State of Utah

SPENCER J. COX
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Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-AN101520028-22

September 26, 2022

Jeff Schmidt
ATK Space Systems, LLC
PO Box 160433
Clearfield, UT 84016-0433
j.schmidt@ngc.com

Dear Mr. Schmidt:

Re: Approval Order:
Modification to Approval Order DAQE-AN101520027-21 to Add Equipment
Project Number: N101520028

The attached Approval Order (AO) is issued pursuant to the Notice of Intent (NOI) received on October 14, 2021. ATK Space Systems, LLC must comply with the requirements of this AO, all applicable state requirements (R307), and Federal Standards.

The project engineer for this action is **Ana Williams**, who can be contacted at (385) 306-6505 or anawilliams@utah.gov. Future correspondence on this AO should include the engineer's name as well as the DAQE number shown on the upper right-hand corner of this letter. No public comments were received on this action.

Sincerely,

Bryce C. Bird
Director

BCB:AW:jg

cc: Davis County Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

APPROVAL ORDER
DAQE-AN101520028-22
Modification to Approval Order DAQE-AN101520027-21 to Add Equipment

Prepared By
Ana Williams, Engineer
(385) 306-6505
anawilliams@utah.gov

Issued to
ATK Space Systems, LLC - Clearfield

Issued On
September 26, 2022

Issued By

Bryce C. Bird
Director
Division of Air Quality

TABLE OF CONTENTS

GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
ATK Space Systems, LLC

Source Name
ATK Space Systems, LLC - Clearfield

Mailing Address
PO Box 160433
Clearfield, UT 84016-0433

Physical Address
Freeport Center 14th 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
ATK Space Systems, LLC (ATK) manufactures aerospace composite structures at their Freeport Center plant located in Clearfield, Davis County. ATK manufactures composite components for the aerospace industry, specifically for commercial and defense contractors. 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, ATK 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.

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), IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
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
ATK has requested a modification to AO DAQE-AN101520027-21 to add the following new equipment: one iron-filled elastomer (IFE) spray booth controlled with fabric filters; one ceramics spray booth controlled with high efficiency 3-stage fabric filters; one topcoat spray booth controlled with fabric filters; one thermal spray booth controlled with a baghouse; and two fume hoods for paint preparation and mixing operations. ATK has also requested to rename several emission units and remove the following equipment that has been decommissioned/was never installed: two natural gas-fired ovens; two dust collectors; miscellaneous 3D printers; and one wet cooling tower. Total VOC and HAP emission limitations will not be changing with this modification. The increase in VOC emissions from the added equipment will be included in the existing 69.00 TPY VOC limitation within this AO.

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	0	24245.00
Carbon Monoxide	0	16.38
Nitrogen Oxides	0	19.49
Particulate Matter - PM_{10}	0.22	13.42
Particulate Matter - $PM_{2.5}$	0.22	13.21
Sulfur Dioxide	0	0.15
Volatile Organic Compounds	0	69.00

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
1,1,2-Trichloroethane (CAS #79005)	0	4000
2-(2-Butoxyethoxy)-Ethanol (CAS #112345)	0	4000
Chromium Compounds (CAS #CMJ500)	0	27
Cumene (CAS #98828)	0	4000
Ethyl Acrylate (CAS #140885)	0	4000
Ethyl Benzene (CAS #100414)	0	4000
Ethylene Glycol (CAS #107211)	0	4000
Formaldehyde (CAS #50000)	0	1000
Generic HAPs (CAS #GHAPS)	0	2000
Glycol Ethers (CAS #EDF109)	0	4000
Hexamethylene-1,6-Diisocyanate (CAS #822060)	0	14
Hexane (CAS #110543)	0	4000
Hydrogen Fluoride (Hydrofluoric Acid) (CAS #7664393)	0	20

Methanol (CAS #67561)	0	4000
Methyl Chloroform (1,1,1-Trichloroethane) (CAS #71556)	0	19000
Methyl Isobutyl Ketone (Hexone) (CAS #108101)	0	4000
Methyl Isocyanate (CAS #624839)	0	20
Methyl Methacrylate (CAS #80626)	0	200
Methylene Chloride (Dichloromethane) (CAS #75092)	0	4000
Methylene Diphenyl Diisocyanate (MDI) (CAS #101688)	0	20
Naphthalene (CAS #91203)	0	4000
Nickel Compounds (CAS #NDB000)	40	40
Phenol (CAS #108952)	0	4000
Styrene (CAS #100425)	0	200
Tetrachloroethylene (Perchloroethylene) (CAS #127184)	0	4000
Toluene (CAS #108883)	0	4000
Trichloroethylene (CAS #79016)	0	4000
Xylenes (Isomers And Mixture) (CAS #1330207)	0	4000
	Change (TPY)	**Total (TPY)**
Total HAPs	0.02	45.27

SECTION I: GENERAL PROVISIONS

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 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 of all equipment marked **NEW** 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

II.A THE APPROVED EQUIPMENT

II.A.1	**ATK Space Systems, LLC** Aerospace composite components manufacturing facility
II.A.2	**Four Electric Curing Ovens** Ovens: O-21; O-36; O-159; O-160 Venting (all): Atmospheric
II.A.3	**Eleven Natural Gas-Fired Ovens** Oven: Rating: O-26 1.2 MMBtu/hr O-27 4.0 MMBtu/hr 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-37 3.0 MMBtu/hr O-39 6.4 MMBtu/hr O-41 1.0 MMBtu/hr O-47 3.0 MMBtu/hr
II.A.4	**Seven Hot Rooms** Rooms: ACU253, AHU1, AHU2, AHU3, AHU4, HR1, HR3 Fuel (all): Natural Gas Maximum Rating: < 5.0 MMBtu/hr (each)
II.A.5	**One Boiler- BO1** Fuel: Natural Gas Rating: 8.37 MMBtu/hr
II.A.6	**Three Autoclaves** Autoclave: Rating: AC1 12.0 MMBtu/hr AC6 24.3 MMBtu/hr AC12 15.0 MMBtu/hr Fuel (all): Natural Gas

II.A.7	**Five Autoclaves** Autoclaves: CAC1, CAC2, CAC3, CAC4, CAC5 Fuel (all): Natural Gas Rating: 15.8 MMBtu/hr (each)
II.A.8	**Eleven Ventilation Rooms** Nine Mandrel Prep Rooms; FX-141; Paint Touchup Room
II.A.9	**Eleven Laboratory Hoods** FUH-3; FUH-7; AT-401073; FUH-5; FUH-2; AT-401706; FE-200; FE-222; FUH-1; SB-2; 2228
II.A.10	**Fourteen Exhaust Hoods** 1,2. Two Welding fume exhausters 3. RMS-6 4. Battery Charging area exhaust hood 5. MX-85 6. M-5 7. 83310J00475 8. E-145 9. Tacking Table 10. FX-105 11. FX-106 12. FE-655 13, 14. Two Paint mixing fume hoods (**NEW**)
II.A.11	**Four Heated Paint Booths** Paint Booth: Heater Rating: SB10 750 KBtu/hr SB11 950 KBtu/hr SB12 950 KBtu/hr SB13 950 KBtu/hr Fuel (all): Natural Gas Control: Vacuum System (each)
II.A.12	**Six Spray Booths** SB7, SB9, SB5, SB14, IFE SB (**NEW**), Topcoat SB (**NEW**) Control: Fabric Filters (each)
II.A.13	**One Ceramics Spray Booth (**NEW**)** Control: High efficiency 3-stage fabric filters
II.A.14	**One Thermal Spray Booth (**NEW**)** Control: Pulse jet baghouse Baghouse Maximum Flow Rate: 25,300 acfm MACT Applicability: Subpart WWWWWW

II.A.15	**Eight Natural Gas-Fired Emergency Generators** Engine: Rating: GE 3 7 kW GE 4 35 kW GE 5 100 kW GE 8 80 kW GE 9 240 kW GE 10 45 kW GE 11 45 kW GE 12 85 kW
II.A.16	**Two Diesel-Fired Emergency Generators** Engine: GE 7 Rating: 225 kW Engine: GE 13 Rating: 268 hp NSPS Applicability: Subpart IIII MACT Applicability: Subpart ZZZZ
II.A.17	**Eight Dust Collectors** DC-16, DC-27, DC-28, DC-29, DC-30, DC-36, DC-37, DC-38
II.A.18	**Miscellaneous Equipment** Miscellaneous vacuum pumps Miscellaneous Air compressors
II.A.19	**Miscellaneous Combustion Equipment** Various Boilers and Heaters Maximum Rating: <5.0 MMBtu/hr Fuel: Natural Gas
II.A.20	**Eighteen Wet Cooling Towers** 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 Controls: High Efficiency Drift Eliminators (each)
II.A.21	**Informational-Only Equipment*** Nine electrical sample curing ovens One electrical Hot room Five electrical autoclaves One Buffer room Miscellaneous Dust Collectors, including portable and orifice scrubbers Miscellaneous Machining Centers / Lathes / Cork Cutting Equipment One Spray Gun Cleaning Station Miscellaneous Grit Blast and Abrading Equipment 3D Printers *This equipment does not vent to atmosphere and is listed for informational purposes only

II.A.22	**Informational-Only Equipment* (Continued)** Three Hot Drape Forming Machines One Tacking Table Two Reticulators Two Dry Cooling Towers *This equipment does not vent to atmosphere and is listed for informational purposes only
II.A.23	**Grandfathered Equipment*** Pit exhaust system Indirect gas fired curing oven - #20 Rating: 6 MMBtu/hr *This equipment was installed before 1969 and is listed for informational purposes only

SECTION II: SPECIAL PROVISIONS

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	**Site-Wide Requirements**
II.B.1.a	The owner/operator shall not allow visible emissions from the following emission points to exceed the following values: A. Diesel-fired emergency engines - 20% opacity B. All other emission points - 10% opacity [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 a plant-wide natural gas consumption limit of 406,624 Decatherms per rolling 12-month period. [R307-401-8]
II.B.1.b.1	To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the 20th day of each month using data from the previous 12 months. Natural gas consumption shall be determined by gas billing records and shall be kept on a monthly basis for all periods when the plant is in operation. [R307-401-8]
II.B.1.c	The owner/operator shall comply with all applicable requirements of UAC R307-355 for VOC sources. [R307-355]
II.B.2	**VOC & HAP Requirements**

II.B.2.a	The owner/operator shall not emit more than the following from all sources on site: A. 69.00 tons per rolling 12-month period of VOCs B. 19.00 tons per rolling 12-month period of all HAPs combined C. 2.00 tons per rolling 12-month period of 2-Butoxyethanol D. 0.014 tons per rolling 12-month period of Chromium Compounds E. 2.00 tons per rolling 12-month period of Cumene F. 2.00 tons per rolling 12-month period of Ethyl Acrylate G. 2.00 tons per rolling 12-month period of Ethylbenzene H. 2.00 tons per rolling 12-month period of Ethylene Glycol I. 0.50 tons per rolling 12-month period of Formaldehyde J. 1.20 tons per rolling 12-month period of Generic HAPs K. 2.00 tons per rolling 12-month period of Glycol Ethers L. 0.007 tons per rolling 12-month period of Hexamethylene-1,6-Diisocyanate M. 2.00 tons per rolling 12-month period of Hexane N. 0.010 tons per rolling 12-month period of Hydrogen Fluoride O. 2.00 tons per rolling 12-month period of Methyl Alcohol P. 0.01 tons per rolling 12-month period of Methyl Isocyanate Q. 2.00 tons per rolling 12-month period of Methylene Chloride R. 0.10 tons per rolling 12-month period of Methylenedianiline S. 0.010 tons per rolling 12-month period of Methylene Diphenyl Diisocyanate T. 2.00 tons per rolling 12-month period of Methyl Isobutyl Ketone (MIBK) U. 2.00 tons per rolling 12-month period of Naphthalene V. 0.02 tons per rolling 12-month period of Nickel Compounds W. 2.00 tons per rolling 12-month period of Phenol X. 2.00 tons per rolling 12-month period of Tetrachloroethylene Y. 2.00 tons per rolling 12-month period of Toluene Z. 9.50 tons per rolling 12-month period of 1,1,1-Trichloroethane AA. 2.00 tons per rolling 12-month period of 1,1,2-Trichloroethane BB. 2.00 tons per rolling 12-month period of Trichloroethylene CC. 2.00 tons per rolling 12-month period of Xylene [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] HAP = [% HAP by Weight/100] x [Density] x [Volume Consumed] [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 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 HVLP spray guns, or an equivalent method, to control VOC emissions. [R307-355-6]
II.B.3.c	The owner/operator shall control the thermal 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 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	Each 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 natural gas-fired emergency engines. [R307-401-8]
II.B.5.b	The owner/operator shall only use diesel fuel (fuel oil #1, #2 or diesel fuel oil additives) in the diesel-fired emergency engines. All diesel burned shall meet the definition of ultra-low sulfur diesel (ULSD) and contain no more than 15 ppm sulfur. [R307-401-8]
II.B.5.b.1	To demonstrate compliance with the diesel fuel requirements for any diesel fuel purchased, the owner/operator shall keep and maintain fuel purchase invoices. The fuel purchase invoices shall indicate that the diesel fuel meets the ULSD requirements, or the owner/operator shall obtain certification of sulfur content from the fuel supplier. [R307-401-8]

PERMIT HISTORY

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

Supersedes	AO DAQE-AN101520027-21 dated August 3, 2021
Is Derived From	NOI dated October 14, 2021
Incorporates	Additional Information dated May 11, 2022

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