State of Utah

SPENCER J. COX
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Department of
Environmental Quality

Tim Davis
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-IN101520033-25

September 22, 2025

Jeff Schmidt
Northrop Grumman Systems Corp.
PO Box 707
Brigham City, UT 84302-0707
j.schmidt@ngc.com

Dear Mr. Schmidt:

Re: Intent to Approve: Modification to Approval Order DAQE-AN101520032-24 to Add Equipment and Recalculate Emissions
Project Number: N101520033

The attached document is the Intent to Approve (ITA) for the above-referenced project. The ITA is subject to public review. Any comments received shall be considered before an Approval Order (AO) is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Future correspondence on this ITA should include the engineer's name, **Katie Andersen,** as well as the DAQE number as shown on the upper right-hand corner of this letter. Katie Andersen, can be reached at (385) 515-1748 or kandersen@utah.gov, if you have any questions.

Sincerely,

Alan D. Humpherys, Manager
New Source Review Section

ADH:KA:jg

cc: Davis County Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

INTENT TO APPROVE
DAQE-IN101520033-25
Modification to Approval Order DAQE-AN101520032-24 to Add Equipment and Recalculate Emissions

Prepared By
Katie Andersen, Engineer
(385) 515-1748
kandersen@utah.gov

Issued to
Northrop Grumman Systems Corp. - Clearfield Freeport Center AS

Issued On
September 22, 2025

New Source Review Section Manager
Alan D. Humpherys

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GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
Northrop Grumman Systems Corp.

Source Name
Northrop Grumman Systems Corp. - Clearfield Freeport Center AS

Mailing Address
PO Box 707
Brigham City, UT 84302-0707

Physical Address
Freeport Center 13th Street
Clearfield, UT 84016

Source Contact
Name: Jeff Schmidt
Phone: (801) 774-4171
Email: j.schmidt@ngc.com

UTM Coordinates
414,000 m Easting
4,550,000 m Northing
Datum NAD83
UTM Zone 12

SIC code 3728 (Aircraft Parts & Auxiliary Equipment, NEC)

SOURCE INFORMATION

General Description
Northrop Grumman Systems Corp. (NGSC) manufactures aerospace composite structures, specifically for commercial and defense contractors, at their Freeport Center plant located in Clearfield, Davis County. General steps in the manufacturing process include the following: raw material receipt and storage, material and tool preparation, fabrication, curing, finishing, testing, and packaging and shipping. As part of these steps, NGSC uses natural gas-fired equipment, including curing ovens, boilers, burners, hot rooms, autoclaves, and heated paint booths; operates dust collectors for control of various machining processes; has painting and welding operations; has various natural gas-fired and diesel-fired emergency generators; and has various laboratory and chemical mixing operations.

This Freeport Center (PS) (DAQ Site ID 10152) is adjacent to the NGSC Clearfield Plant (AS) (DAQ Site ID 10162). Both existing facilities belong to the same major industrial grouping and are owned/operated by NGSC. For the purposes of permitting and modeling, the DAQ considers the PS (Site ID 10152) and the AS (Site ID 10162) to be one stationary source due to the above-mentioned criteria. For the purposes of compliance inspections, the DAQ will maintain two separate approval orders. The total emissions for the two sites are below major source thresholds and are as follows: 23.71 tpy of PM_{10}, 23.71 tpy of $PM_{2.5}$, 49.44 tpy of NO_x, 0.49 tpy of SO_2, 46.59 tpy of CO, 46.50 tpy of VOCs, 12.82 tpy of HAPs, and 94,540 tpy of CO_2 Equivalent.

NSR Classification
Minor Modification at Minor Source

Source Classification
Located in Northern Wasatch Front O3 NAA, Salt Lake City UT $PM_{2.5}$ NAA
Davis County
Airs Source Size: B

Applicable Federal Standards
NSPS (Part 60), A: General Provisions
NSPS (Part 60), JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
MACT (Part 63), A: General Provisions
MACT (Part 63), ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
MACT (Part 63), WWWWWW: National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations

Project Description
NGSC has requested a modification to AO DAQE-AN101520031-24, issued April 9, 2024, for the following changes:

1. Add two (2) electric autoclaves;
2. Add two (2) cooling towers;
3. Add one (1) 4.0 MMBtu/hr natural gas-fired oven;
4. Update site-wide emissions to reflect the current PTE
5. Update the equipment list to reflect an equipment ownership change between the Freeport Center AO (Site ID 10152) and the Clearfield Plant AO (Site ID 10162).

The addition of new equipment will increase emissions as follows: 1.23 tpy of CO, 1.09 tpy of NO_x, 0.12 tpy of PM_{10}, 0.12 tpy of $PM_{2.5}$, 0.01 tpy of SO_2, 0.24 tpy of VOC, and 0.03 tpy of HAPs. The site-wide emissions and equipment list are being updated to reflect a responsibility change between the NGSC Aeronautical Systems Group Freeport Center AO and the NGSC Propulsion Systems Group Clearfield Plant AO. For the purposes of permitting and modeling, the DAQ considers the Freeport Center (Site ID 10152) and the Clearfield Plant (Site ID 10162) to be one stationary source because the facilities belong to the same major industrial grouping and are owned/operated by NGSC. For the purposes of compliance inspections, the DAQ will maintain two separate approval orders. The total emissions for the two sites are as follows: 23.71 tpy of PM_{10}, 23.71 tpy of $PM_{2.5}$, 49.44 tpy of NO_x, 0.48 tpy of SO_2, 46.59 tpy of CO, 46.50 tpy of VOCs, 12.82 tpy of HAPs, and 94,572 tpy of CO_2 Equivalent.

SUMMARY OF EMISSIONS

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

Criteria Pollutant	Change (TPY)	Total (TPY)
CO_2 Equivalent	55472	79184.00
Carbon Monoxide	23.79	37.69
Nitrogen Oxides	19.12	37.78
Particulate Matter - PM_{10}	8.47	21.57

Particulate Matter - $PM_{2.5}$	8.68	21.57
Sulfur Dioxide	0.24	0.39
Volatile Organic Compounds	-32	37.00

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Chromium Compounds (CAS #CMJ500)	-25	2
Ethyl Benzene (CAS #100414)	-3680	320
Ethylene Glycol (CAS #107211)	-3780	220
Formaldehyde (CAS #50000)	-880	120
Generic HAPs (CAS #GHAPS)	-1900	100
Glycol Ethers (CAS #EDF109)	-3840	160
Hexane (CAS #110543)	-1620	2380
Methyl Isobutyl Ketone (Hexone) (CAS #108101)	-2780	1220
Methylene Chloride (Dichloromethane) (CAS #75092)	-3918	82
Methylene Diphenyl Diisocyanate (MDI) (CAS #101688)	300	320
Nickel Compounds (CAS #NDB000)	-18	22
Phenol (CAS #108952)	-3996	4
Toluene (CAS #108883)	-3600	400
Xylenes (Isomers And Mixture) (CAS #1330207)	-2720	1280
	Change (TPY)	**Total (TPY)**
Total HAPs	-41.95	3.32

PUBLIC NOTICE STATEMENT

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Director.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the intent to approve will be published in the Ogden Standard Examiner on September 24, 2025. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing within 15 days of publication, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

SECTION I: GENERAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

I.1	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
I.2	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]

I.3	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
I.4	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
I.5	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.6	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
I.7	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]
I.8	The owner/operator shall submit documentation of the status of construction or modification to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18]

SECTION II: PERMITTED EQUIPMENT

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.A THE APPROVED EQUIPMENT

II.A.1	**Freeport Center** Aerospace Composite Components Manufacturing Facility
II.A.2	**Six (6) Electric Curing Ovens** Ovens: O-21, O-36, O-48, O-159, O-160, IR&D Oven
II.A.3	**One (1) IR&D Electric Kiln**

II.A.4	**Ten (10) Natural Gas-Fired Ovens - 1 New** **Oven:** **Rating:** COV1 2.8 MMBtu/hr COV2 4.0 MMBtu/hr O-30 3.5 MMBtu/hr O-22 2.0 MMBtu/hr O-24 0.6 MMBtu/hr O-39 6.4 MMBtu/hr O-41 1.0 MMBtu/hr O-47 3.0 MMBtu/hr O-52 1.0 MMBtu/hr O-59 4.0 MMBtu/hr - New
II.A.5	**Five (5) Hot Rooms** Rooms: AHU1, AHU2, AHU3, AHU4, HR1 Fuel: Natural Gas Maximum Rating: < 2.0 MMBtu/hr (each)
II.A.6	**Two (2) Autoclaves** **Autoclave:** **Rating:** AC1 12.0 MMBtu/hr AC12 15.0 MMBtu/hr Fuel: Natural Gas
II.A.7	**Six (6) Low-NO_x Autoclaves** Autoclaves: CAC1, CAC2, CAC3, CAC4, CAC5 Fuel: Natural Gas Rating: 15.8 MMBtu/hr (each) Autoclave AC-6: Fuel: Natural Gas Rating: 24.3 MMBtu/hr
II.A.8	**Ventilation Rooms** Mandrel Prep Rooms; Paint Touchup Room; Mold Prep Rooms
II.A.9	**Eight (8) Laboratory Hoods** FUH-3; FUH-7; AT-401073; FUH-5; FUH-2; AT-401706; FUH-1; 2228
II.A.10	**Seven (7) Exhaust Hoods** One (1) Welding Fume Exhauster, One (1) Battery Charging Area Exhaust Hood M-5 FX-105 FX-106 Two (2) Paint Mixing Fume Hoods

II.A.11	**Four (4) Heated Paint Booths** **Paint Booth: Heater Rating:** SB10 750 KBtu/hr* SB11 750 KBtu/hr SB12 950 KBtu/hr* SB13 950 KBtu/hr Fuel: Natural Gas *NESHAP Subpart HHHHHH Compliant
II.A.12	**Six (6) Spray Booths** SB7, SB5, SB14, IFE SB, Topcoat SB, SB (G12) Control: Fabric Filters (each)
II.A.13	**One (1) Ceramics Spray Booth** Control: High efficiency 3-stage fabric filters
II.A.14	**One (1) Arc Welding Spray Booth** Control: Pulse jet baghouse (DC-58) Baghouse Maximum Flow Rate: 25,300 acfm MACT Applicability: Subpart WWWWWW
II.A.15	**Five (5) Natural Gas-Fired Emergency Generators** **Engine: Rating:** GE 4 35 kW GE 8 80 kW GE 9 240 kW NSPS Applicability: None MACT Applicability: Subpart ZZZZ **Engine: Rating:** GE 10 45 kW GE 12 85 kW NSPS Applicability: Subpart JJJJ MACT Applicability: Subpart ZZZZ
II.A.16	**Six (6) Dust Collectors** DC-27, DC-29, DC-30, DC-36, DC-37, DC-38
II.A.17	**Miscellaneous Equipment** Miscellaneous vacuum pumps Miscellaneous Air compressors
II.A.18	**Miscellaneous Combustion Equipment** Various Boilers and Heaters Maximum Rating: <5.0 MMBtu/hr Fuel: Natural Gas
II.A.19	**Twenty-One (21) Wet Cooling Towers - 2 New** CT-6, CT-7, CT-9, CT-13, CT-14, CT-15, CT-16, CT-17, CT-18, CT-19, CT-20, CT-21, CT-22, CT-23, CT-24, CT-25, CT-26, CT-27, CT (G12), CT ACCE (NEW), CT AC16 (NEW) Controls: High Efficiency Drift Eliminators (each)

II.A.20	**Informational-Only Equipment*** Fourteen (14) electrical sample curing ovens One (1) electrical Hot room Ten (10) electrical autoclaves - 2 New Miscellaneous Dust Collectors, including portable and orifice scrubbers One (1) Spray Gun Cleaning Station 3D Printers *This equipment vents internally and is listed for informational purposes only
II.A.21	**Informational-Only Equipment* (Continued)** Three (3) Hot Drape Forming Machines One (1) Ductless Fume Hood Two (2) Reticulators One (1) Dry Cooling Tower *This equipment vents internally and is listed for informational purposes only

SECTION II: SPECIAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	**Site-Wide Requirements**
II.B.1.a	The owner/operator shall not allow visible emissions to exceed 10% opacity on-site. [R307-401-8]
II.B.1.a.1	Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-401-8]
II.B.1.b	The owner/operator shall not exceed the following operational limits: A. CAC1, CAC2, CAC3, CAC4, CAC5 - 37,230 hours per rolling 12 month period, combined B. All other natural gas-fired ovens, low NO_x autoclaves, and natural gas-fired autoclaves - 7,446 hours per rolling 12 month period each. [R307-401-8]

II.B.1.b.1	The owner/operator shall: A. Determine hours of operation by monitoring and maintaining an operations log B. Record hours of operations daily C. Use the hours of operation to calculate a new rolling 12-month total by the 20th day of each month using data from the previous 12 months D. Keep hours of operation records for all periods the plant is in operation. [R307-401-8]
II.B.1.c	The owner/operator shall comply with all applicable requirements of UAC R307-325 (Ozone Nonattainment and Maintenance Areas: General Requirements) and UAC R307-355 (Control of Emissions from Aerospace Manufacture and Rework Facilities), [R307-355]
II.B.2	**VOC & HAP Requirements**
II.B.2.a	The owner/operator shall not emit more than the following from all evaporative sources on site: A. 36.84 tons per rolling 12-month period of VOCs B. 1 pound per rolling 12-month period of Cadmium C. 2 pounds per rolling 12-month period of Chromium Compounds D. 125 pounds per rolling 12-month period of Formaldehyde E. 154 pounds per rolling 12-month period of Glycol Ethers F. 2,375 pounds per rolling 12-month period of Hexane G. 323 pounds per rolling 12-month period of Methylene Diphenyl Diisocyanate H. 1,228 pounds per rolling 12-month period of Methyl Isobutyl Ketone I. 21 pounds per rolling 12-month period of Nickel Compounds J. 400 pounds per rolling 12-month period of Toluene K. 1,281 pounds per rolling 12-month period of Xylene L. 100 pounds per rolling 12-month period of any other Hazardous Air Pollutant M. 3.32 tons per rolling 12-month period of all HAPs combined. [R307-401-8]

II.B.2.a.1	The owner/operator shall calculate a new 12-month total by the 20th day of each month using data from the previous 12 months. The owner/operator shall use a mass-balance method to calculate emissions from evaporative sources. The owner/operator may use the following equations with applicable units to comply with the mass-balance method: VOCs = [% VOCs by Weight/100] x [Density] x [Volume Consumed] Non-Metal HAP = [% HAP by Weight/100] x [Density] x [Volume Consumed] Metal HAP = [% HAP by Weight/100] x [Density] x [Volume Consumed] x [filter control efficiency] [R307-401-8]
II.B.2.a.2	The owner/operator shall use a mass-balance method to quantify any amount of VOCs and HAPs reclaimed. The owner/operator shall subtract the amount of VOCs and HAPs reclaimed from the quantities calculated above to provide the monthly total emissions of VOCs and HAPs. [R307-401-8]
II.B.2.a.3	The owner/operator shall keep records each month of the following: A. The name (as per SDS) of the VOC- and HAP-emitting material B. The maximum percent by weight of VOCs and each HAP in each material used C. The density of each material used D. The volume of each VOC- and HAP-emitting material used E. The amount of VOCs and the amount of each HAP emitted from each material F. The amount of VOCs and the amount of each HAP reclaimed and/or controlled from each material G. The total amount of VOCs, the total amount of each HAP, and the total amount of all HAPs combined emitted from all materials (in tons). [R307-401-8]
II.B.3	**Paint and Arc Welding Booth Requirements**
II.B.3.a	The owner/operator shall equip each paint booth with paint arrestor particulate filters to control particulate emissions. All exhaust air from the paint booths shall be routed through the filters before venting to the atmosphere. [R307-401-8]
II.B.3.b	The paint booths shall be equipped with high volume low pressure (HVLP) spray guns, or an equivalent method, to control VOC emissions. [R307-355-6]
II.B.3.c	The owner/operator shall control the arc welding spray booth with a baghouse. [R307-401-8]
II.B.3.d	The owner/operator shall install a manometer or magnehelic pressure gauge to measure the differential pressure across the arc welding spray booth baghouse. The baghouse shall operate within the static pressure range recommended by the manufacturer for normal operations. [R307-401-8]

II.B.3.d.1	Pressure drop readings shall be recorded at least once during each day of operation while the baghouse is operating. Records documenting the pressure drop shall be kept in a log and shall include the following: A. Unit identification B. Manufacturer-recommended pressure drop for the unit C. Daily pressure drop readings D. Date of reading. [R307-401-8]
II.B.3.d.2	The pressure gauge shall be located such that an inspector/operator can safely read the indicator at any time. [R307-401-8]
II.B.3.d.3	The instrument shall be calibrated in accordance with the manufacturer's instructions or recommendations or replaced at least once every 12 months. Documentation of calibrations and replacements shall be maintained. [R307-401-8]
II.B.4	**Emergency Engine Requirements**
II.B.4.a	The owner/operator shall not operate each emergency engine on site for more than 100 hours per calendar year during non-emergency situations. There is no time limit on the use of the engines during emergencies. [40 CFR 63 Subpart ZZZZ, R307-401-8]
II.B.4.a.1	To determine compliance with a calendar year total, the owner/operator shall calculate a new yearly total by January 31st using data from the previous calendar year. Records documenting the operation of each emergency engine shall be kept in a log and shall include the following: A. The date the emergency engine was used B. The duration of operation in hours C. The reason for the emergency engine usage. [40 CFR 63 Subpart ZZZZ, R307-401-8]
II.B.4.a.2	To determine the duration of operation, the owner/operator shall install a non-resettable hour meter for each emergency engine. [40 CFR 63 Subpart ZZZZ, R307-401-8]
II.B.5	**Fuel Requirements**
II.B.5.a	The owner/operator shall use only natural gas as a fuel in all fuel-burning furnaces, ovens, boilers, heaters, and emergency engines on site. [R307-401-8]

PERMIT HISTORY

This Approval Order shall supersede (if a modification) or will be based on the following documents:

Supersedes	AO AN101520032-24 dated April 9, 2024
Is Derived From	NOI dated November 13, 2024
Incorporates	Additional Information dated December 19, 2024
Incorporates	Additional Information dated January 6, 2025
Incorporates	Additional Information dated January 14, 2025
Incorporates	DAQE-MN101520033-25 dated March 21, 2025

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by Environmental Protection Agency to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent - Title 40 of the Code of Federal Regulations Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal Division of Air Quality use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - Title 40 of the Code of Federal Regulations 52.21 (b)(49)(i)
GWP	Global Warming Potential - Title 40 of the Code of Federal Regulations Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/YR	Pounds per year
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO_x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO_2	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds