COMAR 26.11.24.06 – <u>Training Requirements for Operation and Maintenance of Approved Systems.</u> “A. <u>General.</u> An operator shall ensure that: (1) At least one employee at each facility subject to this regulation is trained in accordance with the requirements of Sec. B of this regulation; and. (2) The trained employee assists in the training of each of the other employees at the facility who are involved in the operation or maintenance of the approved system.” Compliance Methods for the Above (Description and Citation): Review of training records on-site during quarterly inspections. Interviews with site POC. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): 7.1 <u>Applicable Standards/Limits: Operational Limits.</u> COMAR 26.11.24.06 – <u>Training Requirements for Operation and Maintenance of Approved Systems.</u> “B. <u>Approved Training Course Contents and Duration.</u> (1) An approved training course shall contain, at a minimum, a discussion of the following: (a) Purposes and effects of Stage II vapor recovery; (b) Stage II vapor recovery equipment design, function, operation, and maintenance; (c) Daily inspection requirements and development and maintenance of records and files; and (d) Equipment warranties and spare parts. (2) The approved training course shall be of duration sufficient to properly train persons in the requirements of this chapter.” Compliance Methods for the Above (Description and Citation): Interviews with site POC and review of training course materials. Permit terms 7.1 B.(1)(a) and (b) no longer apply to these units as stated in the 1 December 2020 letter from APG to MDE ARA. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): 7.1 <u>Applicable Standards/Limits: Operational Limits.</u> COMAR 26.11.24.08 – <u>Instructional Signs.</u> “A. An operator who is subject to this chapter shall place instructional signs in conspicuous locations at each gasoline dispenser. B. The instructional signs shall include: (1) Instructions, with illustrations, on how to insert the nozzle, dispensing gasoline, and how to remove the nozzle;



- (2) A warning against attempts to continue refueling after automatic shutoff of the gasoline (that is, topping off); and
(3) The Department's toll-free telephone number, which may be used for complaints or comments concerning the use of the Stage II vapor recovery systems."

Compliance Methods for the Above (Description and Citation):

Visual observations of instructional signs during quarterly inspections. Permit term 7.1 B.(3) no longer applies to these units as stated in the 1 December 2020 letter from APG to MDE ARA.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

7.2 Testing Requirements:

COMAR 26.11.24.04 - Testing Requirements.

A. Except as provided in §§E and F of this regulation, an owner subject to this chapter shall perform the following CARB-approved tests.

"(1) A leak test in accordance with the Vapor Recovery Test Procedure TP-201.3 referenced in Regulation .01-1B(1) of this chapter;

(2) An air to liquid volume ratio test in accordance with the Vapor Recovery Test Procedure TP-201.5 referenced in Regulation .01-1B(2) of this chapter.

(3) A dynamic pressure performance test in accordance with the Vapor Recovery Test Procedure TP-201.4 referenced in Regulation .01-1B(3) of this chapter;

(4) A vapor return line vacuum integrity test for the Healy Model 400 ORVR System in accordance with Executive Order G-70-186, Exhibit 4 referenced in Regulation .01-1B(4) of this chapter; and

(5) A vapor return line vacuum integrity test for the Healy Model 600 System in accordance with Executive Order G-70-165 Exhibit 4 referenced in Regulation .01-1B(5) of this chapter.

Compliance Methods for the Above (Description and Citation):

Review and maintain CARB-approved test records. Permit term 7.2 A. no longer applies to these units and instead COMAR 26.11.24.04 Testing Requirements, A-1 applies, as stated in the 1 December 2020 letter from APG to MDE ARA.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

7.2 Testing Requirements:

COMAR 26.11.24.04 - Testing Requirements.

"B. The leak and liquid blockage tests required in §A of this regulation shall be performed on each approved system before the gasoline dispensing facility is initially used to refuel motor vehicles, or by the applicable dates in Regulation .03 of this chapter, whichever occurs later."

Compliance Methods for the Above (Description and Citation):

Review and maintain CARB-approved test records. Permit term 7.2 B. no longer applies to these units and instead COMAR 26.11.24.04 Testing Requirements, A-1 applies, as stated in the 1 December 2020 letter from APG to MDE ARA.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

7.2 Testing Requirements:

COMAR 26.11.24.04 - Testing Requirements.

“C. Stage II Vapor Recovery System.

(1) An owner of a Stage II vapor recovery system subject to this chapter shall repeat the required tests:

(a) In accordance with the test schedule in §C(2) of this regulation; and

(b) Upon replacement of 75 percent or more of an approved system.

(2) Test Schedule.”

<i>Type of Stage II Vapor Recovery System</i>	<i>Initial Test</i>	<i>Frequency of Retest</i>
(a) Vapor Balance System	Dynamic Back Pressure	12 months
	Leak Test	12 months
	Liquid Blockage Test	5 years
(b) Vapor Assist System—Type 1	Air to Liquid Ratio Test	12 months
	Leak Test	12 months
	Liquid Blockage Test	5 years
(c) Vapor Assist System—Type 2 Model 400	Nozzle Regulation Test	12 months
	Vapor Return Leak Tightness Test	12 months
(d) Vapor Assist System—Type 2 Model 600	Air to Liquid Ratio Test	12 months
	Vapor Return Line Vacuum Integrity Test	12 months

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Review and maintain CARB-approved test records. The leak test (TP-201.3) and leak rate and cracking pressure test (TP-201.1E) are required to be performed annually on unit 26-04029-A03 [for a Type (a) Vapor Balance System] as stated in the 1 December 2020 letter from APG to MDE ARA. The tie tank test (TP-201.3C) is not required to be performed since the two tanks are not manifolded as stated in the 1 December 2020 letter from APG to MDE ARA. The leak and leak rate and cracking pressure tests were performed on unit 26-04029-A03 with passing results on 2 December and 3 December 2020, respectively.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): <u>7.2 Testing Requirements:</u> COMAR 26.11.24.04 - Testing Requirements. "D. If a gasoline dispensing facility fails any test required by this chapter, the owner shall notify the Department of the failure in writing within 5 working days after the test and before retesting." Compliance Methods for the Above (Description and Citation): Review of test data and correspondence to the Department to confirm that if the gasoline dispensing facility failed any required tests, the Department was notified in writing within 5 working days after the test and before retesting. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): <u>7.2 Testing Requirements:</u> COMAR 26.11.24.04 - Testing Requirements. "E. Alternative test methods approved by CARB may be used in place of the test methods specified in §A of this regulation, if the alternative test methods are approved by the U.S. Environmental Protection Agency (EPA) as a revision to the State Implementation Plan, which is Maryland's plan for meeting the National Ambient Air Quality Standards." Compliance Methods for the Above (Description and Citation): Not applicable as alternative methods were not utilized. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): <u>7.2 Testing Requirements:</u> COMAR 26.11.24.04 - Testing Requirements. "F. Test methods and the frequency of testing required by this regulation may be modified for vapor assist systems, if the test methods and testing frequency are approved by the Department and the EPA." Compliance Methods for the Above (Description and Citation): Not applicable as test methods/frequency were not modified. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): <u>7.3 Monitoring Requirements:</u> COMAR 26.11.24.05 – Inspection Requirements.

"A. An operator subject to this chapter shall ensure that each approved system is inspected at least once each day of operation to verify that it is working properly."

Compliance Methods for the Above (Description and Citation):

Review of on-site records. Daily records maintained for inspections of each approved system.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

7.3 Monitoring Requirements:

COMAR 26.11.24.05 – Inspection Requirements.

"B. Except as provided in Sec. C of this regulation, the Department shall consider an operator of a gasoline dispensing facility to be in violation of Regulation .03E of this chapter during periods of time when defective equipment at the facility is placed in operation."

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Review of on-site records to verify that defective equipment was not operated.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

7.3 Monitoring Requirements:

COMAR 26.11.24.05 – Inspection Requirements.

"C. The operator is not in violation of Regulation .03E of this chapter during any period of time that the operator establishes, to the satisfaction of the Department, that nozzles associated with defective equipment were tagged out of service and that no nozzle associated with the defective equipment was actually used."

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Review of on-site records to verify that the facility tagged out of service nozzles associated with defective equipment.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

7.3 Monitoring Requirements:

COMAR 26.11.24.05 – Inspection Requirements.

"D. For any defective equipment identified by the Department, the operator shall effect necessary repairs before placing the equipment in service, and shall inform the Department by telephone within 72 hours after the repair or replacement of the defective equipment has been effected."

Compliance Methods for the Above (Description and Citation): Not applicable, no defective equipment identified by the Department. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): 7.4 <u>Record Keeping Requirements</u>: COMAR 26.11.24.07 – <u>Record Keeping and Reporting Requirements</u>. “A. An operator subject to this chapter shall create and maintain a record file at the facility.” Compliance Methods for the Above (Description and Citation): Review of on-site records. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Underground Storage Tanks) 26-04029-A03 & A05 (9-0152) Permit Term (Describe requirements and cross-reference): 7.4 <u>Record Keeping Requirements</u>: COMAR 26.11.24.07 – <u>Record Keeping and Reporting Requirements</u>. “B. The record file shall contain copies of all test reports, permits, violation notices, correspondence with the Department, equipment maintenance records, training records, and other information pertinent to the requirements of this chapter. Verification of training shall be maintained in the facility file. Equipment maintenance records required under this chapter shall be maintained for at least 2 years. All other records shall be maintained for at least 5 years.” Compliance Methods for the Above (Description and Citation): Review of on-site records. Records are maintained for at least 5 years. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): 7.4 <u>Record Keeping Requirements</u>: COMAR 26.11.24.07 – <u>Record Keeping and Reporting Requirements</u>. “C. The equipment maintenance records shall include: (1) The date on which defective equipment was found, a description of each defect, a description of the corrective action and the date on which the defect was corrected, and the probable cause of the defect; (2) If parts are replaced, the location within the approved system of the part, the part number, and assurance that the replacement part does not degrade the efficiency of the system; and (3) Inspection reports and any other information relating to maintenance or care of the approved system.” Compliance Methods for the Above (Description and Citation): Review of inspection/maintenance records on-site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Underground Storage Tanks) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): 7.5. <u>Reporting Requirements</u> : If any test is failed, the Permittee shall notify the Department in writing within 5 days after the test and before retesting. [Reference: COMAR 26.11.24.04E] The Permittee shall submit written notification to the Department within 5 days of the incident, unless otherwise specified by the Permit. [Reference: COMAR 26.11.24.04E] COMAR 26.11.24.07E – “The following reporting requirements apply to a test under this chapter: (1) The Department shall be notified 5 days before a test is to be conducted; (2) A test protocol shall be available at the test site during testing; (3) Copies of all test results shall be forwarded to the Department within 30 days of the test; and (4) Test failures shall be reported to the Department in writing within 5 days following the date of the failure.” Compliance Methods for the Above (Description and Citation): Review of test data and correspondence to the Department to confirm that if the gasoline dispensing facility failed any required tests, the Department was notified in writing within 5 working days after the test and before retesting. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.10 Fire Test Laboratory

8.0 FIRE TEST LABORATORY Emission Unit ID(s): (Fire Test Laboratory) 07-0525-A01 (12-9-0216), Intermediate Firing and Environmental Laboratory (IFEL, formerly Fire Test Lab) Permit Term (Describe requirements and cross-reference): 8.1A. <u>Applicable Standards/Limits: Control of Visible Emissions.</u> COMAR 26.11.06.02C(2) – Visible Emission Standards. “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.” <u>Exceptions.</u> COMAR 26.11.06.02A(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 Methods for the Above (Description and Citation):

Periodic monitoring for visible emissions by facility personnel during equipment operations. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): 8.1B. Applicable Standards/Limits: Control of Particulate Matter. COMAR 26.11.06.03B(2)(a) – Particulate Matter from Confined Sources. “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 Methods for the Above (Description and Citation): Routine preventative maintenance. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): 8.1C. Applicable Standards/Limits: Control of Volatile Organic Compounds. COMAR 26.11.06.06B(1)(b) – Control of VOC from Installation. “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 Methods for the Above (Description and Citation): Review of material usage logs, emissions are processed through a thermal oxidizer. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1. Permit Term (Describe requirements and cross-reference): 8.1D. Applicable Standards/Limits: Operational Limits. The thermal oxidizer shall be operated at a minimum temperature of 1400°F. [Reference: MDE Permit to Construct No. 12-9-0216N] Compliance Methods for the Above (Description and Citation): Review of available chart recorders. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance



Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

8.3A. Monitoring Requirements: Control of Visible Emissions.

The Permittee shall conduct a monthly 1-minute visual observation of the thermal oxidizer exhaust. The visual observation must be conducted while the fire test laboratory and thermal oxidizer is in operation. If no visible emissions are observed in six consecutive monthly observations from the thermal oxidizer exhaust, the Permittee may decrease the frequency of visual observations from monthly to quarterly for the thermal oxidizer exhaust. If visible emissions are observed during any quarter visual observation, the Permittee must resume the observation of the thermal oxidizer exhaust on 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 thermal oxidizer for cause of visible emission and perform necessary adjustments or repairs within 24-hours or prior to operating the fire test laboratory. 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 fire test laboratory. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

Interviews with personnel and quarterly inspections. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

8.3B. Monitoring Requirements: Control of Particulate Matter.

The Permittee shall develop and maintain a preventive maintenance plan for the thermal oxidizer that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates and description of the maintenance that was performed. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

Interviews with personnel and quarterly inspection. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

8.3C. Monitoring Requirements: Control of Volatile Organic Compounds.

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

Compliance Methods for the Above (Description and Citation):
Interviews with personnel and quarterly inspections. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):
8.4A. Record Keeping Requirements: Control of Visible Emissions.
The Permittee shall maintain on site a log of the dates and results of visible emissions observations for a period of at least 5 years. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):
Review of visible emissions observations records. Records are maintained on site for at least 5 years. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):
8.4B. Record Keeping Requirements: Control of Particulate Matter.
The Permittee shall maintain a copy of the preventive maintenance plan and a record of the dates of and description of maintenance activity performed. The Permittee shall maintain records of the thermal oxidizer malfunctions and the corrective actions taken to bring into proper operation. [Reference: COMAR 26.11.03.06C].

Compliance Methods for the Above (Description and Citation):
Review of records. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):
8.4C. Record Keeping Requirements: Control of Volatile Organic Compounds.
The Permittee shall maintain a copy of the preventive maintenance plan and a record of the dates of and description of maintenance activity performed. The Permittee shall maintain records of the thermal oxidizer malfunctions and the corrective actions taken to bring into proper operation. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):
Review of records. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance



Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

8.4D. Record Keeping Requirements: Operational Limits.

The Permittee shall maintain records of the temperature readings and gas usage for the thermal oxidizer on site for at least five years and make these records available to the Department upon request. [Reference: MDE Permit to Construct No. 12-9-0216N]

Compliance Methods for the Above (Description and Citation):

Review of records. Records are maintained on site for at least 5 years. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Fire Test Laboratory) See list of EU IDs for Permit Term 7.1.

Permit Term (Describe requirements and cross-reference):

8.5A. Reporting Requirements: Control of Visible Emissions.

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

Compliance Methods for the Above (Description and Citation):

No reportable incidences of visible emissions. Currently not in use due to building damage. The thermal oxidizer was dismantled and is in storage.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.11 Atmospheric Burner at Heat Engine System Altitude Test Facility (HESATF)

9.0 ATMOSPHERIC BURNER AT HEAT ENGINE SYSTEM ALTITUDE TEST FACILITY (HESATF)

Emission Unit ID(s): (Atmospheric Burner at HESATF) 025-0081-4-0692

Permit Term (Describe requirements and cross-reference):

9.1A. Applicable Standards/Limits: Control of Visible Emissions.

COMAR 26.11.09.05A – 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 Methods for the Above (Description and Citation):

Visible emissions verified by periodic observations. This unit was not used in 2022.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.1B. Applicable Standards/Limits: Control of Sulfur Oxide Emissions.

COMAR 26.11.09.07A(2) – 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

Compliance Methods for the Above (Description and Citation):

Fuel specifications for fuel with sulfur content of less than 0.3 percent by weight are maintained by DPW – Environmental. This unit was not used in 2022.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.1C. Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.

COMAR 26.11.09.08B(5) – Operator Training.

"(c) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.



(d) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."

Compliance Methods for the Above (Description and Citation):

Training records maintained for equipment operators. Operator training course is approved by the Department. This unit was not used in 2022.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.1C. Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.

COMAR 26.11.09.08E – Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 MMBtu/hr 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 Methods for the Above (Description and Citation):

- (6) Atmospheric burner is properly registered with the Department.
- (7) and (3) Combustion optimizations are not performed annually because there is no known method to conduct a combustion analysis on this bench scale device which most closely resembles a jet engine. Consideration is underway to remove this requirement from the Permit to Construct and the APG Aberdeen Area Title V Permit. This device is operated per the manufacturer's recommendations under the supervision of trained personnel to achieve the lab results required.
- (4) and (5) Verified by combustion optimization training records. Combustion optimization training was completed in May 2022. Records are maintained by DPW-Environmental. Training program attendance records were not requested by the Department. This unit was not used in 2022.

Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.2C. Testing Requirements: Control of Nitrogen Oxide Emissions.

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

Compliance Methods for the Above (Description and Citation):

A combustion optimization was not performed in 2022 because there is no known method to conduct a combustion analysis on this bench scale device which most closely resembles a jet engine. Consideration is underway to remove this requirement from the Permit to Construct and the APG Aberdeen Area Title V Permit. This device is operated per the manufacturer's recommendations under the supervision of trained personnel to achieve the lab results required. This unit was not used in 2022.

Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.3A. Monitoring Requirements: Control of Visible Emissions.

The Permittee shall properly operate and maintain the atmospheric burner in a manner to prevent visible emissions, in accordance with the operation and maintenance manual.

[Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

Visible emissions verified by periodic observations. This unit was not used in 2022.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.3B. Monitoring Requirements: Control of Sulfur Oxide Emissions.

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitations on the sulfur content in fuel oil. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Fuel supplier certifications are maintained by DPW - Environmental. This unit was not used in 2022.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.3C. Monitoring Requirements: Control of Nitrogen Oxide Emissions.

The Permittee shall optimize combustion based on the annual combustion analysis.

[Reference: COMAR 26.11.09.08E(2)]

Compliance Methods for the Above (Description and Citation):

Verified by DPW-Environmental quarterly inspections. Combustion optimizations are performed annually. This unit was not used in 2022.

Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.4A. Record Keeping Requirements: Control of Visible Emissions.

The Permittee shall maintain operations manual and preventive maintenance plan on site.

The Permittee shall also maintain the following: a record of maintenance performed that relates to combustion performance; a log of visible emissions observations performed and make it available to the Department upon request; and a record of the hours that No. 2 fuel oil is burned. **[Reference: COMAR 26.11.03.06C]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

O&M Plan, maintenance records, visible emissions log, and fuel oil usage log are maintained by DPW. No records were requested by the Department. This unit was not used in 2022.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.4B. Record Keeping Requirements: Control Sulfur Oxide Emissions.

The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with this regulation. **[Reference: COMAR 26.11.09.07C]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

Fuel supplier certifications are maintained by DPW – Environmental for at least 5 years. This unit was not used in 2022.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1

Permit Term (Describe requirements and cross-reference):

9.4C. Record Keeping Requirements: Control of Nitrogen Oxide Emissions.

The Permittee shall maintain:

- (1) Records of results of the annual combustion analysis on site. **[Reference: COMAR 26.11.09.08E(5)]**
- (2) Records of combustion optimization training program attendance for each operator at the site for at least five years and make available to the Department upon request. **[Reference: COMAR 26.11.09.08E(5)]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation): Records of combustion analysis and combustion optimization training are maintained for at least 5 years. This unit was not used in 2022. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1 Permit Term (Describe requirements and cross-reference): 9.5A. <u>Reporting Requirements: 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". Compliance Methods for the Above (Description and Citation): Visible emissions did not occur and a Report of Excess Emissions and Deviations was not filed. This unit was not used in 2022. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1 Permit Term (Describe requirements and cross-reference): 9.5B. <u>Reporting Requirements: Control of Sulfur Oxide Emissions.</u> The Permittee shall report fuel supplier certifications to the Department upon request. [Reference: COMAR 26.11.09.07C] Compliance Methods for the Above (Description and Citation): Fuel supplier certifications were not requested by the Department. This unit was not used in 2022. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): (Atmospheric Burner at HESATF) See list of EU IDs for Permit Term 9.1 Permit Term (Describe requirements and cross-reference): 9.5C. <u>Reporting Requirements: Control of Nitrogen Oxide Emissions.</u> The Permittee shall submit: (1) The results of combustion analysis to the Department and the EPA upon request. [Reference: COMAR 26.11.09.08E(3)] (2) A record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08E(5)] Compliance Methods for the Above (Description and Citation): Neither a record of combustion analysis nor training program attendance was requested by the Department. This unit was not used in 2022. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.12 Facility Wide

10.0 FACILITY-WIDE

Emission Unit ID(s): Facility Wide.

Permit Term (Describe requirements and cross-reference):

10.1A. Applicable Standards/Limits: Control of VOC Emissions.

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

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

(2) Good Operating Practices.

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

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

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

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

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

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

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

(c) A person subject to this regulation shall:

(i) Establish good operating practices in writing;

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

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

(3) Equipment Cleanup.

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

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

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

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

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

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

(4) VOC Storage and Transfer.

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

more, to minimize VOC emissions.

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

Compliance Methods for the Above (Description and Citation):

Good Operating Practices (GOP) verified for permitted sources such as Paint Spray Booths (PSBs) and gas stations during quarterly inspections (e.g., rags stored in closed containers, spray guns cleaned in closed equipment). Verified covers and HVLP spray gun use for PSBs during quarterly inspections.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Facility Wide.

Permit Term (Describe requirements and cross-reference):

10.1B. Applicable Standards/Limits: Control of VOC Emissions.

COMAR 26.11.19.16B, C & D – Control of VOC Equipment Leaks.

“Applicability. A person subject to any VOC emission standard or limitation established in this chapter and not otherwise subject to more specific VOC leak requirements of another regulation is subject to the requirements of this regulation.

General Requirements. A person subject to this regulation shall comply with all of the following requirements:

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

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

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

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

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

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

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 Methods for the Above (Description and Citation): Verified control of VOC equipment leaks for PSBs and gas stations during quarterly inspections. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): Facility Wide. Permit Term (Describe requirements and cross-reference): 10.3A <u>Monitoring Requirements: Control of VOC Emissions.</u> The Permittee shall conduct facility-wide inspections at least once per quarter to determine the compliance status of facility operations with regard to implementation of “good operating practices” designed to minimize emissions of VOC. [Reference: COMAR 26.11.03.06C] Compliance Methods for the Above (Description and Citation): GOP verified for permitted sources such as PSBs and gas stations during quarterly inspections (e.g., rags stored in closed containers, spray guns cleaned in closed equipment). Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): Facility Wide. Permit Term (Describe requirements and cross-reference): 10.3B <u>Monitoring Requirements: Control of VOC Emissions.</u> The Permittee shall visually inspect all components on the premises for VOC leaks at least once each calendar month following the procedures specified in COMAR 26.11.19.16. [Reference: COMAR 26.11.19.16C(1)] Compliance Methods for the Above (Description and Citation): Verified for gas stations during quarterly inspections. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): Facility Wide. Permit Term (Describe requirements and cross-reference): 10.4A. <u>Record Keeping Requirements: Control of VOC Emissions.</u> The Permittee shall maintain: (1) Written descriptions of all “good operating practices” designed to minimize emissions of VOC from facility-wide operations. [Reference: COMAR 26.11.19.02I] (2) Records of all inspections conducted to determine the facility’s compliance status with regard to implementation of “good operating practices” designed to minimize emissions of VOC from facility-wide operations. The records shall include for each inspection the name of the inspector, the date and time of the inspection, and an account of the findings. [Reference: COMAR 26.11.03.06C] All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06C(5)(g)] Compliance Methods for the Above (Description and Citation):



GOP verified for permitted sources such as PSBs and gas stations during quarterly inspections, e.g., rags stored in closed containers, spray guns cleaned in closed equipment. Quarterly inspection records maintained for at least 5 years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Facility Wide.

Permit Term (Describe requirements and cross-reference):

10.4B. Record Keeping Requirements: Control of VOC Emissions.

The Permittee shall 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, a list of leaks by tag identification number and identity of components that cannot be repaired as required in this regulation because they are inaccessible, or that cannot be repaired during operation of the source. The log shall be made available to the Department upon request. Leak records, along with the log shall be maintained for a period of not less than 2 years from the date of their occurrence. **[Reference: COMAR 26.11.03.06C]**

All records must be maintained for a period of 5 years. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

Logs were verified for PSBs and gas stations during quarterly inspections. Logs not requested by the Department. Records are maintained for at least 5 years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Facility Wide.

Permit Term (Describe requirements and cross-reference):

10.5. Reporting Requirements: Control of VOC Emissions.

- A. Good operating practices information as required by COMAR 26.11.19.02I shall be made available to the Department upon request.
- B. Leak inspection logs as required by COMAR 26.11.19.16 shall be made available to the Department upon request.

Compliance Methods for the Above (Description and Citation):

GOP information and leak inspection logs not requested by the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

6.13 Insignificant Activities

INSIGNIFICANT ACTIVITIES

Emission Unit ID(s): Insignificant Activities (Exempt)

Permit Term (Describe requirements and cross-reference):

- (1) No. 44 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. See Table IV-4 for additional Requirements.

Compliance Methods for the Above (Description and Citation):

Periodic observations of visible emissions by DPW personnel during equipment operation.
Fuel supplier certifications are maintained by DPW - Environmental.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Insignificant Activities (Exempt)

Permit Term (Describe requirements and cross-reference):

- (2) No. 87 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 fuel burning 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 warmup 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. Compliance Methods for the Above (Description and Citation): Periodic observations of emissions by DPW personnel during equipment operation. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance Note: Emergency ZZZZ affected sources are required to have an oil and filter change every 500 hours of operation or annually, whichever comes first per 40 CFR §63.6603 and §63.6640. For this requirement there was intermittent compliance for stationary engines at buildings 3600A and 1043 during the reporting period. Status (Check one): ☒ Intermittent Compliance ☐ Continuous Compliance

6.14 State-Only Enforceable Conditions

STATE-ONLY ENFORCEABLE CONDITIONS Emission Unit ID(s): State Only Enforceable Conditions Permit Term (Describe requirements and cross-reference): 1.A. <u>Applicable Regulations</u>: 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 air pollution.” Compliance Methods for the Above (Description and Citation): Received no complaints nor have reason to believe that any emission created a nuisance or air pollution beyond the property line. Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance
Emission Unit ID(s): State Only Enforceable Conditions Permit Term (Describe requirements and cross-reference): 1.B. <u>Applicable Regulations</u>: COMAR 26.11.06.09 – Odors. “A person may not cause or permit the discharge into the atmosphere of gasses, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”



Compliance Methods for the Above (Description and Citation):

Received no complaints nor have reason to believe that there were any emissions of gasses, vapors or odors that created a nuisance or air pollution beyond the property line.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): State Only Enforceable Conditions

Permit Term (Describe requirements and cross-reference):

1.C. Applicable Regulations:

COMAR 26.11.15.05, which requires that the Permittee implement "Best Applicable Control Technology for Toxics" (T-BACT) to control emissions of toxic air pollutants.

Compliance Methods for the Above (Description and Citation):

Emissions sources subject to T-BACT requirements operate as permitted.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): State Only Enforceable Conditions

Permit Term (Describe requirements and cross-reference):

1.D. Applicable Regulations:

COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

Compliance Methods for the Above (Description and Citation):

Received no complaints nor have reason to believe that there were any emissions of toxic air pollutants that would endanger human health. Periodic internal air toxics compliance assessments are performed, the most recent two being "Toxic Air Pollutants Air Emissions Inventory and Compliance Demonstration for Aberdeen Proving Ground, April 2021" and "Hazardous Air Pollutants Air Emissions Inventory and Compliance Demonstration for Aberdeen Proving Ground, May 2021."

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance



Emission Unit ID(s): State Only Enforceable Conditions

Permit Term (Describe requirements and cross-reference):

2. 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.

Compliance Methods for the Above (Description and Citation):

A written certification of the results of an analysis of emissions of toxic air pollutants from the facility during the reporting year is included in the Annual Emissions Certification report. The Annual Emissions Certification report is submitted to the Department by April 1 of each year. A compliance demonstration for the emissions of toxic air pollutants (TAPs) was conducted in April 2021, and is considered to be valid. There have been no significant changes at APG Aberdeen Area in 2022 that would invalidate this demonstration.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

7 A-COMP Form Part C – Deviations from Permit Terms and Conditions

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

ALL OIL-FIRED BOILERS: SPACE HEATERS, PROCESS BOILERS, & NSPS BOILERS

Permit Term for Which There was a Deviation:

4.1 Applicable Standards/Limits: Control of HAPs: §63.11196 (a)(1) “If the existing affected boiler is subject to a work practice or management practice standard of a tune-up, you must achieve compliance with the work practice or management practice standard no later than March 21, 2014.”

4.1 Applicable Standards/Limits: Control of HAPs: §63.11201 (b) “You must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies to your boiler.”

Table 2 to Subpart JJJJJJ of Part 63 – Work Practice Standards, Emission Reduction Measures, and Management Practices:

If your boiler is in this subcategory	You must meet the following
12. Existing oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr	Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every 5 years as specified in §63.11223.

4.2 Testing Requirements: Control of HAPs. Continuous Compliance Requirements: §63.11223 “(a) For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to paragraph (b) of this section and keep records as required in §63.11225(c) to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.”

4.2 Testing Requirements: Control of HAPs. Continuous Compliance Requirements: §63.11223 (e) “Oil-fired boilers with a heat input capacity of equal to or less than 5 million Btu per hour must conduct a tune-up every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed oil-fired boiler with a heat input capacity of equal to or less than 5 million Btu per hour, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months.”

4.3. **Monitoring Requirements: Control of HAPs:** “The Permittee must operate and maintain, at all times, all affected sources, including air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.” **[Reference: 40 CFR §63.11205(a)]**

Emission Units (unit IDs): (All Oil-Fired Boilers: Space Heaters, Process Boilers, & NSPS Boilers)

EU 26-0896-A01: Deviation Start: 12/28/2020 00:00 End: 12/31/2022 23:59

The five-year tune-up for unit 0896-A01 (due December 28, 2020) has not been conducted. The unit is incorrectly classified as a 1.5 mmBTU JJJJJ Boiler. The unit is actually a radiant tube space heater. Since the unit is a radiant tube space heater and not a boiler, it is not subject to JJJJJ by definition and a request will be made to remove it from the Title V table IV – 1 Space Heating Boilers rated less than or equal to 5 MMBtu/hr constructed before June 4, 2010.

Subsequent tune-ups will be performed in accordance with DPW’s maintenance schedule.

Date Written Report Submitted: Not Applicable

Deviations for unit 26-0896-A01 previously reported in Q3Q4 SIXMON report but was inadvertently not included in the Q1Q2 SIXMON report.

NSPS BOILERS

Permit Term for Which There was a Deviation:

3.1C. Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.

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:

- (6) 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;
- (7) Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;
- (8) 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;
- (9) 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
- (10) 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 Methods for the Above (Description and Citation):

- (6) NSPS boilers are properly registered with the Department.
- (7) Verified by DPW-Environmental quarterly inspections. Combustion optimizations are performed once a year.
- (8) Results of the combustion analysis are maintained on site. Combustion analysis records have not been requested by the Department or EPA.

(9) Verified by reviewing training records. Combustion optimization training was completed in May 2022.

(10) Combustion optimization training program attendance records are maintained, but were not requested by the Department.

Emission Unit ID(s): (NSPS Boilers) See list of EU IDs for Permit Term 3.1A.

EU 0345-A01 Deviation Start: 12/07/2022 00:00 End: 12/31/2022 23:59

EU 4600-A06: Deviation Start: 12/02/2021 00:00 End: 12/06/2022 08:08

The annual combustion optimization for unit 345-A1 (due 7, December 2022) has not been conducted. A combustion optimization will be completed as soon as possible.

The annual combustion optimization for unit 4600-A06 (due 12 December 2021) had not been conducted, because the unit is offline. The unit was repaired and tuned up on December 6, 2022 prior to being put back into service.

Date Written Report Submitted: Not Applicable

Deviation previously reported in Q1Q2 and Q3Q4 SIXMON report.

GENERATORS/ENGINES SUBJECT TO NESHA SUBPART ZZZZ

Permit Term for Which There was a Deviation:

8 05b.1. Applicable Standards/Limits:

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

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

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

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

“As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:”

For each.	You must meet the following requirement, except during periods of startup.	During periods of startup you must.
3. Non-Emergency, non-black start CI stationary RICE > 500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or b. Reduce CO emissions by 70 percent or more.	



¹Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

²If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

5.b.3. Monitoring Requirements:

§63.6625 – What are my monitoring, installation, collection, operation, and maintenance requirements? (e) See A-COMP B. for the text of the permit term.

Emission Units (unit IDs): (Generators/Engines Subject to NESHAP Subpart ZZZZ) BSS-01 (9-0435), and LWE-01 thru 05 (9-0436)

EU BSS-01:	Deviation Start	<u>See Attachment 1</u>
	End	<u>See Attachment 1</u>
EU LWE-01 thru -05 (9-0436)	Deviation Start	<u>See Attachment 1</u>
	End	<u>See Attachment 1</u>

See Attachment 1 –Semiannual NESHAPS 40 CFR Part 63, Subpart ZZZZ Compliance Reports for a description of the BSS-01 (9-0435) and LWE-01 thru 05 (9-0436) deviations.

Date Written Report Submitted: Not Applicable
Previously reported in Q1Q2 and Q3Q4 SIXMON report.

SECTION V INSIGNIFICANT ACTIVITIES

(2) No. 87 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.

Stationary Internal Combustion Engines Subject to ZZZZ requirements under 40 CFR Part 63 Subpart ZZZZ for Stationary Compression Ignition Internal Combustion Engines

Permit Term for Which There was a Deviation:
Applicable Standards/Limits: Operational Limits.

“As stated in §63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions: 1. Emergency stationary CI RICE and black start stationary CI RICE – Change oil and filter every 500 hours of operation or annually, whichever comes first, and replace as necessary; and Inspect all hoses and belts

every 500 hours of operation or annually, whichever comes first, and replace as necessary.”

EU (N/A) Fire Pump 3600A (150HP) Deviation Start 10/08/2021 00:00 End 12/31/2022 23:59
EU (N/A) Fire Pump 1043-1 (288HP) Deviation Start Unknown 00:00 End 12/31/2022 23:59
EU (N/A) Fire Pump 1043-2 (288HP) Deviation Start Unknown 00:00 End 12/31/2022 23:59

Annual maintenance at these diesel powered pumps has not occurred due to a lapse in contractual coverage. Maintenance is being scheduled for Spring of 2023.

Date Written Report Submitted: Not Applicable
Previously reported in Q3Q4 SIXMON report.

ATMOSPHERIC BURNER AT HEAT ENGINE SYSTEM ALTITUDE TEST FACILITY (HESATF)

Permit Term for Which There was a Deviation:

9.1C. Applicable Standards/Limits: Control of Nitrogen Oxide Emissions.

COMAR 26.11.09.08E – Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 MMBtu/hr 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:

(2) Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;"

9.2C. Testing Requirements: Control of Nitrogen Oxide Emissions.

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

9.3C. Monitoring Requirements: Control of Nitrogen Oxide Emissions.

The Permittee shall optimize combustion based on the annual combustion analysis.

[Reference: COMAR 26.11.09.08E(2)]

Emission Units (unit IDs): Atmospheric Burner at HESATF (025-0081-4-0692)

Deviation Start 01/01/2022 23:59 End 12/31/2022 23:59

An annual combustion optimization has not been performed during this reporting period because there is no known method to conduct a combustion analysis on this bench scale device which most closely resembles a jet engine. Consideration is underway to remove this requirement from the Permit to Construct and the APG Aberdeen Area Title V Permit. This device is operated per the manufacturer's recommendations under the supervision of trained personnel to achieve the lab results required. This unit was not used in 2022.

Date Written Report Submitted: Not Applicable

Previously reported in Q3Q4 SIXMON report. Deviation inadvertently not included in SIXMON Q1Q2 report.



PLANT-WIDE

Permit Term for Which There was a Deviation:

Section III – 15. 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:

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

Emission Units (unit IDs): N/A – Building 4727 Trane Chiller + Building 4304 Trane Chiller

Deviation Start 07/22/2021 00:00 End 03/10/2022 23:59

R-22 service and maintenance log does not include the required annualized leakage rate % calculation. The repair logs have now been corrected to display the annualized % leak rate.

Date Written Report Submitted: Not Applicable
Previously reported in Q1Q2 SIXMON report.



Appendix A – Semiannual NESHAPS 40 CFR Part 63 Subpart ZZZZ Compliance Certification Reports

Semiannual Compliance Report

National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines 40 CFR Part 63, Subpart ZZZZ

Purpose of these Example Report Forms

You may use these example forms to meet the requirements for submitting the required semiannual reporting for engines subject to 40 CFR Part 63 Subpart ZZZZ. However, you are not required to use these example forms and may submit the information in another form or format.

Who is Required to Report Semiannually and May use this Example?

The following engines must submit semi-annual¹ reports under Subpart ZZZZ:

- Existing non-emergency, non-black start stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of hazardous air pollutants (HAP);
- Existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP;
- Existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP;
- Existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP;
- New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and
- New or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP
- Existing non-emergency 4-stroke engines >500 HP at area sources that are not in remote areas and that are used >24 hr/yr

Section I: Facility Information

Company Name:

Facility Physical Address:	Mailing Address (if different):
Bridge Simulator (BSS)	U.S. Army Aberdeen Proving Grounds
BSS-01	Bldg. 4304, 6504 Rodman Rd
APG, MD, 21005	

Reporting Period²: ☐ January 1 through June 30 ☒ July 1 through December 31, 2022

¹ Limited use engines with no deviations or malfunctions may submit only an annual report.

² Submittal must be postmarked no later than July 31st for the first semiannual period (January 1st through June 30th) and no later than January 31st for the second semiannual period (July 1 through December 31st).

Section II: Required Semiannual Report Information

1. Were there any malfunctions³ in the reporting period that "caused or may have caused any applicable emission limitation to be exceeded"?
☐ YES – For each engine, complete **Section IV** and provide supporting data.
☒ NO
2. Were there deviations⁴ from emission or operating limitations?
☒ YES – For each engine, complete **Section IV** and provide supporting data.
☐ NO
3. If you operate a Continuous Monitoring System (CMS), including CEMS and CPMS, was the CMS out-of-control, as specified in §63.8(c)(7)?
☐ YES – For each engine, complete **Section IV** and provide supporting data.
☒ NO

Section III: Certification

Based upon information and belief formed after a reasonably inquiry, I, as a responsible official of the above-mentioned facility, certify the information contained in this report is accurate and true to the best of my knowledge.

<u>Larry Birchfield</u>	<u>BIRCHFIELD.LARRY</u> <u>.DEAN.1241945878</u>	Digitally signed by BIRCHFIELD.LARRY.DEAN.124194587 8 Date: 2023.01.11 09:55:42 -05'00'
Responsible Official Name (Please Print)	Responsible Official Signature	
<u>ATC Environmental Division Chief</u>	<u>11 January 2023</u>	
Responsible Official Title	Date	

³ Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

⁴ Deviation means any instance in which the affected source fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation; fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart; fails to satisfy the general duty to minimize emission established by §63.6(e)(1)(i).

Section IV: Engine Malfunction or Deviation Information

(You are only required to provide the information in this Section IV if you had a malfunction or deviation in the report period.)

Engine ID or Description: BSS-01

Malfunctions

1. If the engine experienced a malfunction which caused or may have caused any applicable emission limitation to be exceeded, provide the following information in a written report using the Optional Log form or in any format that is convenient.
 - Number, duration, and a brief description for each type of malfunction which occurred during the reporting period.
 - Description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions, including actions taken to correct a malfunction.

Deviations from operating limits or emission limits

2. If the engine experienced deviation from an emission or operating limit, is the engine equipped with a Continuous Parameter Monitoring System (CPMS)?
☒ YES – go to #3 below ☐ NO – go to #4 below
3. If you are using a CPMS to demonstrate compliance and you checked “YES” to #2 above, for each deviation from an emission or operating limit, provide the following information using the Optional Log form or in a written report in any format that is convenient:
 - The date and time that each malfunction started and stopped.
 - The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
 - The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).
 - The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
 - A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

-
- A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period
 - An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE. A brief description of the stationary RICE.
 - A brief description of the CMS.
 - The date of the latest CMS certification or audit.
 - A description of any changes in CMS, processes, or controls since the last reporting period.
4. If you are not using a CPMS (selected “NO” for #2 above) and there were deviations from emission or operating limitations, include the following information in any format that is convenient.
- Total operating time of the engine monitored in the reporting period;
 - The number, duration and cause of each deviation and corrective action(s) to return the engine and any associated control device to normal operation.
5. For Compression Ignition engines > 300 HP and < 30 liters/cylinder displacement, was only ultra-low sulfur diesel fuel (ULSD at a maximum of 15 parts per million sulfur content) used in the engine?
- ☒ YES ☐ NO

To whom do I submit the semi-annual report?

- a. Submit the notification to the appropriate EPA Regional Office using the list below.
- b. In addition, if your State has been delegated⁵ the authority for this regulation under section 112(l) of the Clean Air Act, submit the notification to your State agency found at the following link:
www.epa.gov/ttn/atw/area/table_state_contacts.doc

EPA Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)

US Environmental Protection Agency
5 Post Office Square, Suite 100, Mail code: OES04-2,
Boston MA 02109-3912 Attention: Air Clerk

EPA Region II (New Jersey, New York, Puerto Rico, Virgin Islands)

Director, Division of Enforcement and Compliance Assistance
290 Broadway, New York, NY 10007-1866

EPA Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia)

Director, Air Protection Division, 1650 Arch Street, Philadelphia, PA 19103

EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Director, Air, Pesticides and Toxics Management Division
Atlanta Federal Center, 61 Forsyth Street, Atlanta, GA 30303-3104

EPA Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Director, Air and Radiation Division, 77 West Jackson Blvd., Chicago, IL 60604-3507

EPA Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, Texas)

Director, Air, Pesticides and Toxics, 1445 Ross Avenue, Dallas, TX 75202-2733

EPA Region VII (Iowa, Kansas, Missouri, Nebraska)

Director, Air and Waste Management Division, U.S. Environmental Protection Agency
901 N. 5th Street, Kansas City, KS 66101

EPA Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

Director, Air and Toxics Technical Enforcement Program, Office of Enforcement, Compliance and Environmental Justice, 1595 Wynkoop Street, Denver, CO 80202-1129

EPA Region IX (Arizona, California, Hawaii, Nevada, American Samoa, Guam)

Director, Air and Toxics Division, 75 Hawthorne Street, San Francisco, CA 94105

EPA Region X (Alaska, Idaho, Oregon, Washington)

Director, Office of Air, Waste and Toxics, 1200 6th Ave., Suite 900, AWT-107, Seattle, WA 98101

⁵ To determine whether your State has been delegated the authority for this regulation under section 112(l) of the Clean Air Act, contact your EPA Regional Office.

Part 63, Subpart ZZZZ Deviation and/or Malfunction Log (Optional Log)

Facility Name BSS-01
 Reporting Period (Check One): January-June ☒ July-December 2022
 Report Date: 1/11/23

Engine Description	CPMS Make/Model Certification Date Parameters Monitored ¹	Provide Description of Malfunctions, Deviations and Equipment Downtime along with Corrective / Preventive Actions/Causes, & Corresponding Date(s) / Time(s)
600 HP Detroit Diesel	Make/Model: DCL v2.4 cert date: 5/23/17 T ☐ other ☒ x	7/25/22-9/20/22 - The four hour rolling average for temperature did not meet minimum operation limits of 450 degrees F. The engine was not operated at a full load due to the assembly of a new test item. Corrective action is to educate operators on the importance of limiting running engines while not under load, when possible.
	Make/Model: cert date: / / T ☐ other ☐	Note: On 1/4/23, Emissions Compliance Testing was performed on the engine with passing results.
	Make/Model: cert date: / / T ☐ other ☐	
	Make/Model: cert date: / / T ☐ other ☐	

¹ indicate if CPMS monitors temperature (T) or other parameters
 Total Lapsed Time for all Malfunctions or Deviations in Reporting Period: 16.9 hrs
 Total Lapsed Time of CPMS Down Time in Reporting Period: 0
 Total Engine Operating Time in Reporting Period: 196.5 hrs

Semiannual Compliance Report

National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines 40 CFR Part 63, Subpart ZZZZ

Purpose of these Example Report Forms

You may use these example forms to meet the requirements for submitting the required semiannual reporting for engines subject to 40 CFR Part 63 Subpart ZZZZ. However, you are not required to use these example forms and may submit the information in another form or format.

Who is Required to Report Semiannually and May use this Example?

The following engines must submit semi-annual¹ reports under Subpart ZZZZ:

- Existing non-emergency, non-black start stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of hazardous air pollutants (HAP);
- Existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP;
- Existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP;
- Existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP;
- New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and
- New or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP
- Existing non-emergency 4-stroke engines >500 HP at area sources that are not in remote areas and that are used >24 hr/yr

Section I: Facility Information

Company Name:

Facility Physical Address:	Mailing Address (if different):
Undex Test Facility (UTF)	U.S. Army Aberdeen Proving Grounds
UTF-01	Bldg. 4304, 6504 Rodman Rd
APG, MD, 21005	

Reporting Period²: ☐ January 1 through June 30 ☒ July 1 through December 31, 2022

¹ Limited use engines with no deviations or malfunctions may submit only an annual report.

² Submittal must be postmarked no later than July 31st for the first semiannual period (January 1st through June 30th) and no later than January 31st for the second semiannual period (July 1 through December 31st).

Section II: Required Semiannual Report Information

1. Were there any malfunctions³ in the reporting period that "caused or may have caused any applicable emission limitation to be exceeded"?
☐ YES – For each engine, complete **Section IV** and provide supporting data.
☒ NO
2. Were there deviations⁴ from emission or operating limitations?
☒ YES – For each engine, complete **Section IV** and provide supporting data.
☐ NO
3. If you operate a Continuous Monitoring System (CMS), including CEMS and CPMS, was the CMS out-of-control, as specified in §63.8(c)(7)?
☐ YES – For each engine, complete **Section IV** and provide supporting data.
☒ NO

Section III: Certification

Based upon information and belief formed after a reasonably inquiry, I, as a responsible official of the above-mentioned facility, certify the information contained in this report is accurate and true to the best of my knowledge.

<u>Larry Birchfield</u>	BIRCHFIELD.LARRY. DEAN.1241945878 Digitally signed by BIRCHFIELD.LARRY.DEAN.12419458 78 Date: 2023.01.11 10:00:53 -05'00'
Responsible Official Name (Please Print)	Responsible Official Signature
<u>ATC Environmental Division Chief</u>	<u>11 January 2023</u>
Responsible Official Title	Date

³ Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

⁴ Deviation means any instance in which the affected source fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation; fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart; fails to satisfy the general duty to minimize emission established by §63.6(e)(1)(i).

Section IV: Engine Malfunction or Deviation Information

(You are only required to provide the information in this Section IV if you had a malfunction or deviation in the report period.)

Engine ID or Description: UTF-01

Malfunctions

1. If the engine experienced a malfunction which caused or may have caused any applicable emission limitation to be exceeded, provide the following information in a written report using the Optional Log form or in any format that is convenient.
 - Number, duration, and a brief description for each type of malfunction which occurred during the reporting period.
 - Description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions, including actions taken to correct a malfunction.

Deviations from operating limits or emission limits

2. If the engine experienced deviation from an emission or operating limit, is the engine equipped with a Continuous Parameter Monitoring System (CPMS)?
☒ YES – go to #3 below ☐ NO – go to #4 below
3. If you are using a CPMS to demonstrate compliance and you checked “YES” to #2 above, for each deviation from an emission or operating limit, provide the following information using the Optional Log form or in a written report in any format that is convenient:
 - The date and time that each malfunction started and stopped.
 - The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
 - The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).
 - The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
 - A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

-
- A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period
 - An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE. A brief description of the stationary RICE.
 - A brief description of the CMS.
 - The date of the latest CMS certification or audit.
 - A description of any changes in CMS, processes, or controls since the last reporting period.
4. If you are not using a CPMS (selected “NO” for #2 above) and there were deviations from emission or operating limitations, include the following information in any format that is convenient.
- Total operating time of the engine monitored in the reporting period;
 - The number, duration and cause of each deviation and corrective action(s) to return the engine and any associated control device to normal operation.
5. For Compression Ignition engines > 300 HP and < 30 liters/cylinder displacement, was only ultra-low sulfur diesel fuel (ULSD at a maximum of 15 parts per million sulfur content) used in the engine?
- ☒ YES ☐ NO

To whom do I submit the semi-annual report?

- a. Submit the notification to the appropriate EPA Regional Office using the list below.
- b. In addition, if your State has been delegated⁵ the authority for this regulation under section 112(l) of the Clean Air Act, submit the notification to your State agency found at the following link:
www.epa.gov/ttn/atw/area/table_state_contacts.doc

EPA Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)

US Environmental Protection Agency
5 Post Office Square, Suite 100, Mail code: OES04-2,
Boston MA 02109-3912 Attention: Air Clerk

EPA Region II (New Jersey, New York, Puerto Rico, Virgin Islands)

Director, Division of Enforcement and Compliance Assistance
290 Broadway, New York, NY 10007-1866

EPA Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia)

Director, Air Protection Division, 1650 Arch Street, Philadelphia, PA 19103

EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Director, Air, Pesticides and Toxics Management Division
Atlanta Federal Center, 61 Forsyth Street, Atlanta, GA 30303-3104

EPA Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Director, Air and Radiation Division, 77 West Jackson Blvd., Chicago, IL 60604-3507

EPA Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, Texas)

Director, Air, Pesticides and Toxics, 1445 Ross Avenue, Dallas, TX 75202-2733

EPA Region VII (Iowa, Kansas, Missouri, Nebraska)

Director, Air and Waste Management Division, U.S. Environmental Protection Agency
901 N. 5th Street, Kansas City, KS 66101

EPA Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

Director, Air and Toxics Technical Enforcement Program, Office of Enforcement, Compliance and Environmental Justice, 1595 Wynkoop Street, Denver, CO 80202-1129

EPA Region IX (Arizona, California, Hawaii, Nevada, American Samoa, Guam)

Director, Air and Toxics Division, 75 Hawthorne Street, San Francisco, CA 94105

EPA Region X (Alaska, Idaho, Oregon, Washington)

Director, Office of Air, Waste and Toxics, 1200 6th Ave., Suite 900, AWT-107, Seattle, WA 98101

⁵ To determine whether your State has been delegated the authority for this regulation under section 112(l) of the Clean Air Act, contact your EPA Regional Office.

Part 63, Subpart ZZZZ Deviation and/or Malfunction Log (Optional Log)

Facility Name UTF-01
 Reporting Period (Check One): January-June ☒ July-December 2022
 Report Date: 1/11/23

Engine Description	CPMS Make/Model Certification Date Parameters Monitored ¹	Provide Description of Malfunctions, Deviations and Equipment Downtime along with Corrective / Preventive Actions/Causes, & Corresponding Date(s) / Time(s)
500 HP Cummins VTA	Make/Model: DCL v2.4 cert date: 5/23/17 T ☐ other ☒ x	11/12, 12/16, 12/17, 12/18 - The four hour rolling average for temperature did not meet minimum operation limits of 450 degrees F. The engine was not operated at a full load due to maintenance of a test item. Corrective action is to educate operators on the importance of limiting running engines while not under load, when possible.
	Make/Model: cert date: / / T ☐ other ☐	
	Make/Model: cert date: / / T ☐ other ☐	
	Make/Model: cert date: / / T ☐ other ☐	

¹ Indicate if CPMS monitors temperature (T) or other parameters
 Total Lapsed Time for all Malfunctions or Deviations in Reporting Period: 4 hrs
 Total Lapsed Time of CPMS Down Time in Reporting Period: 0
 Total Engine Operating Time in Reporting Period: 8.12 hrs

Semiannual Compliance Report

National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines 40 CFR Part 63, Subpart ZZZZ

Purpose of these Example Report Forms

You may use these example forms to meet the requirements for submitting the required semiannual reporting for engines subject to 40 CFR Part 63 Subpart ZZZZ. However, you are not required to use these example forms and may submit the information in another form or format.

Who is Required to Report Semiannually and May use this Example?

The following engines must submit semi-annual¹ reports under Subpart ZZZZ:

- Existing non-emergency, non-black start stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of hazardous air pollutants (HAP);
- Existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP;
- Existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP;
- Existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP;
- New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and
- New or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP
- Existing non-emergency 4-stroke engines >500 HP at area sources that are not in remote areas and that are used >24 hr/yr

Section I: Facility Information

Company Name:

Facility Physical Address:	Mailing Address (if different):
Littoral Warfare Environment (LWE)	U.S. Army Aberdeen Proving Grounds
Engines #1-#5	Bldg. 4304, 6504 Rodman Rd
APG, MD, 21005	

Reporting Period²: ☐ January 1 through June 30 ☒ July 1 through December 31, 2022

¹ Limited use engines with no deviations or malfunctions may submit only an annual report.

² Submittal must be postmarked no later than July 31st for the first semiannual period (January 1st through June 30th) and no later than January 31st for the second semiannual period (July 1 through December 31st).

Section II: Required Semiannual Report Information

1. Were there any malfunctions³ in the reporting period that "caused or may have caused any applicable emission limitation to be exceeded"?
☐ YES – For each engine, complete **Section IV** and provide supporting data.
☒ NO
2. Were there deviations⁴ from emission or operating limitations?
☒ YES – For each engine, complete **Section IV** and provide supporting data.
☐ NO
3. If you operate a Continuous Monitoring System (CMS), including CEMS and CPMS, was the CMS out-of-control, as specified in §63.8(c)(7)?
☐ YES – For each engine, complete **Section IV** and provide supporting data.
☒ NO

Section III: Certification

Based upon information and belief formed after a reasonably inquiry, I, as a responsible official of the above-mentioned facility, certify the information contained in this report is accurate and true to the best of my knowledge.

<u>Larry Birchfield</u> Responsible Official Name (Please Print)	BIRCHFIELD.LARRY .DEAN.1241945878 Digitally signed by BIRCHFIELD.LARRY.DEAN.124194587 8 Date: 2023.01.11 10:01:43 -05'00' <u>11 January 2023</u> Responsible Official Signature
<u>ATC Environmental Division Chief</u> Responsible Official Title	 Date

³ Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

⁴ Deviation means any instance in which the affected source fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation; fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart; fails to satisfy the general duty to minimize emission established by §63.6(e)(1)(i).

Section IV: Engine Malfunction or Deviation Information

(You are only required to provide the information in this Section IV if you had a malfunction or deviation in the report period.)

Engine ID or Description: LWE Engines #1-#5

Malfunctions

1. If the engine experienced a malfunction which caused or may have caused any applicable emission limitation to be exceeded, provide the following information in a written report using the Optional Log form or in any format that is convenient.
 - Number, duration, and a brief description for each type of malfunction which occurred during the reporting period.
 - Description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions, including actions taken to correct a malfunction.

Deviations from operating limits or emission limits

2. If the engine experienced deviation from an emission or operating limit, is the engine equipped with a Continuous Parameter Monitoring System (CPMS)?
☒ YES – go to #3 below ☐ NO – go to #4 below
3. If you are using a CPMS to demonstrate compliance and you checked “YES” to #2 above, for each deviation from an emission or operating limit, provide the following information using the Optional Log form or in a written report in any format that is convenient:
 - The date and time that each malfunction started and stopped.
 - The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
 - The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).
 - The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
 - A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

-
- A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period
 - An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE. A brief description of the stationary RICE.
 - A brief description of the CMS.
 - The date of the latest CMS certification or audit.
 - A description of any changes in CMS, processes, or controls since the last reporting period.
4. If you are not using a CPMS (selected “NO” for #2 above) and there were deviations from emission or operating limitations, include the following information in any format that is convenient.
- Total operating time of the engine monitored in the reporting period;
 - The number, duration and cause of each deviation and corrective action(s) to return the engine and any associated control device to normal operation.
5. For Compression Ignition engines > 300 HP and < 30 liters/cylinder displacement, was only ultra-low sulfur diesel fuel (ULSD at a maximum of 15 parts per million sulfur content) used in the engine?
- ☒ YES ☐ NO

To whom do I submit the semi-annual report?

- a. Submit the notification to the appropriate EPA Regional Office using the list below.
- b. In addition, if your State has been delegated⁵ the authority for this regulation under section 112(l) of the Clean Air Act, submit the notification to your State agency found at the following link:
www.epa.gov/ttn/atw/area/table_state_contacts.doc

EPA Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)

US Environmental Protection Agency
5 Post Office Square, Suite 100, Mail code: OES04-2,
Boston MA 02109-3912 Attention: Air Clerk

EPA Region II (New Jersey, New York, Puerto Rico, Virgin Islands)

Director, Division of Enforcement and Compliance Assistance
290 Broadway, New York, NY 10007-1866

EPA Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia)

Director, Air Protection Division, 1650 Arch Street, Philadelphia, PA 19103

EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Director, Air, Pesticides and Toxics Management Division
Atlanta Federal Center, 61 Forsyth Street, Atlanta, GA 30303-3104

EPA Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Director, Air and Radiation Division, 77 West Jackson Blvd., Chicago, IL 60604-3507

EPA Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, Texas)

Director, Air, Pesticides and Toxics, 1445 Ross Avenue, Dallas, TX 75202-2733

EPA Region VII (Iowa, Kansas, Missouri, Nebraska)

Director, Air and Waste Management Division, U.S. Environmental Protection Agency
901 N. 5th Street, Kansas City, KS 66101

EPA Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

Director, Air and Toxics Technical Enforcement Program, Office of Enforcement, Compliance and Environmental Justice, 1595 Wynkoop Street, Denver, CO 80202-1129

EPA Region IX (Arizona, California, Hawaii, Nevada, American Samoa, Guam)

Director, Air and Toxics Division, 75 Hawthorne Street, San Francisco, CA 94105

EPA Region X (Alaska, Idaho, Oregon, Washington)

Director, Office of Air, Waste and Toxics, 1200 6th Ave., Suite 900, AWT-107, Seattle, WA 98101

⁵ To determine whether your State has been delegated the authority for this regulation under section 112(l) of the Clean Air Act, contact your EPA Regional Office.

No Deviations Statement

There were no deviations from emissions or operating limitations during this reporting period for LWE Engines #1, 2, 4, and 5.

Part 63, Subpart ZZZZ Deviation and/or Malfunction Log (Optional Log)

Facility Name LWE Engine #3
 Reporting Period (Check One): January-June ☒ July-December 2022
 Report Date: 1/11/23

Engine Description	CPMS Make/Model Certification Date Parameters Monitored ¹	Provide Description of Malfunctions, Deviations and Equipment Downtime along with Corrective / Preventive Actions/Causes, & Corresponding Date(s) / Time(s)
550 HP Detroit Diesel	Make/Model: DCL v2.4 cert date: 5/23/17 T ☒ other ☒	7/19/22 - The four hour rolling average was not correctly calculating the average instantaneous temperatures, causing the four hour rolling average to be above 1350 degrees F. Corrective action is to execute a contract to have the CPMS inspected by a company and verified that it is working properly.
	Make/Model: cert date: / / T ☐ other ☐	
	Make/Model: cert date: / / T ☐ other ☐	
	Make/Model: cert date: / / T ☐ other ☐	

¹ Indicate if CPMS monitors temperature (T) or other parameters
 Total Lapsed Time for all Malfunctions or Deviations in Reporting Period: 3.15 hrs
 Total Lapsed Time of CPMS Down Time in Reporting Period: 0
 Total Engine Operating Time in Reporting Period: 5.05 hrs