



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

STATIONARY SOURCE PERMIT TO OPERATE

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

Northrop Grumman Systems Corporation
2980 Fairview Park Drive
Falls Church, Virginia 22042
Registration No.: 81917

is authorized to operate:

an advanced electronics assembly and testing facility

located at

1001 Shenandoah Village Drive
Waynesboro, Virginia 22980

in accordance with the Conditions of this permit.

Approved on September 30, 2026

A handwritten signature in black ink, reading "Brandon D. Kiracofe".

Brandon D. Kiracofe
Regional Director, Valley Region

Permit consists of 6 pages.

Permit Conditions 1 to 10.

Attachment A – Hazardous Air Pollutant List, 6 pages

INTRODUCTION

This permit approval is based on the following permit applications:

Application Signature Date	Application Amendment Date	Application Additional Information Received Date
October 31, 2025	--	December 4, 2025 December 8, 2025 December 16, 2025 January 5, 2026 January 20, 2026 February 5, 2026

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. In addition, this facility may be subject to additional applicable requirements not listed in this permit document.

Words or terms used in this permit document shall have meanings as provided in 9VAC5-10-10 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 Department of Environmental Quality (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 9VAC 5-170-60 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 at this facility covered by this permit consists of the following:

Equipment to be operated			
Reference No.	Equipment Description	Rated Capacity	Referenced Federal Requirements
SB1 SB2	<u>Spray Coating</u> (2 booths) Spec: Spray coating via manual operation using HVLP guns	Five guns per booth 0.05 gal/min (each)	--
RECOVER-1	<u>Solvent Recovery</u> Spec: Batch recovery / recycle of spent solvents	11 gal/hr	--
CT-1 CT-2 CT-3	<u>Cooling Towers</u> (3 total) Make: EVAPCO AXS12-17N22-FM	2,100 gal/min (each) 0.008% drift loss	--
SOLV	<u>Solvent Consumption</u> Spec: Facility solvent usage associated with surface preparation, adhesive breakdown, spray booth cleaning	--	--
B1 B2 B3	<u>Boilers</u> (3 total) Fuel: Natural gas	3.5 MMBtu/hr (each)	--
E-GEN1 E-GEN2	<u>Internal Combustion Engines</u> (2 total) Spec: Emergency engine-generator set Fuel: Diesel	500 kW (each)	--

Specifications provided above are for informational purposes only and do not form enforceable terms or conditions of the permit document.

PROCESS REQUIREMENTS

- Emission Limits: Hazardous Air Pollutants** – Hazardous air pollutant (HAP) emissions, as defined by §112(b) of the Clean Air Act, from the facility shall not exceed 9.9 tons per year of any individual HAP or 24.9 tons per year of any combination, calculated monthly as the sum of each consecutive 12-month period. HAPs which are not accompanied by a specific CAS number (as listed in Attachment A) shall be calculated as the sum of all compounds containing the named chemical when determining compliance with the individual HAP emissions limitation of 9.9 tons per year.
(9VAC5-80-850)

RECORDS

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

- a. Globally Harmonized System Safety Data Sheets (GHS SDS), Material Safety Data Sheets (MSDS), Certified Product Data Sheets (CPDS), or other vendor information as approved by DEQ, for materials that may be emitted from the permitted operations;
- b. Monthly and annual throughput (pounds) of each material containing HAPs used at the facility. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period;
- c. Monthly and annual emissions (tons) to verify compliance with the individual and total HAP emission limitations in Condition 1. Emissions shall be calculated assuming all the HAPs present in the materials are emitted;
- d. Records of maintenance, operating procedures, and training as required by Condition 5; and
- e. Records of bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment as required by Condition 6.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9VAC5-80-900 and 9VAC5-50-50)

GENERAL CONDITIONS

3. Permit Suspension/Revocation – This permit may be suspended or revoked if the permittee:

- a. Knowingly makes material misstatements in the permit application or any amendments to it;
- b. Fails to comply with the conditions of this permit;
- c. Fails to comply with any emission standards applicable to a permitted emissions unit;
- d. Causes emissions from the stationary source which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard; or
- e. Fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time an application for this permit is submitted.
- f. Fails to comply with the applicable provisions of Articles 6, 8, and 9 of 9VAC5 Chapter 80.

(9VAC5-80-1010)

4. 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)

5. **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; and
- 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 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)

6. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause),

corrective action, preventive measures taken and name of person generating the record.
(9VAC5-20-180 J and 9VAC5-80-850)

7. **Notification for Facility or Control Equipment Malfunction** – The permittee shall furnish notification to the DEQ of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour. 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 14 days 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 DEQ.
(9VAC5-20-180 C and 9VAC5-80-850)
8. **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)
9. **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 DEQ of the change of ownership within 30 days of the transfer.
(9VAC5-80-940)
10. **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)

ATTACHMENT A – Hazardous Air Pollutants

CAS #	HAZARDOUS AIR POLLUTANT (HAP)	HAP CLASS
50000	FORMALDEHYDE	VOC
51285	2,4-DINITROPHENOL	VOC
51796	ETHYL CARBAMATE (URETHANE)	VOC
53963	2-ACETYLAMINOFLUORENE	VOC
56235	CARBON TETRACHLORIDE	VOC
56382	PARATHION	VOC
57147	1,1-DIMETHYL HYDRAZINE	VOC
57578	BETA-PROPIOLACTONE	VOC
57749	CHLORDANE	VOC
58899	LINDANE(ALL ISOMERS)	VOC
59892	N-NITROSOMORPHOLINE	VOC
60117	4-DIMETHYL AMINOAZOBENZENE	VOC
60344	METHYL HYDRAZINE	VOC
60355	ACETAMIDE	VOC
62533	ANILINE	VOC
62737	DICHLORVOS	VOC
62759	N-NITROSODIMETHYLAMINE	VOC
63252	CARBARYL	VOC
64675	DIETHYL SULFATE	VOC
67561	METHANOL	VOC
67663	CHLOROFORM	VOC
67721	HEXACHLOROETHANE	VOC
68122	DIMETHYL FORMAMIDE	VOC
71432	BENZENE (INC. FROM GASOLINE)	VOC
71556	METHYL CHLOROFORM (1,1,1-TRICHLOROETHANE)	----
72435	METHOXYCHLOR	VOC
72559	DDE (1,1-DICHLORO-2,2-BIS(P-HLOROPHENYL)ETHYLENE)	VOC
74839	METHYL BROMIDE (BROMOMETHANE)	VOC
74873	METHYL CHLORIDE (CHLOROMETHANE)	VOC
74884	METHYL IODIDE (Iodomethane)	VOC
75003	ETHYL CHLORIDE (CHLOROETHANE)	VOC
75014	VINYL CHLORIDE	VOC
75058	ACETONITRILE	VOC
75070	ACETALDEHYDE	VOC
75092	METHYLENE CHLORIDE (DICHLOROMETHANE)	----
75150	CARBON DISULFIDE	VOC
75218	ETHYLENE OXIDE	VOC
75252	BROMOFORM	VOC
75343	ETHYLIDENE DICHLORIDE (1,1 DICHLOROETHANE)	VOC
75354	VINYLDENE CHLORIDE (1,1,-DICHLOROETHYLENE)	VOC
75445	PHOSGENE	VOC
75558	1,2-PROPYLENEIMINE (2-METHYL AZIRIDINE)	VOC
75569	PROPYLENE OXIDE	VOC
76448	HEPTACHLOR	VOC
77474	HEXACHLOROCYCLOPENTADIENE	VOC
77781	DIMETHYL SULFATE	VOC
78591	ISOPHORONE	VOC
78875	PROPYLENE DICHLORIDE (1,2-DICHLOROPROPANE)	VOC
79005	1,1,2-TRICHLOROETHANE	VOC

CAS #	HAZARDOUS AIR POLLUTANT (HAP)	HAP CLASS
79016	TRICHLOROETHYLENE	VOC
79061	ACRYLAMIDE	VOC
79107	ACRYLIC ACID	VOC
79118	CHLOROACETIC ACID	VOC
79345	1,1,2,2-TETRACHLOROETHANE	VOC
79447	DIMETHYL CARBAMOYL CHLORIDE	VOC
79469	2-NITROPROPANE	VOC
80626	METHYL METHACRYLATE	VOC
82688	PENTACHLORONITROBENZENE (QUINTOBENZENE)	VOC
84742	DIBUTYL PHTHALATE	VOC
85449	PHTHALIC ANHYDRIDE	VOC
87683	HEXACHLOROBUTADIENE	VOC
87865	PENTACHLOROPHENOL	VOC
88062	2,4,6- TRICHLOROPHENOL	VOC
90040	o-ANISIDINE	VOC
91203	NAPHTHALENE	VOC
91225	QUINOLINE	VOC
91941	3,3',- DICHLOROBENZIDENE	VOC
92524	BIPHENYL	VOC
92671	4-AMINOBIIPHENYL	VOC
92875	BENZIDINE	VOC
92933	4-NITRODIPHENYL	VOC
94757	2,4-D, (2,4-DICHLOROPHENOXYACETIC ACID) SALTS AND ESTERS	VOC
95476	o-XYLENE	VOC
95487	o-CRESOL	VOC
95534	o-TOLUIDINE	VOC
95807	2,4- TOLUENE DIAMINE	VOC
95954	2,4,5- TRICHLOROPHENOL	VOC
96093	STYRENE OXIDE	VOC
96128	1,2- DIBROMO-3-CHLOROPROPANE	VOC
96457	ETHYLENE THIOUREA	VOC
98077	BENZOTRICHLORIDE	VOC
98828	CUMENE	VOC
98862	ACETOPHENONE	VOC
98953	NITROBENZENE	VOC
100027	4-NITROPHENOL	VOC
100414	ETHYL BENZENE	VOC
100425	STYRENE	VOC
100447	BENZYL CHLORIDE	VOC
101144	4,4'-METHYLENE BIS (2-CHLOROANILINE)	VOC
101688	METHYLENE DIPHENYL DIISOCYANATE (MDI)	VOC
101779	4,4- METHYLENE DIANILINE	VOC
106423	p-XYLENE	VOC
106445	p-CRESOL	VOC
106467	1,4-DICHLOROBENZENE(P)	VOC
106503	p-PHENYLENEDIAMINE	VOC
106514	QUINONE	VOC
106887	1,2-EPOXYBUTANE	VOC
106898	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	VOC
106934	ETHYLENE DIBROMIDE (DIBROMOETHANE)	VOC

CAS #	HAZARDOUS AIR POLLUTANT (HAP)	HAP CLASS
106945	1-BROMOPROPANE	VOC
106990	1,3 BUTADIENE	VOC
107028	ACROLEIN	VOC
107051	ALLYL CHLORIDE	VOC
107062	ETHYLENE DICHLORIDE (1,2 -DICHLOROETHANE)	VOC
107131	ACRYLONITRILE	VOC
107211	ETHYLENE GLYCOL	VOC
107302	CHLOROMETHYL METHYL ETHER	VOC
108054	VINYL ACETATE	VOC
108101	METHYL ISOBUTYL KETONE (HEXONE)	VOC
108316	MALEIC ANHYDRIDE	VOC
108383	M-XYLENE	VOC
108394	M-CRESOL	VOC
108883	TOLUENE	VOC
108907	CHLOROBENZENE	VOC
108952	PHENOL	VOC
109591	ISOPROPOXYETHANOL ³	VOC
109864	2-METHOXYETHANOL ³	VOC
110543	HEXANE	VOC
110805	2-ETHOXYETHANOL ³	VOC
111422	DIETHANOLAMINE	VOC
111444	DICHLOROETHYL ETHER (BIS(2-CHLORETHYL)ETHER)	VOC
114261	PROPOXUR (BAYGON)	VOC
117817	BIS(2-ETHYLHEXYL) PHTHALATE	VOC
118741	HEXACHLOROBENZENE	VOC
119904	3,3 DIMETHOXYBENZIDINE	VOC
119937	3,3'-DIMETHYL BENZIDINE	VOC
120809	CATECHOL	VOC
120821	1,2,4-TRICHLOROBENZENE	VOC
121142	2,4-DINITROTOLUENE	VOC
121448	TRIETHYLAMINE	VOC
121697	N,N- DIMETHYLANILINE (N,N-DIMETHYLANILINE)	VOC
122667	1,2-DIPHENYLHYDRAZINE	VOC
123319	HYDROQUINONE	VOC
123386	PROPIONALDEHYDE	VOC
123911	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	VOC
126998	CHLOROPRENE	VOC
127184	TETRACHLOROETHYLENE (PERCHLOROETHYLENE)	----
131113	DIMETHYL PHTHALATE	VOC
132649	DIBENZOFURANS	VOC
133062	CAPTAN	VOC
133904	CHLORAMBEN	VOC
140885	ETHYL ACRYLATE	VOC
151564	ETHYLENIMINE (AZIRIDINE)	VOC
156627	CALCIUM CYANAMIDE	VOC
302012	HYDRAZINE	----
334883	DIAZOMETHANE	VOC
463581	CARBONYL SULFIDE	VOC
510156	CHLOROBENZILATE	VOC
532274	2-CHLOROACETOPHENONE	VOC

CAS #	HAZARDOUS AIR POLLUTANT (HAP)	HAP CLASS
534521	4,6-DINITRO-O-CRESOL,AND SALTS	VOC
540841	2,2,4- TRIMETHYLPENTANE	VOC
542756	1,3-DICHLOROPROPENE	VOC
542881	BIS(CHLOROMETHYL) ETHER	VOC
584849	2,4- TOLUENE DIISOCYANATE	VOC
593602	VINYL BROMIDE	VOC
624839	METHYL ISOCYANATE	VOC
680319	HEXAMETHYL PHOSPHOROAMIDE	VOC
684935	N-NITROSO-N-METHYLUREA	VOC
822060	HEXAMETHYLENE-1,6-DIISOCYANATE	VOC
1120714	1,3- PROPANE SULTONE	VOC
1319773	CRESOLS/CRESYLIC ACID(ISOMERS AND MIXTURE)	VOC
1330207	XYLENES (ISOMERS AND MIXTURE)	VOC
1336363	POLYCHLORINATED BIPHENYLS (AROCLORS)	VOC
1582098	TRIFLURALIN	VOC
1634044	METHYL TERT BUTYL ETHER	VOC
1746016	2,3,7,8- TETRACHLORODIBENZO -P-DIOXIN	VOC
7439921	LEAD COMPOUNDS ^{1,5} (as Pb)	PM
7439965	MANGANESE COMPOUNDS ^{1,5} (as Mn)	PM
7439976	MERCURY COMPOUNDS ^{1,5} (as Hg) (ALKYL)	PM
7439976	MERCURY COMPOUNDS ^{1,5} (VAPOR, ALL EXCEPT ALKYL) (as Hg)	PM
7439976	MERCURY COMPOUNDS ^{1,5} (as Hg) (ARYL & INORGANIC)	PM
7440020	NICKEL COMPOUNDS ^{1,5} (as Ni) (METAL & INSOLUBLE)	PM
7440020	NICKEL COMPOUNDS ^{1,5} (as Ni) (SOLUBLE)	PM
7440360	ANTIMONY COMPOUNDS ^{1,5} (as Sb)	PM
7440382	ARSENIC COMPOUNDS ^{1,5} (as As) (INORGANIC & ARSINE)	PM
7440417	BERYLLIUM COMPOUNDS ^{1,5} (as Be)	PM
7440439	CADMIUM COMPOUNDS ^{1,5} (as Cd)	PM
7440473	CHROMIUM II & III COMPOUNDS ^{1,5} (as Cr)	PM
7440473	CHROMIUM VI COMPOUNDS (as Cr)	PM
7440484	COBALT COMPOUNDS ^{1,5} (as Co)	PM
7550450	TITANIUM TETRACHLORIDE	----
7647010	HYDROCHLORIC ACID (HYDROGEN CHLORIDE)	----
7664393	HYDROGEN FLUORIDE (HYDROFLUORIC ACID)	----
7723140	PHOSPHORUS	PM
7758976	LEAD CHROMATE ⁵ (as Pb)	PM
7758976	LEAD CHROMATE ⁵ (as Cr)	PM
7782492	SELENIUM COMPOUNDS ^{1,5} (as Se)	PM
7782505	CHLORINE	----
7803512	PHOSPHINE	----
8001352	TOXAPHENE (CHLORINATED CAMPHENE)	VOC
13463393	NICKEL CARBONYL (as Ni)	PM
----	COKE OVEN EMISSIONS	VOC
----	CYANIDE COMPOUNDS ^{1,2,5} (as Cn) ³	VOC

CAS #	HAZARDOUS AIR POLLUTANT (HAP)	HAP CLASS
----	GLYCOL ETHERS ^{1, 3, 5}	VOC
----	POLYCYCLIC ORGANIC MATTER ^{4,5}	VOC

The following pollutants and pollutant source categories are listed as HAPs under section 112(b) but are excluded from the definitions of toxics in the Virginia Regulations:

- A. Asbestos NESHAP, 40 CFR 61 Subpart M (for asbestos removal, demolition and installation contact Virginia Department of Labor - 804/786-8009).
- B. Fine Mineral Fibers.
- C. Radionuclides (including radon).

¹ For all listings above which contain the word “compounds” and for the glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical’s infrastructure.

² X'CN where X = H' or any other group where formal dissociation may occur. For example, KCN or Ca(CN)₂.

³ Glycol ethers include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH₂CH₂)_n-OR' where:

n = 1, 2, or 3

R = alkyl C7 or less, or phenyl or alkyl substituted phenyl

R' = H, or alkyl C7 or less, or carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate

2-Ethoxyethanol, Isopropoxyethanol, and 2-Methoxyethanol meet this definition, but are considered as only one HAP (glycol ethers) for Title V and CAAA §112 purposes. They are also listed individually in this table as a reminder that because they have TLVs, they must be considered separately under Virginia's Toxic Pollutant regulations (9VAC5 Chapter 60, Articles 4 and 5).

⁴ Includes substituted and/or unsubstituted polycyclic aromatic hydrocarbons and aromatic heterocycle compounds, with two or more fused rings, at least one of which is benzenoid in structure. Polycyclic Organic Matter is a mixture of organic compounds containing one or more of these polycyclic aromatic chemicals which include dioxins and furans. Polycyclic Organic Matter is generally formed or emitted during thermal processes including (1) incomplete combustion, (2) pyrolysis, (3) the volatilization, distillation or processing of fossil fuels or bitumens, or (4) the distillation or thermal processing of non-fossil fuels.

- ⁵ Emissions for pollutant listings which do not have a specific CAS number must be totaled when determining major source applicability under Title V and for HAP regulations (i.e. 112(g) & (d)).