Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

BLUE RIDGE REGIONAL OFFICE
901 Russell Drive, Salem, Virginia 24153
(540) 562-6700 FAX (804) 698-4178
www.deq.virginia.gov

Travis A. Voyles
Acting Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

Robert J. Weld
Regional Director

Federal Operating Permit
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9VAC5-80-50 through 9VAC5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Alliant Techsystems Operations LLC
Facility Name:	Alliant Techsystems Operations LLC
Facility Location:	P.O. Box 6 Radford, VA 24143
Registration Number:	21258
Permit Number:	BRRO-21258

This permit includes the following programs:
Federally Enforceable Requirements - Clean Air Act

December 19, 2022
Effective Date

Paul R. Jenkins
for Robert J. Weld, Regional Director

December 18, 2027
Expiration Date

December 19, 2022
Signature Date

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Facility Information

Permittee
Alliant Techsystems Operations LLC
Radford Army Ammunition Plant,
P.O. Box 6
Radford, VA 24143

Responsible Official
Anthony Miano
Site Lead

Facility
Alliant Techsystems Operations LLC
Radford Army Ammunition Plant,
Radford, VA 24141

Contact Person
Jeremy Flint
Environmental Engineer
540-831-4716

County-Plant Identification Number: 51-121-21258

Facility Description: NAICS 325920 - This industry comprises establishments primarily engaged in manufacturing explosives.

Alliant Techsystems Operations LLC, separate legal entity and wholly owned subsidiary of Northrop Grumman Systems Corporation (NGSC) (which in turn is a wholly owned subsidiary of Northrop Grumman Corporation (Northrop Grumman)), operates the New River Energetics (NRE) multi-base propellant manufacturing facility. NRE is an independently operated commercial facility located within the boundaries of the Radford Army Ammunition Plant (RFAAP) and is a separate stationary source from RFAAP.

The facility consists of a commercial multi-base propellant process line and propellant conveyance equipment. The commercial multi-base propellant process line is considered one emission unit consisting of multiple process steps. Multi-base propellant manufacturing includes production of base product, flash suppressant and limited water contact (LWC) product for commercial sale using equipment relocated from another ATK[1] manufacturing operation in 1996. Propellant Conveyance equipment which of consists of one (1) Vac-U-Max pneumatic powder conveyance system. The facility also operates and maintains one (1) emergency engine.

[1] The facility currently operated by Alliant Techsystems Operations LLC (ATK) was formerly operated by New River Energetics (NRE), a wholly owned subsidiary of Alliant Techsystems, Inc.

The manufacturing process involves processing and conveying nitrocellulose and nitroglycerin. Processing and conveying involves the use of ethanol, acetone and water. The manufacturing process emits VOCs and particulate (PM, PM10 and PM2.5).

Emission Units

Process Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
NRE01	---	NC, Premix and Chemical Storage	---	---	---	---	2/10/2020
NRE 03	MH1 to MH8	8 Propellant Mixers	0.025 MPU/hr	---	---	---	2/10/2020
NRE04	BL1 to BL2	2 12-inch blocking presses	0.020 MPU/hr	---	---	---	2/10/2020
NRE05	EC-T1 to EC-T9	Extruder Cutter and Slurry Transfer 8 12-inch Presses 8 Primary SWECO Water Separators 8 LWC SWECO Water Separators 4 Slurry Transfer Tanks 2 Process Water Filter Systems	0.024 MPU/hr	---	---	VOC	2/10/2020
NRE06	SI-R1 to SI-S6; SI-R1 to SI-R5	Slurry Coating 5 Secondary SWECO Water Separators 4 Slurry Coaters/Reaction Tanks	0.074 MPU/hr	---	---	VOC	2/10/2020
NRE07	D1 to D-D7; D-E1 to D-E7; D-F1 to D-F7	Drying 2 Centrifuges 3 Fluidized Bed Dryers 1 Forced Air Dryer	0.024 MPU/hr 0.011 MPU/hr	Each dryer zone (21 in total) has a dry cyclone	D-DC1 to D-DC7; E-DC1 to E-DC7; F-DC1 to F-DC7	PM	2/10/2020
NRE08	Sc-S1 to Sc-S3	3 Shaker Screens	0.046 MPU/hr	Fisher Klosterman WM-200 (Wet Cyclone)	Sc-S1 to Sc-S3	PM	2/10/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
NRE09	---	In-process Material Storage	---	---	---	---	2/10/2020
NRE10	FA-57; FA-57e	Sublot Homogenizer/Blender	0.02 MPU/hr	Roto-Clone	R-57	PM	2/10/2020
NRE11	FA-56; FA-56e	Sublot Can Pack	0.02 MPU/hr	Roto-Clone	R-56	PM	2/10/2020
NRE12	---	Lab/Ballistics	---	---	---	---	2/10/2020
NRE13	---	Sublot Storage	---	---	---	---	2/10/2020
NRE14	FA-55; FA-55e	Final Blending	0.019 MPU/hr	Roto-Clone	R-55	PM	2/10/2020
NRE 17	FA-54; FA-54e	Final Can Pack	0.019 MPU/hr	Roto-Clone	R-54	PM	2/10/2020
NRE18	FA-52	Vac-U-Max pneumatic powder conveyance system – Building 1652 [Automated 4.5 and 8 lb. Canister Pack]	1125 lbs/hr	Dry Filter (HEPA)	H-52	PM	11/02/2009
NRE20	---	Shipping Houses	---	---	---	---	2/10/2020
NRE21	SR-V1	Solvent Recovery	0.088 MPU/hr	Vent Condenser	SR-VC	VOC	2/10/2020
EM-GEN-001 (ATK8825)	---	Caterpillar Model D40-6S, 64 KW Diesel Emergency Generator	48 HP	---	---	---	---

*The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

Fuel Burning Equipment Requirements - Emergency Engine (EM-GEN-001)

Limitations

1. **Emergency Engine – (EM-GEN-001) – Limitations -** Visible emissions from the emergency engines shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity. The opacity standards for the engines apply at all times except during periods of startup, shutdown and malfunction.
(9VAC5-80-110 and 9VAC5-50-80)

2. **Emergency Engine – (EM-GEN-001) – Limitations -** 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 the engines:

   a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

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

   c. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

   Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
   (9VAC5-80-110 E and K)

Monitoring

3. **Emergency Engine – (EM-GEN-001) – Monitoring -** At least one time in any calendar month the emergency engine (EM-GEN-001) operate, an observation of the presence of visible emissions from the emergency engine stack shall be made. The presence of visible emissions shall require the permittee to:

   a. take timely corrective action such that the engine resumes operation with no visible emissions, or,

b. conduct a visible emission evaluation (VEE) on the engine stack in accordance with EPA Method 9 (reference 40 CFR 60 Appendix A) for a minimum of six minutes, to assure visible emissions from the affected engine are 20 percent opacity or less. If any of the observations exceed the opacity limitation of 20 percent, the observation period shall continue until a total of sixty (60) minutes of observations have been completed. Timely corrective action shall be taken, if necessary, such that the engine resumes operation within the 20 percent opacity limit.

The permittee shall maintain an observation log for each engine stack to demonstrate compliance. The logs shall include the date and time of the observations, whether or not there were visible emissions, the results of all VEEs, any necessary corrective action and the name of the observer. If the emergency engine has not been operated for any period during the entire month, it shall be noted in the log book.
(9VAC5-50-20 E, 9VAC5-80-110 E and K)

Recordkeeping

4. **Emergency Engine – (EM-GEN-001) – Recordkeeping -** The permittee shall maintain records of scheduled and non-scheduled maintenance, written operating procedures and training. The training records shall include the information specified in Condition 2. Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9VAC5-80-110 E and K)

5. **Emergency Engine – (EM-GEN-001) – Recordkeeping -** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. These records shall include, but are not limited to:

   a. Visible emissions observation logs required by Condition 3.

   These records shall be available on site for inspection by the DEQ and shall be current for the most recent (5) years.
   (9VAC5-80-110)

40 CFR 63 Subpart ZZZZ - Standards of Performance for Stationary Reciprocating Internal Combustion Engines - (EM-GEN-001)

6. **MACT Subpart ZZZZ – (EM-GEN-001) –** The permittee shall comply with 40 CFR 63 Subpart ZZZZ by meeting the applicable requirements of 40 CFR 60 Subpart IIII.
(9VAC5-80-110 and 40 CFR 63.6590(c))

40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines - (EM-GEN-001)

General Conditions

7. **NSPS Subpart IIII – (EM-GEN-001)** – The permittee shall comply with the applicable requirements of Standards of Performance for New Stationary Sources: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines 40 CFR 60 Subpart IIII.
(9VAC5-80-110 and 40 CFR 60.4200)

8. **NSPS Subpart IIII – (EM-GEN-001)** – The permittee shall comply with the applicable General Provisions, as listed in Table 8 to 40 CFR Part 60 Subpart IIII.
(9VAC5-80-110 and 40 CFR 60.4218)

Emission Standards

9. **NSPS Subpart IIII – (EM-GEN-001) – Emission Standards –** The permittee shall comply with the applicable emission standards for new nonroad CI engines in 40 CFR 60.4205(b) by complying with the applicable emission standards in 40 CFR 60.4202(a)(2), for all pollutants, for the same rated power and model year, including, but not limited to:

    a. Tier 3 emission standards in 40 CFR Appendix I to Part 1039(c).

    b. Smoke standards as specified in 40 CFR 1039.105.

    (9VAC5-80-110, 40 CFR 60.4211(c))

10. **NSPS Subpart IIII – (EM-GEN-001) – Emission Standards –** The permittee shall operate and maintain stationary CI ICE that achieve the applicable emission standards as required in 40 CFR 60.4205 over the entire life of the engine.
(9VAC5-80-110 and 40 CFR 60.4206)

11. **NSPS Subpart IIII – (EM-GEN-001) – Fuel Requirements –** The permittee shall use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel.
(9VAC5-80-110 and 40 CFR 60.4207(b))

Compliance

12. **NSPS Subpart IIII – (EM-GEN-001) – Compliance Requirements –** Except as permitted under 40 CFR 60.4211(g), the permittee shall:

    a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

    b. Change only those emission-related settings that are permitted by the manufacturer; and

    c. Meet the applicable requirements of 40 CFR Part 1068.

    (9VAC5-80-110 and 40 CFR 60.4211(a))

13. **NSPS Subpart IIII – (EM-GEN-001) – Compliance Requirements –** In order for the engine to be considered an emergency stationary RICE under 40 CFR Subpart IIII, any operation other than those listed in 40 CFR 60.4211(f), (f)(1), (f)(2)(i), and (f)(3), as described in 40 CFR 60.4211(f), is prohibited.

    a. There is no time limit on the use of emergency stationary ICE in emergency situations.

    b. The permittee may operate the emergency engine for any combination of the purposes specified in 40 CFR 60.4211(f)(2)(i) (Maintenance and readiness testing) for a maximum of 100 hours per calendar year.

        i. The emergency engine may be operated for up to 50 hours per calendar year in non-emergency situations as specified in 40 CFR 60.4211(f)(3). The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar provided in 40 CFR 60.4211(f)(2).

        ii. These 50 hours 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, except as provided in 40 CFR 60.4211(f)(3)(i).

    If the permittee does not operate the engine according to the requirements in 40 CFR 60.4211(f), the engine will not be considered an emergency engine under 40 CFR 60 Subpart IIII and shall meet all applicable requirements for non-emergency engines. (9VAC5-80-110 and 40 CFR 60.4211(f))

Testing

14. **NSPS Subpart IIII – (EM-GEN-001) – Performance Testing –** The permittee shall only conduct performance tests pursuant to 40 CFR 60.4212(a) through (c) and (e).

    a. Performance test must be conducted according to the in-use testing procedures in 40 CFR Part 1039 Subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder.

    b. Alternatively, stationary CI ICE that are complying with Tier 2 or Tier 3 emission standards as described in 40 CFR Part 1039, Appendix I, may follow the testing procedures specified in 40 CFR 60.4213, as applicable.

    c. The permittee shall meet the applicable NTE standards, as indicated in 40 CFR 60.4212 (b),(c) and (e), when conducting in-use performance tests.

    (9VAC5-80-110, 40 CFR 60.4211(d), 40 CFR 60.4212, and 40 CFR 60.4205(e))

Recordkeeping

15. **NSPS Subpart IIII – (EM-GEN-001) – Recordkeeping –** If the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time.
    (9VAC5-80-110, 40 CFR 60.4214(b))

Multi-Base Propellant Manufacturing Line

Process Requirements

16. **Slurry Coating (NRE06) – Controls –** Volatile organic compound (VOC) emissions from each slurry coater/reactor tank (NRE06) shall be controlled by a condenser. Each condenser shall be provided with adequate access for inspection and shall be in operation when the respective slurry coater/reactor tank is operating. Each condenser shall have chilled water flowing through it at all times the respective slurry coater/reactor tank is operating.
    (9VAC5-80-110 and Condition 16 of 02/10/2020 Permit Document)

17. **Slurry Coating (NRE06) – Monitoring –** The slurry coating chilled water tank shall be equipped with a device to continuously measure the chilled water temperature. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be

provided with adequate access for inspection and shall be in operation when the process is operating. The permittee shall establish a normal operating range for the chilled water temperature developed from observations recorded from the monitoring device during normal operation. The permittee shall maintain written documentation of this range.
(9VAC5-80-110 and Condition 17 of 02/10/2020 Permit Document)

18. **Slurry Coating (NRE06) – Monitoring –** To ensure good performance, the monitoring device used to continuously measure the chilled water temperature shall be observed by the permittee with a frequency of not less than once per operating day. The permittee shall keep a log of these observations.
(9VAC5-80-110 and Condition 18 of 02/10/2020 Permit Document)

19. **Drying (NRE07) – Controls –** Particulate emissions from each fluidized bed dryer zone (NRE07) shall be controlled by a dry cyclone. Each cyclone shall be provided with adequate access for inspection and shall be in operation when the respective dryer is operating. Each dryer zone shall be monitored for static pressure. When a dryer zone is operating, an electronic interlock system shall prevent operation of each dryer zone supply fan unless the corresponding cyclone exhaust fan is operating.
(9VAC5-80-110 and Condition 8 of 02/10/2020 Permit Document)

20. **Drying (NRE07) – Monitoring** – Each fluidized bed dryer zone shall be equipped with a device to continuously measure the zone's static pressure. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the process is operating. The permittee shall establish a normal operating range for each dryer zone static pressure developed from observations recorded from the monitoring device during normal operation. The permittee shall maintain written documentation of this range. In addition, an electronic automatic interlock system shall prevent operation of each dryer zone supply fan unless the corresponding cyclone exhaust fan is operating.
(9VAC5-80-110 and Condition 9 of 11/2/2020 Permit Document)

21. **Drying (NRE07) – Monitoring –** To ensure good performance, the monitoring device used to continuously measure dryer zone static pressure shall be observed by the permittee with a frequency of not less than once per operating day. The permittee shall keep a log of these observations.
(9VAC5-80-110 and Condition 10 of 02/10/2020 Permit Document)

22. **Drying (NRE07) – Monitoring –** Each propellant dryer shall be equipped with devices to continuously measure and record each dryer zone outlet temperature. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the respective dryer is operating.
(9VAC5-80-110 and Condition 30 of 02/10/2020 Permit Document)

23. **Shaker Screens (NRE08) – Controls –** Particulate emissions from each shaker screen (NRE08) shall be controlled by a wet cyclone. Each wet cyclone shall be provided with adequate access for inspection and shall be in operation when the respective unit is operating. An electronic interlock system shall prevent operation of each unit unless water is being supplied to the corresponding wet cyclone.
(9VAC5-80-110 and Condition 2 of 02/10/2020 Permit Document)

24. **Shaker Screens (NRE08) – Monitoring –** Each wet cyclone shall be equipped with a device to continuously measure the differential pressure drop across the wet cyclone. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the wet cyclone is operating. The permittee shall establish a normal operating range for the differential pressure drop across each wet cyclone based upon the manufacturer's recommendations or developed from observations recorded from the monitoring device during normal operation. The permittee shall maintain written documentation of this range.
(9VAC5-80-110 and Condition 3 of 02/10/2020 Permit Document)

25. **Shaker Screens (NRE08) – Monitoring –** To ensure good performance, the monitoring device used to continuously measure differential pressure drop across the wet cyclone shall be observed by the permittee with a frequency of not less than once per operating day. The permittee shall keep a log of these observations.
(9VAC5-80-110 and Condition 4 of 02/10/2020 Permit Document)

26. **Sublot Homogenizer/Blender, Sublot Can Pack, Final Blending, and Final Can Pack (NRE10, NRE11, NRE14, and NRE17) – Controls –** Particulate emissions from each sublot homogenizer/blender (NRE10), sublot can pack (NRE11), final blending (NRE14), and final can packing (NRE 17) operation shall be controlled by a rotoclone scrubber. Each rotoclone shall be provided with adequate access for inspection and shall be in operation when the respective unit is operating. An electronic interlock system shall prevent operation of each unit unless water is being supplied to the corresponding rotoclone.
(9VAC5-80-110 and Condition 5 of 02/10/2020 Permit Document)

27. **Sublot Homogenizer/Blender, Sublot Can Pack, Final Blending, and Final Can Pack (NRE10, NRE11, NRE14, and NRE17) – Monitoring –** Each rotoclone shall be equipped with a device to continuously monitor the scrubber liquid flow rate and nozzle pressure. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacture's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the rotoclone is operating. The permittee shall establish a normal operating range for the liquid nozzle pressure for each rotoclone based upon the manufacturer's recommendations or developed from observations recorded from the monitoring device during normal operation. The device that continuously monitors the scrubber liquid flow rate and nozzle pressure automatically shall shut down the process when the water flow or water pressure drops below the established operating range. The permittee shall maintain written documentation of these ranges.
(9VAC5-80-110 and Condition 6 of 02/10/2020 Permit Document)

28. **Sublot Homogenizer/Blender, Sublot Can Pack, Final Blending, and Final Can Pack (NRE10, NRE11, NRE14, and NRE17) – Monitoring –** To ensure good performance, the automatic interlock shutting down the process based on the devices used to continuously monitor water flow and nozzle pressure shall be checked by the permittee with a frequency of not less than once per week. The permittee shall keep a log of these observations.
(9VAC5-80-110 and Condition 7 of 02/10/2020 Permit Document)

29. **Solvent Recovery (NRE21) – Controls –** VOC emissions from solvent recovery (NRE21) shall be controlled by a vent condenser and good operation of the solvent recovery system. The vent condenser shall have chilled water flowing through it at all times solvent recovery is operating.
(9VAC5-80-110 and Condition 13 of 02/10/2020 Permit Document)

30. **Solvent Recovery (NRE21) – Monitoring –** Solvent recovery shall be equipped with a device to continuously measure the chilled water temperature. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the process is operating. The permittee shall establish a normal operating range for the chilled water temperature developed from observations recorded from the monitoring device during normal operation. The permittee shall maintain written documentation of this range. In addition, an electronic interlock system shall prevent operation of solvent recovery if the chilled water temperature exceeds an established maximum.
(9VAC5-80-110 and Condition 14 of 02/10/2020 Permit Document)

31. **Solvent Recovery (NRE21) – Monitoring –** To ensure good performance, the monitoring device used to continuously measure the chilled water temperature shall be observed by the permittee with a frequency of not less than once per operating day. The permittee shall keep a log of these observations.
(9VAC5-80-110 and Condition 15 of 02/10/2020 Permit Document)

32. **Solvent Recovery (NRE21) – Monitoring –** The permittee shall monitor the amount of ethanol, in pounds, recovered in the solvent recovery system daily. The daily amount shall be based on the actual ethanol concentration, actual volume, and specific gravity for that concentration for the transferred liquid.
(9VAC5-80-110 and Condition 21 of 02/10/2020 Permit Document)

33. **Solvent Recovery (NRE21) – Monitoring –** The permittee shall monitor the amount of 'off-spec' ethanol, in pounds, sent to other facilities daily. The daily amount shall be based on the actual ethanol concentration for the transferred liquid.
(9VAC5-80-110 and Condition 24 of 02/10/2020 Permit Document)

34. **Wastewater Outflow (UMS-5, UMS-9) – Monitoring –** The wastewater outflow (UMS-5, UMS-9) shall be equipped with devices to continuously measure and record liquid flow rate and collect a flow proportional composite daily sample. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation at all times.
(9VAC5-80-110 and Condition 25 of 02/10/2020 Permit Document)

35. **Wastewater Outflow (UMS-5, UMS-9) – Monitoring –** The permittee shall monitor each daily sample required in Condition 34 for total suspended solids (UMS-9 only), nitroglycerin content, and salt (nitrates and sulfates) content and calculate the wastewater amount of solid material in pounds in accordance with DEQ-approved procedures.
(9VAC5-80-110 and Condition 26 of 02/10/2020 Permit Document)

36. **Wastewater Outflow (UMS-5, UMS-9) – Monitoring –** The permittee shall monitor each daily sample required in Condition 34 for alcohol content and calculate the wastewater ethanol pounds in accordance with DEQ approved procedures.
(9VAC5-80-110 and Condition 29 of 02/10/2020 Permit Document)

37. **Multi-Base Propellant Manufacturing Line – VOC Work Practice Standards – Limitations –** 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.
(9VAC5-80-110 and Condition 11 of 02/10/2020 Permit Document)

38. **Multi-Base Propellant Manufacturing Line – VOC Work Practice Standards – Limitations –** Volatile organic compound (VOC) emissions from slurry transport of extruded propellant and solvent laden water from the process shall be minimized by use of solvent recovery and biological treatment in a wastewater treatment plant. The solvent recovery system shall be provided with adequate access for inspection. The solvent recovery system shall be maintained by the permittee such that it is in proper working order at all times it is operating.
(9VAC5-80-110 and Condition 12 of 02/10/2020 Permit Document)

39. **Multi-Base Propellant Manufacturing Line – Monitoring –** The permittee shall monitor the amount of conveyance alcohol lost during each batch of Flash Suppressant manufactured.
(9VAC5-80-110 and Condition 20 of 02/10/2020 Permit Document)

40. **Multi-Base Propellant Manufacturing Line – Monitoring –** The permittee shall monitor the actual amount of VOC, in pounds, added to the process daily for Base Product (which includes Flash Suppressant) and for LWC Product manufactured. The actual amount of VOC added to the process daily shall be the sum of the following:

    a. The actual amount of ethanol added with each tub of premix,

    b. The actual amount of ethanol added with each tub of nitrocellulose (NC),

    c. The actual amount of ethanol added during processing based on the average ethanol concentration (volume weighted) of the previous 30 days' daily ethanol recovery determined in Condition 32 and the amount added to the mixer, and

    d. The actual amount of VOC, except denaturant and nitroglycerin, added to the process via any other method.

    (9VAC5-80-110 and Condition 22 of 02/10/2020 Permit Document)

41. **Multi-Base Propellant Manufacturing Line - Monitoring –** The permittee shall monitor the actual amount, in mixed production units (MPU), of solid material added to the process daily for all products combined (Base Product, LWC Product and Flash Suppressant). The actual amount, in MPU, of solid material added to the process daily shall be the sum of the following:
    a. The actual amount of nitrocellulose added with each tub of nitrocellulose,

    b. The actual amount of nitrocellulose added with each tub of premix,

    c. The actual amount of nitroglycerin added with each tub of premix,

    d. The actual amount of salt added with materials added to the mixer,

    e. The actual amount of all other solids, excluding internal recycle materials, added to the mixer,

    f. The actual amount of slurry coating materials added to the slurry coating reactor,

    g. The actual amount of solid materials added at sublot blending,

    h. The actual amount of solid materials added at final pack,

    i. The actual amount of solids added to the process via any other method

    (9VAC5-80-110 and Condition 23 of 02/10/2020 Permit Document)

42. **Multi-Base Propellant Manufacturing Line) – Monitoring –** The permittee shall monitor the change in inventory for each four week period for the following groups: solid material in-process, solids in internal recycle materials, and solid material in the base grain inventory. A change in inventory is positive when the final inventory is larger than the initial inventory for the given period.
    (9VAC5-80-110 and Condition 27 of 02/10/2020 Permit Document)

43. **Multi-Base Propellant Manufacturing Line – Monitoring –** The permittee shall calculate the amount of solid material output weekly by calculating the dry weight of the finished product and by calculating the dry weight of each container of scrap.
    (9VAC5-80-110 and Condition 28 of 02/10/2020 Permit Document)

44. **Multi-Base Propellant Manufacturing Line – Monitoring –** The permittee shall develop, maintain, and operate in accordance with a monitoring threshold action plan to minimize emissions of particulate and VOC. The plan shall contain actions the permittee will take to minimize emissions and maintain compliance with the material balances for particulate and VOC at defined thresholds. A log of corrective actions taken shall be maintained. The plan shall be reviewed annually to determine if the plan continues to represent best practices for minimizing emissions at the facility. Any changes to the plan shall be recorded along with the reason for the change.
(9VAC5-80-110 and Condition 31 of 02/10/2020 Permit Document)

45. **Multi-Base Propellant Manufacturing Line – 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:

    a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

    b. Maintain an inventory of spare parts.

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

    d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

    Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
    (9VAC5-80-110 and Condition 47 of 02/10/2020 Permit Document)

Operating Limits

46. **Drying (NRE07) – Production Limit –-** Each dryer shall operate at 145 degrees Fahrenheit or less, calculated as the 12-hour rolling average zone outlet temperatures for each dryer.
(9VAC5-80-110 and Condition 36 of 02/10/2020 Permit Document)

47. **Multi-Base Propellant Manufacturing Line – Throughput –** The annual amount of VOC added to the process (all products combined), calculated in accordance with Condition 40, shall not exceed 1,231,000 pounds per year, calculated as the sum of each consecutive 12-month period. The annual amount of VOC added to the process, calculated in accordance with Condition 40, for LWC product shall not exceed 240,000 pounds per year, calculated as the sum of each consecutive 12-month period.
(9VAC5-80-110 and Condition 32 of 02/10/2020 Permit Document)

48. **Multi-Base Propellant Manufacturing Line – Throughput –** The amount of solid material added to the process (all products combined), calculated in accordance with Condition 41, shall not exceed 85.4 MPUs per year, calculated as the sum of each consecutive 13 4-week periods.
(9VAC5-80-110 and Condition 33 of 02/10/2020 Permit Document)

49. **Multi-Base Propellant Manufacturing Line – Production –** The permittee shall not manufacture any product with a nitroglycerin content greater than 46% (weight dry basis).
(9VAC5-80-110 and Condition 34 of 02/10/2020 Permit Document)

50. **Multi-Base Propellant Manufacturing Line – Production –** The permittee shall not manufacture product with a moisture and volatiles content of less than 0.2% (weight), calculated as the average of all sublots manufactured daily. This condition does not apply on days with a total of less than 3 sublots.
(9VAC5-80-110 and Condition 35 of 02/10/2020 Permit Document)

51. **Multi-Base Propellant Manufacturing Line – Production –** Ethanol used in the multibase manufacturing process shall either be that recovered from the multi-base propellant line process, purchased as SDA-2B-3 as designated by the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) standards, or enters the process with the raw materials from a supplier who provides materials that have been made using SDA-2B-3.
(9VAC5-80-110 and Condition 37 of 02/10/2020 Permit Document)

Emission Limits

52. **Drying and Shaker Screens (NRE07 and NRE08) – Visible Emission Limits –** Visible emissions from each process unit covered by Conditions 19 and 23 shall not exceed five (5) percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9VAC5-80-110 and Condition 40 of 02/10/2020 Permit Document)

53. **Multi-Base Propellant Manufacturing Line – Emission Limits –** Emissions from the operation of the multi-base propellant line shall not exceed the limits specified below:

    Volatile Organic Compounds 185.2 tons/yr

    The emission factor for Base Product = 0.18 $lb/lb_{ethanol\ added\ to\ process}$

The emission factor for LWC product = 0.80 $lb/lb_{ethanol\ added\ to\ process}$

Compliance with the emission factor (EF) below will be on an input ethanol weighted basis

$$EF^{2} = \frac{(0.18 * \text{Base Product input ethanol}) + (0.80 * \text{LWC Product input ethanol})}{\text{input ethanol}}$$

Where:

$lb_{ethanol\ added\ to\ process}$ = summation of the amounts recorded in accordance with Condition 40

VOC emissions = $lb_{ethanol\ added\ to\ process}$ plus the amount from Condition 39 minus the summation of the amounts from Conditions 32, 33 and 36.

Emissions, in $lb/lb_{ethanol\ added\ to\ process}$ and tons/yr, shall be calculated monthly, as the sum of each consecutive 12 month period, by summing of the daily values for each variable using the daily monitoring data and utilizing the summed annual values in the above equation. Annual emissions shall be calculated as the sum of each consecutive 12 month period. (9VAC5-80-110 and Condition 38 of 02/10/2020 Permit Document)

54. **Multi-Base Propellant Manufacturing Line – Emission Limits –** Emissions from the operation of the multi-base propellant line shall not exceed the limits specified below:

PM	2,100 lb/$MPU_{added\ to\ process}$	89.7 tons/yr
PM10	2,100 lb/$MPU_{added\ to\ process}$	89.7 tons/yr
PM2.5	2,100 lb/$MPU_{added\ to\ process}$	89.7 tons/yr

Where:

$MPU_{added\ to\ process}$ = summation of the amounts recorded in accordance with Condition 41.

Particulate emissions = $MPU_{added\ to\ process}$ minus the summation of the amounts from Conditions 35, 42, and 43.

$MPU_{added\ to\ process}$ shall be calculated every four weeks by adding the total for the most recently completed 4-week period to the individual 4-week totals for the preceding 12 4-week periods. MPU shall be converted utilizing the factor contained in the submittal dated December 20, 2016. Compliance with the lb/$MPU_{added\ to\ process}$ limit shall be demonstrated for each 13 4-week period. Annual emissions, in tons/year, shall be calculated as the sum of each consecutive 13 4-week periods.
(9VAC5-80-110 and Condition 39 of 02/10/2020 Permit Document)

[2] Input ethanol as determined based on the requirements of Condition 40 of this Permit Document.

Testing

55. **Multi-Base Propellant Manufacturing Line – Testing –** The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations.
(9VAC5-80-110 and Condition 19 of 02/10/2020 Permit Document)

Recordkeeping

56. **Multi-Base Propellant Manufacturing Line – Recordkeeping –-** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Blue Ridge Regional Office. These records shall include, but are not limited to:

    a. Annual addition of solid material to the process (in MPUs), calculated as the sum of each consecutive 13 4-week periods to verify compliance with the limit in Condition 48.

    b. Annual VOC emissions, calculated in accordance with Condition 53 as the sum of each consecutive 12 month period.

    c. Annual PM, PM10 and PM2.5 emissions, calculated in accordance with Condition 54 as the sum of each consecutive 13 4-week periods.

    d. Records of the monitoring required in Conditions 17, 20, 22, 24, 27, 30, 32, 33, 34, 35, 36, 39, 40, 41, and 42.

    e. Records of the daily sublots produced and the average moisture and volatile content.

    f. Records of the 12-hour rolling average dryer outlet temperature for each dryer to demonstrate compliance with Condition 46.

    g. Records of the nitroglycerin content of each formulation to demonstrate compliance with Condition 49.

    h. Records of monitoring device observations as required in Conditions 18, 21, 25, 28, 31 and 34.

    i. Records of solid material output as required in Condition 43.

    j. Records sufficient to demonstrate compliance with the ethanol specifications in Condition 51.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(9VAC5-80-110 and Condition 42 of 02/10/2020 Permit Document)

Propellant Conveyance (NRE18)

Process Requirements

57. **Propellant Conveyance (NRE18) – Controls –** Particulate emissions from each powder conveyance system shall be controlled by a combination of primary, secondary and HEPA filter systems. Each combined filter system shall be provided with adequate access for inspection and shall be in operation when its respective conveyance system is operating
(9VAC5-80-110 and Condition 2 of 11/2/2009 Permit Document)

58. **Propellant Conveyance (NRE18) – Controls –** Open equipment for conveying or transporting materials likely to create objectionable air pollution when airborne shall be covered, or treated in an equally effective manner at all times when in motion.
(9VAC5-80-110 and Condition 3 of 11/02/2009 Permit Document)

59. **Propellant Conveyance (NRE18) – Monitoring–** Each combined filter system shall be equipped with a device to continuously measure differential pressure across the filter system. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or' recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when its respective filter system is operating.
(9VAC5-80-110 and Condition 4 of 11/2/2009 Permit Document)

60. **Propellant Conveyance (NRE18) – Monitoring –** To ensure good performance, the control monitoring device used to continuously measure differential pressure across the filter system shall be observed by the permittee with a frequency of not less than once per day on days when each filter system is operating. The permittee shall keep a log of the observations from the monitoring device.
(9VAC5-80-110 and Condition 5 of 11/2/2009 Permit Document)

61. **Propellant Conveyance (NRE18) – Monitoring –** Each powder conveyance system shall be installed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided
(9VAC5-80-110 and Condition 6 of 11/02/2009 Permit Document)

62. **Propellant Conveyance (NRE18) – 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 each powder conveyance system and associated control equipment:

    a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance;

    b. Conduct visual inspections of the control devices at least once per month;

    c. Maintain an inventory of spare parts;

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

    e. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

    Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
    (9VAC5-80-110 and Condition 18 of 11/02/2009 Permit Document)

Operating Limits

63. **Propellant Conveyance (NRE18) – Throughput –** The throughput of propellant shall not exceed 8,000,000 pounds 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 recent completed calendar month to the individual monthly totals for the preceding 11 months.
    (9VAC5-80-110 and Condition 7 of 11/02/2009 Permit Document)

Emission Limits

64. **Propellant Conveyance – (NRE18) – Limitations –** Emissions from the operation of each powder conveyance system shall not exceed the limits specified below:

Particulate Matter (PM)	0.01 grains/dscf	0.0034 lbs/hr	0.015 tons/yr
PM10	0.01 grains/dscf	0.0034 lbs/hr	0.015 tons/yr

These emissions are derived from the estimated overall emission contribution from the 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 63 and 65.
(9VAC5-80-110 and Condition 8 of 11/2/2009 Permit Document)

65. **Propellant Conveyance (NRE18) – Visible Emissions Limitations –** Visible emissions from the operation of the powder conveyance system shall not exceed 5 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 10 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A).
(9VAC5-80-110 and Condition 9 of 11/2/2009 Permit Document)

Monitoring

66. **Propellant Conveyance (NRE18) – Monitoring -** At least one time in any calendar month that Propellant Conveyance (NRE18) operates, an observation of the presence of visible emissions from the powder conveyance system stack shall be made. The presence of visible emissions shall require the permittee to:

    a. take timely corrective action such that the powder conveyance system resumes operation with no visible emissions, or,

    b. conduct a visible emission evaluation (VEE) on the powder conveyance system stack in accordance with EPA Method 9 (reference 40 CFR 60 Appendix A) for a minimum of six minutes, to assure visible emissions from the affected equipment are 5 percent opacity or less. If any of the observations exceed the opacity limitation of 5 percent, the observation period shall continue until a total of sixty (60) minutes of observations have been completed. Timely corrective action shall be taken, if necessary, such that the powder conveyance system resumes operation within the 5 percent opacity limit.

The permittee shall maintain an observation log for each powder conveyance system stack to demonstrate compliance. The logs shall include the date and time of the observations, whether or not there were visible emissions, the results of all VEEs, any necessary corrective action and the name of the observer. If the powder conveyance system has not been operated for any period during the entire month, it shall be noted in the log book. (9VAC5-50-20 E, 9VAC5-80-110 E and K)

Testing

67. **Propellant Conveyance (NRE18) – Continuing Compliance (NRE18) – Testing –** Upon request by the DEQ, the permittee shall conduct performance tests to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the Blue Ridge Regional Office.
(9VAC5-80-110 and Condition 10 of 11/02/2009 Permit Document)

68. **Propellant Conveyance (NRE18) – Continuing Compliance –** Upon request by the DEQ, the permittee shall conduct visible emission evaluations to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Blue Ridge Regional Office.
(9VAC5-80-110 and Condition 11 of 11/02/2009 Permit Document)

Recordkeeping

69. **Propellant Conveyance (NRE18)– Recordkeeping –** 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 Blue Ridge Regional Office. These records shall include, but are not limited to:

    a. Annual throughput of propellant, calculated monthly as the sum of each consecutive 12-month period.

    b. Results of all stack tests and visible emissions evaluations.

    c. Monthly emissions calculations for particulate matter and PM10 from each powder conveyance system using calculation methods approved by the Blue Ridge Regional Office to verify compliance with the emissions limitations in Condition Number 64.

    d. Control device monitoring records for the pressure differential monitoring devices as required in Condition 60.

    e. Scheduled and unscheduled maintenance and operator training.

    f. Visible emissions observation logs required by Condition 66.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-110 and Condition 12 of 11/2/2009 Permit Document)

Insignificant Emission Units

70. Insignificant Emission Units - The following emission units at the facility are identified in the application as insignificant emission units under 9VAC5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9VAC5-80-720B)	Rated Capacity (9VAC5-80-720C)
NRE12	Lab/Ballistics	9VAC5-80-720A	---	---
TANKS	Tanks containing ethanol, acetone, or an ethanol / acetone / water solution — **Itemized below:**	---	---	---
3553 T-1	Propellant slurry transfer tank	9VAC5-80-720B	VOC	---
3553 T-2	Propellant slurry transfer tank	9VAC5-80-720B	VOC	---
3553 T-3	Propellant slurry transfer tank	9VAC5-80-720B	VOC	---
3553 T-4	Propellant slurry transfer tank	9VAC5-80-720B	VOC	---
3553 T-5	Hanging filter tank	9VAC5-80-720B	VOC	---
3553 T-6	Hanging filter tank	9VAC5-80-720B	VOC	---
3553 T-7	Process water storage/circulation	9VAC5-80-720B	VOC	---
3553 T-8	Process water storage/circulation	9VAC5-80-720B	VOC	---
3553 T-9	Conveyance ethanol storage/circulation	9VAC5-80-720B	VOC	---

1601 T-1	Process water storage/circulation return to 3553	9VAC5-80-720B	VOC	---
1601 T-2	Process water storage/circulation	9VAC5-80-720B	VOC	---
1601 T-4	Propellant slurry transfer tank	9VAC5-80-720B	VOC	---
1601 T-5	Deterrent coating mixture	9VAC5-80-720B	VOC	---
1601 T-8	Wastewater storage/circulation	9VAC5-80-720B	VOC	---
1601 R-1	Propellant slurry coating	9VAC5-80-720B	VOC	---
1601 R-2	Propellant slurry coating	9VAC5-80-720B	VOC	---
1601 R-3	Propellant slurry coating	9VAC5-80-720B	VOC	---
1601 R-4	Propellant slurry coating	9VAC5-80-720B	VOC	---
1601E T-1	Process water storage/circulation	9VAC5-80-720B	VOC	---
1601G T-1	Solvent Recovery Feed Tank	9VAC5-80-720B	VOC	---
1601G T-2	Solvent Recovery C-1 Reflux Tank	9VAC5-80-720B	VOC	---
1601G T-3	Solvent Recovery Bottoms Tank	9VAC5-80-720B	VOC	---
1601G T-4	Solvent Recovery Ethanol Day Tank	9VAC5-80-720B	VOC	---
1601G T-5	Solvent Recovery Acetone Day Tank	9VAC5-80-720B	VOC	---
1601G T-6	Solvent Recovery Ethanol Storage Tank	9VAC5-80-720B	VOC	---
1601G T-7	Solvent Recovery Acetone Storage Tank	9VAC5-80-720B	VOC	---
1601G T-9	Solvent Recovery C-1 Reflux Tank	9VAC5-80-720B	VOC	---

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9VAC5-80-110. (9VAC5-80-110)

Permit Shield & Inapplicable Requirements

71. **Permit Shield & Inapplicable Requirements -** Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
None	None	None

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act or (ii) the DEQ pursuant to §10.1-1307.3 or §10.1-1315 of the Virginia Air Pollution Control Law.
(9VAC5-80-110 and 9VAC5-80-140)

General Conditions

72. **General Conditions - Federal Enforceability** - All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9VAC5-80-110)

73. **General Conditions - Permit Expiration**

    a. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9VAC5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

    b. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

    c. If an applicant submits a timely and complete application for an initial permit or renewal under 9VAC5-80-80 F, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9VAC5 Chapter 80, until the DEQ takes final action on the application under 9VAC5-80-150.

d. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9VAC5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9VAC5 Chapter 80.

e. If an applicant submits a timely and complete application under section 9VAC5-80-80 for a permit renewal but the DEQ fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9VAC5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

f. The protection under subsections F 1 and F 5 (ii) of section 9VAC5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9VAC5-80-80 D, the applicant fails to submit by the deadline specified in writing by the DEQ any additional information identified as being needed to process the application.

(9VAC5-80-80, 9VAC5-80-110, and 9VAC5-80-170)

74. **General Conditions - Recordkeeping and Reporting** - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

a. The date, place as defined in the permit, and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of such analyses; and

f. The operating conditions existing at the time of sampling or measurement.

(9VAC5-80-110)

75. **General Conditions - Recordkeeping and Reporting** - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

(9VAC5-80-110)

76. **General Conditions - Recordkeeping and Reporting** - The permittee shall submit the results of monitoring contained in any applicable requirement to the DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:

    a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and

    b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

        i. Exceedances of emissions limitations or operational restrictions;

        ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring or periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

        iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

    c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semiannual reporting period."

    (9VAC5-80-110)

77. **General Conditions - Annual Compliance Certification** - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to the Environmental Protection Agency (EPA) and the DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a) (3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:

    a. The time period included in the certification. The time period to be addressed is January 1 to December 31;

b. The identification of each term or condition of the permit that is the basis of the certification;

c. The compliance status;

d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;

e. Consistent with subsection 9VAC5-80-110, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;

f. Such other facts as the permit may require to determine the compliance status of the source; and

g. One copy of the annual compliance certification shall be submitted to the EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD_Permits@epa.gov

(9VAC5-80-110)

78. **General Conditions - Permit Deviation Reporting** - The permittee shall notify the BRRO Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semiannual compliance monitoring report pursuant to Condition 76 of this permit.
(9VAC5-80-110 F. 2)

79. **General Conditions - Failure/Malfunction Reporting** - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall no later than four daytime business hours after the malfunction is discovered, notify the BRRO Regional Office of such failure or malfunction and within 14 days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the BRRO Regional Office.
(9VAC5-80-110 and 9VAC5-20-180)

80. **General Conditions - Severability** - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9VAC5-80-110)

81. **General Conditions - Duty to Comply** - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9VAC5-80-110)

82. **General Conditions - Need to Halt or Reduce Activity not a Defense** - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9VAC5-80-110)

83. **General Conditions - Permit Modification** - A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9VAC5-80-50, 9VAC5-80-1100, 9VAC5-80-1605, or 9VAC5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9VAC80-110, 9VAC5-80-190, and 9VAC5-80-260)

84. **General Conditions - Property Rights** - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9VAC5-80-110)

85. **General Conditions - Duty to Submit Information** - The permittee shall furnish to the DEQ, within a reasonable time, any information that the DEQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the DEQ along with a claim of confidentiality.
(9VAC5-80-110)

86. **General Conditions - Duty to Submit Information** - Any document (including reports) required in a permit condition to be submitted to the DEQ shall contain a certification by a responsible official that meets the requirements of 9VAC5-80-80 G.
(9VAC5-80-110)

87. **General Conditions - Duty to Pay Permit Fees** - The owner of any source for which a permit was issued under 9VAC5-80-50 through 9VAC5-80-300 shall pay annual emissions fees, as applicable, consistent with the requirements of 9VAC5-80-310 through 9VAC5-80-350 and annual maintenance fees, as applicable, consistent with the requirements of 9VAC5-80-2310 through 9VAC5-80-2350.
(9VAC5-80-110, 9VAC5-80-310 et seq., and 9VAC5-80-2310 et seq.)

88. **General Conditions - Fugitive Dust Emission Standards** - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

    a. Use, where possible, of 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;

    b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

    c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;

    d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

    e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

    (9VAC5-80-110 and 9VAC5-50-90)

89. **General Conditions - Startup, Shutdown, and Malfunction** - At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the DEQ, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9VAC5-80-110 and 9VAC5-50-20 E)

90. **General Conditions - Alternative Operating Scenarios** - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9VAC5 Chapter 80, Article 1.
(9VAC5-80-110)

91. **General Conditions - Inspection and Entry Requirements** - The permittee shall allow the DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

    a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

    b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

    d. Sample or monitor at reasonable times' substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

    (9VAC5-80-110)

92. **General Conditions - Reopening for Cause** - The permit shall be reopened by the DEQ if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9VAC5-80-80 F. The conditions for reopening a permit are as follows:

    a. The permit shall be reopened if the DEQ or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

    b. The permit shall be reopened if the administrator or the DEQ determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

c. The permit shall not be reopened by the DEQ if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9VAC5-80-110 D.

(9VAC5-80-110)

93. **General Conditions - Permit Availability** - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to the DEQ upon request. (9VAC5-80-110 and 9VAC5-80-150)

94. **General Conditions - Transfer of Permits**

a. No person shall transfer a permit from one location to another, unless authorized under 9VAC5-80-130, or from one piece of equipment to another.

b. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the DEQ of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9VAC5-80-200.

c. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the DEQ of the change in source name within 30 days of the name change and shall comply with the requirements of 9VAC5-80-200.

(9VAC5-80-110 and 9VAC5-80-160)

95. **General Conditions - Permit Revocation or Termination for Cause** - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9VAC5 Chapter 80 Article 1. The DEQ may suspend, under such conditions and for such period of time as the DEQ may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9VAC5-80-110, 9VAC5-80-190 C, and 9VAC5-80-260)

96. **General Conditions - Duty to Supplement or Correct Application** - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9VAC5-80-110 and 9VAC5-80-80 E)

97. **General Conditions - Stratospheric Ozone Protection** - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(9VAC5-80-110 and 40 CFR Part 82)

98. **General Conditions - Asbestos Requirements** - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9VAC5-60-70 and 9VAC5-80-110)

99. **General Conditions - Accidental Release Prevention** - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(9VAC5-80-110 and 40 CFR Part 68)

100. **General Conditions - Changes to Permits for Emissions Trading** - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9VAC5-80-110)

101. **General Conditions - Emissions Trading** - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

    a. All terms and conditions required under 9VAC5-80-110, except subsection N, shall be included to determine compliance.

    b. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

    c. The owner shall meet all applicable requirements including the requirements of 9VAC5-80-50 through 9VAC5-80-300.

    (9VAC5-80-110)