COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Maria R. Nold
Regional Director

DRAFT Date: September 7, 2016

Ms. Kristen K. Poultney
Head, Standard Practice and Environmental Engineering Branch
NASA Langley Research Center
Building 1195, Room 2034A
Mail Stop 133
Hampton, Virginia 23681-2199

Location: Hampton
Registration No.: 60051

Dear Ms. Poultney:

Attached is a significant amendment to your state operating permit dated May 17, 2013 to operate an Aeronautical Research Facility in accordance with the provisions of the Virginia Regulations for the Control and Abatement of Air Pollution. This amended permit supersedes your permit dated May 17, 2013.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and/or civil charges. Please read all permit conditions carefully.

The Department of Environmental Quality (DEQ) deemed the application complete on August 16, 2016, and has determined that the application meets the requirements of 9VAC5-80-990 A for a significant amendment to a state operating permit. The Department solicited written public comments by placing a newspaper advertisement in the Daily Press newspaper on Tuesday, September 13, 2016. The required comment period, provided by 9VAC5-80-1170 D, expired on Thursday, October 13, 2016.

This permit approval to operate shall not relieve NASA Langley Research Center of the responsibility to comply with all other local, state, and federal permit regulations.

The proposed generators may be subject to 40 CFR 63, Maximum Achievable Control Technology, (MACT) Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* and 40 CFR 60, New Source Performance Standards (NSPS), Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*. Virginia has not accepted delegation of this rule. In summary, the units are required to comply with certain federal emission standards and operating limitations. The Department of Environmental Quality (DEQ) advises you to review the referenced MACT and NSPS to ensure compliance with applicable emission and operational limitations. As the owner/operator you are also responsible for any monitoring, notification, reporting and recordkeeping requirements of the MACT and NSPS. Notifications shall be sent to EPA, Region III.

The facility may also be subject to 40 CFR 63, Maximum Achievable Control Technology, (MACT) Subpart CCCCCC, *National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities*, 40 CFR 63, Maximum Achievable Control Technology, (MACT) Subpart JJJJJJ, *National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* and 40 CFR 60, New Source Performance Standards (NSPS), Subpart JJJJ, *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*. Virginia has not accepted delegation of these rules. In summary, the facility is required to comply with certain federal emission standards and operating limitations. The Department of Environmental Quality (DEQ) advises you to review the referenced MACT and NSPS regulations to ensure compliance with applicable emission and operational limitations. As the owner/operator you are also responsible for any monitoring, notification, reporting and recordkeeping requirements of the MACT and NSPS. Notifications shall be sent to EPA, Region III.

To review any federal rules referenced in the above paragraph or in the attached permit, the US Government Publishing Office maintains the text of these rules at **www.ecfr.gov**, Title 40, Part 60 and 63.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
PO Box 1105
Richmond, VA 23218-1105

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact Ms. Laura D. Corl at (757) 518-2178 or by email at **laura.corl@deq.virginia.gov**.

Sincerely,

Wayne H. Franklin
Regional Air Permits Manager

WHF/LDC/60051_019_16_SOPsigamd_NASALaRC.docx

Attachments: Permit

cc: Manager, Data Analysis (electronic file submission)
Chief, Air Enforcement Branch (3AP13), U.S. EPA, Region III (electronic file submission)
Manager/Inspector, Air Compliance

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ARTICLE 5 – STATE OPERATING PERMIT
STATIONARY SOURCE PERMIT TO OPERATE
This permit includes designated equipment subject to
New Source Performance Standards (NSPS).

This permit supersedes your permit dated May 17, 2013.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

NASA Langley Research Center
1 Langley Boulevard, Mail Stop 136
Hampton, Virginia 23681
Registration No.: 60051

is authorized to operate

an Aeronautical Research Facility

located at

Langley Research Center
Hampton, Virginia

in accordance with the Conditions of this permit.

Approved on: **DRAFT Date**.

Maria R. Nold

DRAFT Date
Signature Date

Permit consists of 20 pages.
Permit Conditions 1 to 51.

INTRODUCTION

This permit approval is based on the permit application dated January 10, 1993, July 27, 1993, June 23, 1994, April 11, 1996, January 31, 1997, May 8, 1998, January 14, 2000, October 31, 2008, and April 4, 2016, including amendment information dated February 26, 1993, April 22, 1993, October 28, 1993, February 4, 1997, October 15, 1998, December 7, 1998, February 26, 1999, April 22, 1999, March 23, 2000, June 26, 2000, August 26, 2002, July 7, 2004, July 9, 2004, October 5, 2004, October 6, 2005, November 4, 2005, October 4, 2006, October 17, 2007, February 26, 2010, March 31, 2010, and June 26, 2012 and supplemental information dated January 11, 2007, February 2, 2007, and March 20, 2007, March 18, 2013, March 21, 2013, April 15, 2013, and August 16, 2016. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9VAC5-10-20 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9VAC5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

EQUIPMENT LIST

Equipment to be Constructed:				
Reference No.	**Equipment Description**	**Rated Capacity**	**Federal Requirements**	**Original Permit Date**
CWO - Center-wide Diesel-fueled Generators and Fire Pumps				
CG-CRF1, 2, 3	Three (3) Kohler, 1750REOZMD emergency generators with Mitsubishi S16R-Y2PTAW2-1 engines	2923 BHP, each	NSPS Subpart IIII MACT Subpart ZZZZ	This permit

Equipment permitted prior to the date of this permit				
Reference No.	**Equipment Description**	**Rated Capacity**	**Federal Requirements**	**Original Permit Date**
Conventional Combustion Units (Boilers/Heaters/Burners)				
1221	Propane fired sudden expansion burners (bldg. 1221)	-	-	8/15/1994
NB-1	Nebraska Boiler	59 MMBtu/hr	NSPS Subpart Dc MACT Subpart 6J	8/13/2012
647	Two (2) Cleaver-Brooks boilers	14.645 MMBTU/hr, each	NSPS Subpart Dc	9/18/1996
H-G, H-O	Center-wide natural gas, distillate oil or propane fired external combustion units (list updated by February 15th each year)	Less than 10 MMBTU/hr each	-	7/26/1999, and updated on 1/3/2005
1275	Wind Tunnel, natural gas fired heaters	26.947 MMBtu/hr	--	11/1/2001

Equipment permitted prior to the date of this permit				
Reference No.	**Equipment Description**	**Rated Capacity**	**Federal Requirements**	**Original Permit Date**
1215	NASA LaRC Steam Plant: Three (3) natural gas/distillate oil fired Babcock & Wilcox boilers	1 at 120 MMBtu/hr and 2 at 168 MMBtu/hr	-	7/26/1999
Research Sources (includes research models and test articles that are being tested in any of the following facilities)				
HyMETS	Hypersonic Materials Environmental Test Systems	-	-	12/21/2007
1236	Four (4) burners (bldg. 1236)	50 MMBTU/hr each		3/13/1997
HTT	NASA-built 8-foot high temperature tunnel	-	-	7/26/1999
STF	Scramjet test facility	-	-	7/26/1999
CHSTF	Combustion heated scramjet test facility	-	-	1/3/2001
DCSCTF	Direct-connect supersonic combustion test facility	-	-	1/3/2001
Center-wide Diesel-fueled Generators and Fire Pumps				
CG-DSL	Center-wide diesel-fueled generators and fire pumps (list updated by February 15th each year, list shall indicate which units are subject to NSPS Subpart IIII)	-	NSPS Subpart IIII (for newer units) & MACT Subpart ZZZZ	7/26/1999
CG-NG	Center-wide natural gas fired generators (list updated by February 15th each year, list shall indicate which units are subject to NSPS Subpart JJJJ)	-	NSPS Subpart JJJJ (for newer units) & MACT Subpart ZZZZ	This permit
Center-wide Paint Booths				
CPB	Center-wide paint booths (list updated by February 15th each year)	-	-	7/26/1999
Miscellaneous Sources				
CDG1	Center-wide degreaser/parts washing units	-	-	7/26/1999
CTanks	Center-wide gasoline storage tanks	-	MACT Subpart CCCCCC	7/26/1999
Wax Furnace	Investment casting wax burn-out furnace	-	-	10/25/1993
Prepreg	Tape prepregging machine	-	NSPS Subpart VVV	8/22/2002
MWWA	Miscellaneous wood working activities (discharging particulate emissions inside building)	-	-	This permit
MABA	Miscellaneous abrasive blast booths (discharging particulate emissions inside building)	-	-	This permit
MMCA	Miscellaneous metal cutting activities (discharging particulate emissions to the atmosphere)	-	-	This permit
MWTE	Miscellaneous wind tunnel experiments	-	-	This permit

Specifications included in the above tables are for informational purposes only and do not form enforceable terms or conditions of the permit.

1. **VOC Work Practice Standards** – At all times the disposal of volatile organic compounds shall be accomplished by taking measures, to the extent practicable, consistent with air pollution control practices for minimizing emissions. Volatile organic compounds shall not be intentionally spilled, discarded in sewers which are not connected to a treatment plant, or stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution practices for minimizing emissions.
   (9VAC5-50-20 F and 9VAC5-80-850)

2. **Fuel Specifications -** The distillate oil, diesel fuel, propane, jet propellants, and rocket propellant (RP-1) shall meet the specifications below:

   DISTILLATE OIL which meets the ASTM D396 specification for numbers 1 or 2 fuel oil or the ASTM D975 specification for grades 1 or 2 diesel fuel oil.

   Maximum sulfur content per shipment: 0.12%

   DIESEL FUEL which meets the ASTM D975 specification for Grades 1 or 2 diesel fuel.

   Maximum sulfur content per shipment: 0.0015%

   JET PROPELLANTS shall meet military specifications.

   Maximum sulfur content: 0.3%

   ROCKET PROPELLANT (RP-1) shall meet military specifications.

   Maximum sulfur content: 0.003%

   (9VAC5-80-1180 and 9VAC5-80-850)

3. **Fuel Certification -** The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil and diesel fuel. Each fuel supplier certification shall include the following:

   a. The name of the fuel supplier;

   b. The date on which the distillate oil or diesel fuel was received;

   c. The quantity of distillate oil or diesel fuel delivered in the shipment;

   d. A statement that the distillate oil complies with the American Society for Testing and Materials specifications (ASTM) D396 for numbers 1 or 2 fuel oil, and

   e. A statement that the diesel fuel complies with the American Society for Testing and Materials specifications ASTM D975 for diesel fuel.

   Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 0. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
   (9VAC5-80-1180, 9VAC5-80-850, 9VAC5-80-900, and 9VAC5-50-410)

4. **Visible Emission Limits** - Visible emissions from the permitted emission units shall be subject to the following opacity limits as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

Unit Reference No.	Visible Emissions shall not exceed (% opacity)	Except during one six-minute period in any one hour in which visible emissions shall not exceed (% opacity)
Conventional Combustion Units		
1221, 647, NB-1	10	20
H-O, H-G, 1275	20	30
1215	20	60
Research Sources		
1236, DCSCTF	10	20
STF	20	30
HTT	20	60
Center-wide Generators / Fire Pumps		
CG-CRF	10	20
CG-DSL	20	30
CG-NG	5	10
Center-wide Paint Booths		
CPB	5	10
Miscellaneous Sources		
Wax Furnace	5	20
MWWA	20	30
MABA	20	30
MMCA	20	30
MWTE	20	30

(9VAC5-80-1180, 9VAC5-50-80, 9VAC5-50-260, and 9VAC5-50-410)

Conventional Combustion Units (CCU)

5. **Fuel** - The approved fuel for the Cleaver Brooks boilers (Unit Ref. No. 647) and the Babcock and Wilcox boilers (Unit Ref. No. 1215) is natural gas. During periods of gas curtailment, and other periods as defined by 40 CFR 63.11237 (definition of gas-fired boiler), these boilers are approved to fire distillate oil. The approved fuels for Nebraska boiler (Unit Ref. No. NB-1) are natural gas and distillate oil. The approved fuels for all other conventional combustion units are distillate oil, natural gas, jet propellants, rocket propellant (RP-1), and liquid petroleum gas (including propane and butane). A change in the fuel may require a permit to modify and operate.
(9VAC5-80-1180 and 9VAC5-80-850)

6. **Fuel Throughput** - The following units shall consume no more than the listed throughput limit for each fuel annually:

Unit Ref. Nos.	Natural Gas (NG) Throughput Limit	NG Combined Throughput
B647-CB1, CB2 and B1215-NB-1	-	1033.0 MMscf
All other CCU equipment	776.9 MMscf	

Unit Ref. No.	Distillate Oil Combined Throughput (Including Jet and Rocket Propellants)
All CCU equipment (highest emission factors chosen for most conservative permit limits)	1130.5 1000 gallons

Unit Ref. No.	Liquid Petroleum Gas (Including Propane and Butane) Combined Throughput
All CCU equipment	319 1000 gallons

These throughputs shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-1180 and 9VAC5-80-850)

7. **Emission Controls** – Nitrogen Oxide (NO_x) emissions from each Cleaver Brooks boiler (Unit Ref. No. 647) shall be controlled by flue gas recirculation. Nitrogen Oxide (NO_x) emissions from each Babcock & Wilcox boiler (Unit Ref. No. 1215) and the Nebraska (59 million BTU/hr) boiler (Unit Ref. No. NB-1) shall be controlled by flue gas recirculation and low NO_x burners. The boilers shall be provided with adequate access for inspection.
(9VAC5-80-1180, 9VAC5-80-850, and 9VAC5-50-260)

8. **CCU Emission Limits** - Emissions from the operation of the conventional combustion units shall not exceed the limits specified below:

Particulate Matter (PM) (including condensable PM)	6.0	tons/yr
PM-10	5.4	tons/yr
PM 2.5	5.2	tons/yr
Sulfur Dioxide	10.0	tons/yr
Nitrogen Oxides (as NO_2)	56.3	tons/yr
Carbon Monoxide	47.4	tons/yr
Volatile Organic Compounds	3.0	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 2 and 5-7.
(9VAC5-80-1180, 9VAC5-50-260, and 9VAC5-80-850)

9. **Visible Emission Observation** - The permittee shall perform a monthly visual emissions observation on the Nebraska Boiler stack during normal operating conditions and daylight hours, only when combusting distillate oil, to determine compliance with the opacity standard. If such visual observation indicates any visible emissions, the permittee shall take corrective action to correct the cause of the opacity. If such corrective action fails to eliminate visible emissions, the permittee shall conduct a visible emissions evaluation (VEE) using 40 CFR Part 60, Appendix A, Method 9 for six minutes. If the six minute VEE opacity average exceeds 5%, the VEE shall continue for an additional 12 minutes. If any of the six minute averages during the 18 minutes exceeds 10%, the VEE shall continue for one hour from initiation on the stack to determine compliance with the opacity limit. Records of visual observations shall include the following: the name of the observer, the date and time of the observation, identification of the stack, and indication of the presence or absence of visible emissions, the duration of any visible emission incident, and any corrective action to eliminate visible emissions. If a VEE is conducted, records shall be maintained in accordance with Method 9 (40 CFR 60, Appendix A).
(9VAC5-80-1180 D, 9VAC5-50-400, and 9VAC5-50-410)

10. **Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, the boilers, 647-CB1, CB2 and 1215-NB-1 shall be operated in compliance with the requirements of 40 CFR 60, Subpart Dc.
(9VAC5-80-1180, 9VAC5-50-400, and 9VAC5-50-410)

Research Sources

11. **Fuel** - The approved fuel for the four burners (Unit Ref. No. 1236) is natural gas. The approved fuel for the High Temperature Tunnel combustor (Unit Ref. No. HTT) is methane and natural gas. The approved fuels for all other research sources are natural gas, methane, hydrogen, ethylene, jet propellant and rocket propellant (RP-1). A change in the fuel may require a permit to modify and operate.
(9VAC5-80-850)

12. **Fuel Throughput** - The four burners (Unit Ref. No. 1236) combined, shall consume no more than 40 million cubic feet of natural gas per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

13. **Operating Limit** - The following processes/equipment shall be limited to the operating limits listed below:

Unit Ref. No.	Description	Operating Limits	
HTT	High Temperature Tunnel	10,000	seconds/yr
STF	Scramjet Test Facility	65,520	pounds heated air/yr
CHSTF	Combustion Heated Scramjet Test Facility	3,000	runs/yr
DCSCTF	Direct-Connect Supersonic Combustion Test Facility	3,000	runs/yr
HyMETS	Hypersonic Materials Environmental Test System This limit applies to “air mode” operation only.	525	hours/yr

These limits shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

14. **Process Emission Limits** - Emissions from the operation of the processes listed in Conditions 12 and 13 shall not exceed the limits specified below:

Nitrogen Oxides (as NO_2)	22.1	tons/yr
Carbon Monoxide	9.2	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 2 and 11-13.
(9VAC5-80-850)

Center-wide Generators and Fire Pumps (Unit Ref. Nos. CG-CRF, CG-DSL, CG-NG)

15. **Fuel** - The approved fuels for the center-wide generators and fire pumps (Unit Ref. Nos. CG-CRF, CG-DSL, and CG-NG) are diesel fuel and natural gas. A change in the fuels may require a permit to modify and operate.
(9VAC 5-80-850)

16. **Fuel Throughput** - The center-wide generators and fire pumps (Unit Ref. Nos. CG-CRF, CG-DSL, and CG-NG) shall consume no more than the following:

Unit Ref No.	Throughput Limit	Combined Throughput
CG-CRF	-	50,000 gallons/year
CG-DSL	36,000 gallons/year	
CG-NG	1.046 Million cubic feet/year	N/A

These throughputs shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

17. **Process Emission Limits** - Emissions from the operation of the diesel fired center-wide generators and fire pumps (Unit Ref. Nos. CG-CRF and CG-DSL), combined, shall not exceed the limits specified below:

Particulate Matter (PM) (including condensable PM)	0.8	tons/yr
PM-10	0.8	tons/yr
PM 2.5	0.8	tons/yr
Nitrogen Oxides (as NO_2)	11.9	tons/yr
Carbon Monoxide	2.5	tons/yr
Volatile Organic Compounds	1.0	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 2, 15, and 16.
(9VAC5-80-1180)

18. **Process Emission Limits** - Emissions from the operation of the natural gas fired center-wide generators (Unit Ref. No. CG-NG), combined, shall not exceed the limits specified below:

Nitrogen Oxides (as NO_2)	1.2	tons/yr
Carbon Monoxide	2.0	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 15 and 16.
(9VAC5-80-1180)

Center-wide Paint Booths (Unit Ref. No. CPB)

19. **Emission Controls** – Particulate matter (PM) emissions from all paint spray booths shall be controlled by paint filters. The filters shall be provided with adequate access for inspection and shall be in operation when the spray booths are operating.
(9VAC5-80-850)

20. **Throughput** - The throughput of coatings, as applied, for the paint spray booths and designated paint areas shall not exceed 3,500 gallons per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

21. **Throughput** - The throughput of aluminum oxide for spray booths performing thermal spray operations shall not exceed 0.55 ton per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

22. **Process Emission Limits** - Emissions from the operation of the center-wide paint booths (Unit Ref. No. CPB) shall not exceed the limits specified below:

Particulate Matter (PM)	0.8	tons/yr
PM-10	0.8	tons/yr
Volatile Organic Compounds	11.6	tons/yr
Any Individual Hazardous Air Pollutant	5.4	tons/yr
Total of All Hazardous Air Pollutants	15.5	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 19-21.
(9VAC5-80-850)

Miscellaneous Sources

23. **Emission Controls** – Each solvent metal cleaning degreaser/parts washing unit (Unit Ref. No. CDG1) shall operate in compliance with 9VAC5 Chapter 40, Part II, Article 24 (Rule 4-24), Emission Standards for Solvent Metal Cleaning Operation, including, but not limited to the following:

    a. Each parts washer shall be provided with a cover which should be closed whenever not handling parts in the cleaner.

    b. Internal drainage should be provided to collect and return the solvent to a closed container or a solvent cleaning machine.

    c. A permanent label, summarizing the operating procedures should be placed on or near the parts-washer.

    d. Cleaned parts should drain for at least 15 seconds or until dripping ceases.

    e. Disposal of waste solvent shall be by reclamation (either by outside services or in-house) or incineration.

    (9VAC5-80-850 and 9VAC5-40-3280)

24. **Throughput** - The throughput of solvent in the degreaser/parts washing units (Unit Ref. No. CDG1) shall not exceed 530 gallons per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

25. **Emission Controls** – Particulate matter (PM) emissions and opacity from the investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace) shall be controlled by a secondary burner when the furnace is being used in a burnout mode. The furnace shall operate in burnout mode for not less than one (1) hour after any wax or resin pattern is placed in the furnace. The furnace shall be provided with adequate access for inspection.
(9VAC5-80-850 and 9VAC5-50-260)

26. **Fuel** - The approved fuel for the investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace) is natural gas. The approved fuel for the secondary burner is natural gas. A change in the fuel may require a permit to modify and operate.
(9VAC5-80-850)

27. **Processing** - The investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace) shall be charged with no more than 5 pounds per hour of investment wax and resin, calculated for each burn event, and 0.3 tons per year of investment wax and resin, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850 and 9VAC5-170-160)

28. **Fuel Throughput** - The investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace) shall consume no more than 1.28 million cubic feet of natural gas per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

29. **Monitoring Device** – The investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace) primary and secondary chambers shall be equipped with continuous temperature sensors at or near the chamber exits to indicate the temperatures in each chamber. The furnace shall also be equipped with automatic thermostats to maintain the minimum primary and secondary chamber temperatures. The permittee shall maintain a log to consist of the primary and secondary chamber temperatures, date, and time. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-850 and 9VAC5-170-160)

30. **Operating Temperatures** - The investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace) minimum primary and secondary chamber temperatures shall be maintained at 1400° F and 1800° F, respectively, when the unit is in burnout mode, except when feeding a load of wax. When feeding a load of wax, minimum primary and secondary chamber temperatures shall be maintained at 1050° F and 1800° F, respectively, when the unit is in burnout mode. Burnout mode shall be maintained for one (1) hour after a wax or resin pattern is placed in the furnace. Cold start units shall be heated up and maintained at the minimum temperatures listed in this condition until no combustible materials are left on the hearth.
(9VAC5-80-850)

31. **Operating Cycle** - The investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace) minimum burn-down cycle time shall be the manufacturer's recommended time of one (1) hour per five (5) pounds of wax loaded into the burn-out furnace. In no event shall this be less than the time required to destroy any visible and odorous emissions.
(9VAC5-80-850 and 9VAC5-170-160)

32. **Process Emission Limits** - Emissions from the operation of the investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace) shall not exceed the limits specified below:

Particulate Matter (PM)	0.1	gr/dscf @ 7% O2
Carbon Monoxide	100	ppmvd 1-hr avg @ 7% O_2

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 4 and 25-31.
(9VAC5-80-850, 9VAC5-60-320, and 9VAC5-50-260)

33. **Operating Hours** - The tape prepregging machine (Unit Ref. No. Prepreg) shall not operate more than 1,040 hours per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

34. **Emission Controls** – Solvents other than N-Methyl-2 Pyrrolidone (NMP) and Methanol may be used with the tape prepregging machine (Unit Ref. No. Prepreg) provided that the resulting emissions will not exceed any of the stated emission limits and that the alternative solvents do not result in the uncontrolled emissions of a HAP, based on 1,040 hours per year, in excess of any of the following exemption rates:

    a. *For each new HAP air toxic with a TLV-C, the value obtained from the following equation – [TLV-C (mg/m^3) X 0.033] in pounds per hour.*

    b. *For each new HAP air toxic with both a TLV-STEL and a TLV-TWA, the value obtained from the following equation - [TLV-STEL (mg/m^3) X 0.033] in pounds per hour and the value obtained from the following equation - [TLV-TWA (mg/m^3) X 0.145] in tons per year.*

    c. *For each new HAP air toxic with a TLV-TWA, the value obtained from the following equation - [TLV-TWA (mg/m^3) X 0.066] in pounds per hour and the value obtained from the following equation - [TLV-TWA (mg/m^3) X 0.145] in tons per year.*

    The permittee shall maintain a log for any solvents other than N-Methyl-2 Pyrrolidone (NMP) and Methanol used with the tape prepregging machine (Unit Ref. No. Prepreg), that contains the TLV data and the above calculations. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
    (9VAC5-80-850 and 9VAC5-50-200)

35. **Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, the tape prepregging machine (Unit Ref. No. Prepreg) shall be operated in compliance with the requirements of 40 CFR 60, Subpart VVV, §§ 60.744(b), 60.747(b) and 60.747(c).
(9VAC5-80-850 and 9VAC5-50-400)

36. **Emission Controls** – Particulate matter (PM) emissions from the miscellaneous wood working activities (Unit Ref. No. MWWA) shall be controlled by dust collectors. The dust collectors shall be provided with adequate access for inspection and shall be in operation when the wood working activities are operating.
(9VAC5-80-850)

37. **Emission Controls** – Particulate matter (PM) emissions from the abrasive blast booths (Unit Ref. No. MABA) shall be controlled by dust collectors. The dust collectors shall be provided with adequate access for inspection and shall be in operation when the abrasive blast booths are operating.
(9VAC5-80-850)

38. **Operating Hours** - The miscellaneous wood working activities (Unit Ref. No. MWWA) shall not operate more than 3120 hours per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

39. **Operating Hours** - The miscellaneous abrasive blasting activities (Unit Ref. No. MABA) shall not operate more than 3360 hours per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

40. **Processing** - The miscellaneous wind tunnel experiments (Unit Ref. No. MWTE) shall process no more than 2000 pounds of particulate per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-850)

41. **Process Emission Limits** - Emissions from the operation of the Miscellaneous sources shall not exceed the limits specified below:

Particulate Matter (PM)	5.9	tons/yr
PM-10	4.9	tons/yr
PM 2.5	3.4	tons/yr
Nitrogen Oxides (as NO_2)	3.8	tons/yr
Volatile Organic Compounds	7.7	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 4, 24-40, and 43.
(9VAC5-80-850)

General Facility-Wide Terms and Conditions

42. **Facility-Wide Emission Limits** - Emissions from the operation of the aeronautical research facility shall not exceed the limits specified below:

Particulate Matter (PM)	13.7	tons/yr
PM-10	12.0	tons/yr
PM 2.5	9.6	tons/yr
Nitrogen Oxides (as NO_2)	95.3	tons/yr
Carbon Monoxide	61.1	tons/yr
Sulfur Dioxide	10.0	tons/yr
Volatile Organic Compounds	23.4	tons/yr
Hazardous Air Pollutants (as VOC or Particulates):		
Any Individual Hazardous Air Pollutant	5.4	tons/yr
Total of All Hazardous Air Pollutants	16.5	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 2, 5-7, 11-13, 15-16, 19-21, 23-31, 33, and 36-40.
(9VAC5-80-850 and 9VAC5-50-260)

43. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Tidewater Regional Office. These records shall include, but are not limited to:

Conventional Combustion Units

a. Annual throughput of liquid petroleum gas (including propane and butane), natural gas and distillate oil/jet propellant/rocket propellant (RP-1) for the conventional combustion units, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

b. List of all conventional combustion units, to be updated no later than February 15th of each year.

c. The monthly throughput of natural gas and the monthly throughput of distillate oil for the Cleaver Brooks Boilers (Unit Ref. No. 647) and the Nebraska Boiler (unit Ref. No. NB-1);

   NOTE: Facility was granted approval from U.S. EPA Region III to reduce Subpart Dc Boiler fuel usage recordkeeping frequency (40 CFR 60.48c(g)) from daily to monthly. See June 3, 2003 letter from Judith M. Katz (U.S. EPA Region III) to Ms. Michelle Fraser-Page (NASA Langley Research Center).

d. Annual throughput of natural gas for the Subpart Dc boilers (Ref. No. 647 and NB-1), combined, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

e. Annual throughput of natural gas for all other conventional combustion units except the Subpart Dc boilers (Ref. No. 647 and NB-1), combined, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

f. Military Specification sheets for all types of jet propellants and rocket propellant (RP-1) used.

g. All fuel supplier certifications for distillate oil.

Research Sources

h. Annual throughput of natural gas for the burners (Unit Ref. No. 1236), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

i. Annual pounds of heated air for the Scramjet Test Facility (Unit Ref. No. STF), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

j. Annual number of operating seconds for the High Temperature Tunnel (Unit Ref. No. HTT), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

k. Annual number of operating runs for the Combustion Heated Scramjet Test Facility (Unit Ref. No. CHSTF), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

l. Annual number of operating runs for the Direct-Connect Supersonic Combustion Test Facility (Unit Ref. No. DCSCTF), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

m. Annual number of “air mode” operating hours for the Hypersonic Materials Environmental Test System (Unit Ref. No. HyMETS), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

Center-Wide Generators and Fire Pumps (Unit Ref. No. CG)

n. Annual throughput of diesel fired in the center-wide generators and fire pumps (Unit Ref. No. CG-DSL), combined, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

o. Annual throughput of diesel fuel used in the CRF generators (Unit Ref. No. CG-CRF), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

p. Annual throughput of natural gas used in the generators (Unit Ref. No. NG), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

q. List of all generators and fire pumps, to be updated no later than February 15th of each year. The list shall clearly identify the units subject to NSPS IIII.

Center-Wide Paint Booths (Unit Ref. No. CPB)

r. List of all operational paint booths, to be updated no later than February 15th of each year.

s. Annual throughput of coatings, as applied at the paint booths (Unit Ref. No. CPB), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

t. Annual consumption of aluminum oxide used in spray booths performing thermal spray operations, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

u. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, toxic compound content, water content, solids content, and density for each coating, thinner, cleaning solution used. (Does not include aerosol cans.)

Miscellaneous Sources

v. Annual throughput of solvent in the degreaser/parts washing units (Unit Ref. No. CDG1), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

w. List of all cold cleaners, including MSDS for each solvent used, to be updated no later than February 15th of each year.

x. Annual throughput of investment wax and resin charged into the investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

y. Annual throughput of natural gas used in the investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

z. Quantity of wax and resin (in pounds) and the corresponding burn-down cycle time of each batch loaded into the investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace) and the ratio (in pounds/hour) of each burn event.

aa. Type of material burned in the investment casting wax burn-out furnace (Unit Ref. No. Wax Furnace), and records of the corresponding primary and secondary chamber temperature monitoring for each burn event as required by Condition 29.

bb. Annual number of operating hours for the tape prepregging machine (Unit Ref. No. Prepreg), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

cc. Annual amount, and name, of each solvent(s) used in the tape prepregging machine (Unit Ref. No. Prepreg), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

dd. Calculations showing HAP emissions for solvents other than N-Methyl-2 Pyrrolidone (NMP) and Methanol used in the tape prepregging machine (Ref. No. Prepreg) as required by Condition 34.

ee. Annual throughput of gasoline to the tanks (Unit Ref. No. CTanks), in 1000 gallons, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

ff. Annual emissions from the above ground storage tanks, in tons per year, calculated annually.

gg. Annual hours of operation of the miscellaneous wood working activities (Unit Ref. No. MWWA), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

hh. Annual hours of operation of the miscellaneous abrasive blasting activities (Unit Ref. No. MABA), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

ii. Annual hours of operation of the miscellaneous metal cutting activities (Unit Ref. No. MMCA), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

jj. Annual number of pounds of particulate used in the miscellaneous wind tunnel experiments (Unit Ref. No. MWTE), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

Other Recordkeeping

kk. Written operating procedures and maintenance schedules for all process and pollution control equipment, as specified in condition 48.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-1180, 9VAC5-50-410, 9VAC5-80-850, and 9VAC5-50-50)

REPORTS AND NOTIFICATIONS

44. **Semi-Annual Reports** - The permittee shall submit fuel quality reports for the NSPS Dc equipment (Unit Ref. No. 647 and NB-1) to the Tidewater Regional Office within 30 days after the end of each semi-annual period. If no shipments of distillate oil were received during the semi-annual period, the semi-annual report shall consist of the dates included in the semi-annual period and a statement that no oil was received during the semi-annual period. If distillate oil was received during the semi-annual period, the reports shall include:

    a. Dates included in the semi-annual period, for time period January 1 to June 30 and July 1 to December 31,

    b. A copy of all fuel supplier certifications for all shipments of distillate oil received during the semi-annual period or a semi-annual summary from each fuel supplier that includes the information specified in Condition 8 for each shipment of distillate oil, and

    c. A signed statement from the owner or operator of the facility that the fuel supplier certifications or summaries of fuel supplier certifications represent all of the distillate oil burned or received at the facility.

    One copy of the semi-annual report shall be submitted to the U.S. Environmental Protection Agency at the address specified below:

    Associate Director
    Office of Air Enforcement and Compliance Assistance (3AP20)
    U.S. Environmental Protection Agency
    Region III
    1650 Arch Street
    Philadelphia, PA 19103-2029

    (9VAC5-80-1180, 9VAC5-170-160, 9VAC5-50-50, and 9VAC5-50-410)

GENERAL CONDITIONS

45. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

    a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

    b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

    c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

    d. To sample or test at reasonable times.

    For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
    (9VAC5-170-130 and 9VAC5-80-850)

46. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Tidewater Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by e-mail, facsimile transmission or telephone. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Tidewater Regional Office in writing
(9VAC5-20-180 C and 9VAC5-80-850)

47. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9VAC5-20-180 I and 9VAC5-80-850)

48. **Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

    The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions (Conventional Combustion Units, Unit Ref. No. 1236, Unit Ref. No. HTT, Unit Ref. No. DCSCTF, Unit Ref. No. CG, Unit Ref. No. CPB, and Unit Ref. No. Wax Furnace):

    a. Develop a maintenance schedule.

    b. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

    Records of maintenance schedules and written operating procedures shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
    (9VAC5-50-20 E and 9VAC5-80-850)

49. **Permit Suspension/Revocation** - This permit may be revoked if the permittee:

    a. Knowingly makes material misstatements in the permit application or any amendments to it;

    b. Fails to comply with the terms or conditions of this permit;

    c. Fails to comply with any emission standards applicable to a permitted emissions unit;

    d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;

    e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time that an application for this permit is submitted; or

    f. Fails to comply with the applicable provisions of Articles 6, 8, and 9 of 9VAC5 Chapter 80.
    (9VAC5-80-1010)

50. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Tidewater Regional Office of the change of ownership within 30 days of the transfer.
(9VAC5-80-940)

51. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9VAC5-80-860 D)