State of Utah

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Department of
Environmental Quality

Tim Davis
Interim Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-AN160570002-25

March 19, 2025

Thomas Kubota
Christensen Arms
550 North Cemetery Road
Gunnison, UT 84634
thomask@christensenarms.com

Dear Mr. Kubota:

Re: Approval Order: Modification to Approval Order DAQE-AN160570001-22 to Add Two (2) Spray Paint Booths and Ten (10) Abrasive Blasting Units
Project Number: N160570002

The attached Approval Order (AO) is issued pursuant to the Notice of Intent (NOI) received on October 23, 2024. Christensen Arms must comply with the requirements of this AO, all applicable state requirements (R307), and Federal Standards.

The project engineer for this action is **Christine Bodell**, who can be contacted at (385) 290-2690 or cbodell@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:CB:jg

cc: Central Utah Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

APPROVAL ORDER
DAQE-AN160570002-25
Modification to Approval Order DAQE-AN160570001-22 to Add Two (2) Spray Paint Booths and Ten (10) Abrasive Blasting Units

Prepared By
Christine Bodell, Engineer
(385) 290-2690
cbodell@utah.gov

Issued to
Christensen Arms - Gunnison Gun Manufacturing Plant

Issued On
March 19, 2025

Issued By

Bryce C. Bird
Director
Division of Air Quality

TABLE OF CONTENTS

GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
Christensen Arms

Source Name
Christensen Arms - Gunnison Gun Manufacturing Plant

Mailing Address
550 North Cemetery Road
Gunnison, UT 84634

Physical Address
550 North Cemetery Road
Gunnison, UT 84634

Source Contact
Name: Thomas Kubota
Phone: (435) 469-2459
Email: thomask@christensenarms.com

UTM Coordinates
430,617 m Easting
4,335,547 m Northing
Datum NAD83
UTM Zone 12

SIC code 3484 (Small Arms)

SOURCE INFORMATION

General Description
Christensen Arms operates a gun manufacturing facility in Gunnison in Sanpete County. Operations consist of carbon fiber and fiberglass composite manufacturing, metal and composite fabrication, painting, assembly, and testing. Particulate emissions from contouring, machining, sanding, abrasive blasting, and spray booths are controlled by dust collectors or filters.

NSR Classification
Minor Modification at Minor Source

Source Classification
Located in Attainment Area
Sanpete County
Airs Source Size: B

Applicable Federal Standards
None

Project Description
Christensen Arms is requesting to add two (2) spray booths and ten (10) abrasive blasting units to AO DAQE-AN160570001-22, issued March 16, 2022.

The two (2) new spray booths will be controlled by paint arrestor filters, similar to those already permitted by Equipment ID# II.A.6 in the 2022 AO. Christensen Arms is not requesting to increase the VOC and HAP limits outlined in Condition II.B.3.a of the 2022 AO. The new spray booths will operate under the existing limitations outlined in Condition II.B.3.a. Paint usage will not be increasing.

The ten (10) new abrasive sand blasting units will utilize two (2) cyclone dust collectors to control emissions. The existing abrasive sand blasting unit will continue to be controlled by the baghouse already permitted under Equipment ID# II.A.7 in the 2022 AO. Christensen Arms is not requesting to increase production or use of abrasive blasting material.

While the addition of the new equipment may impact hourly emissions, production and paint usage are not increasing. Therefore, no annual emissions are increasing.

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	1465.00
Carbon Monoxide	0	1.12
Nitrogen Oxides	0	1.12
Particulate Matter - PM_{10}	0	0.31
Particulate Matter - $PM_{2.5}$	0	0.31
Sulfur Dioxide	0	0.01
Volatile Organic Compounds	0	11.22

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Ethyl Benzene (CAS #100414)	0	1900
Generic HAPs (CAS #GHAPS)	0	100
Methyl Isobutyl Ketone (Hexone) (CAS #108101)	0	380
Phenol (CAS #108952)	0	560
Styrene (CAS #100425)	0	5720
Toluene (CAS #108883)	0	900
Xylenes (Isomers And Mixture) (CAS #1330207)	0	2780
	Change (TPY)	**Total (TPY)**
Total HAPs	0	6.17

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 (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

II.A THE APPROVED EQUIPMENT

II.A.1	**Christensen Arms** Gun Manufacturing Facility
II.A.2	**Contouring and Machining Areas** Including forty-one (41) CNC machines equipped with coolant reservoirs, hydraulic presses, rifling machines, saws, tumblers, and grinders The work areas are controlled with a cyclone
II.A.3	**Various saws, tumblers, and grinders**
II.A.4	**Fabrication of Carbon Fiber Composite Process**
II.A.5	**Epoxy Resin Usage and Composite Molding Process** Polyurethane and epoxy resins are mixed and combined with fiberglass prior to being used in the composite molding process
II.A.6	**Four (4) Spray Booths (Two (2) New)** Controlled with filters

II.A.7	**Eleven (11) Abrasive Blasting Booths (Ten (10) New)** Controlled with one (1) baghouse and two (2) new cyclones
II.A.8	**Sanding Operations** Controlled with one (1) baghouse (same baghouse listed in II.A.7)
II.A.9	**Welding Operations**
II.A.10	**Firing Range**
II.A.11	**Misc. Natural Gas Combustion Equipment** Including devices each rated less than 5 MMBtu/hr For information 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 sources to exceed the following opacity limits: A. Any baghouse or cyclone stack - 10% opacity B. Any filter stack - 10% opacity C. All other points - 20% opacity [R307-401-8]
II.B.1.a.1	Opacity observations of visible emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-401-8]
II.B.2	**VOC & HAP Requirements**
II.B.2.a	The owner/operator shall not emit more than the following from evaporative sources (solvent use, mold release, epoxy resin, lubricant use, adhesive, and paints) on site: A. 11.16 tons per rolling 12-month period of VOCs B. 0.95 tons per rolling 12-month period of ethyl benzene C. 0.19 tons per rolling 12-month period of methyl isobutyl ketone D. 0.28 tons per rolling 12-month period of phenol E. 2.86 tons per rolling 12-month period of styrene F. 0.45 tons per rolling 12-month period of toluene G. 1.39 tons per rolling 12-month period of xylene H. 6.15 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] 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.2.b	The owner/operator shall install and operate a set of paint arrestor particulate filters for each paint booth to control particulate emissions. All air exiting the booths shall pass through this control system before being vented to the atmosphere (outside building/operation). [R307-401-8]
II.B.2.c	The owner/operator shall install paint arrestor particulate filters that are each certified to meet a particulate matter control efficiency of no less than 84%. [R307-401-8]
II.B.2.c.1	To demonstrate compliance with the above condition, the owner/operator shall maintain records of the manufacturer's emissions guarantee for the installed paint arrestor particulate filters. [R307-401-8]
II.B.2.d	The owner/operator shall maintain and replace the filters according to the manufacturer's instructions. [R307-401-8]
II.B.2.e	The paint booths shall be equipped with HVLP spray guns to control VOC emissions. [R307-401-8]
II.B.2.f	The owner/operator shall store the VOC/HAP-containing materials in closed and air tight containers when the materials are not in use. [R307-401-8]

II.B.3	**Sanding, Abrasive Blasting, Contouring, and Machining Operations Requirements**
II.B.3.a	The owner/operator shall install and operate one (1) cyclone to control process streams from the contouring and machining operations. All exhaust air from the contouring and machining operations shall be routed through the cyclone before being vented to the atmosphere. [R307-401-8]
II.B.3.b	The owner/operator shall install and operate one (1) baghouse and two (2) cyclones to control process streams from the sanding and abrasive blasting operations. All exhaust air from the sanding and abrasive blasting operations shall be routed through a baghouse or cyclone before being vented to the atmosphere. [R307-401-8]
II.B.3.c	The owner/operator shall install a baghouse and cyclones that are each certified to meet a particulate matter control efficiency of no less than 99.9%. [R307-401-8]
II.B.3.c.1	To demonstrate compliance with the above condition, the owner/operator shall maintain records of the manufacturer's emissions guarantee for the installed baghouse and cyclones. [R307-401-8]
II.B.3.d	The owner/operator shall install a manometer or magnehelic pressure gauge to measure the differential pressure across each baghouse and cyclone. [R307-401-8]
II.B.3.d.1	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.2	Each pressure gauge shall measure the pressure drop in 1-inch water column increments or less. [R307-401-8]
II.B.3.e	During operation of each baghouse and cyclone, the owner/operator shall maintain the static pressure differential across each baghouse and cyclone between 1.0 to 6.0 inches of water column. [R307-401-8]
II.B.3.e.1	The owner/operator shall record the reading of each pressure gauge at least once per operating day. [R307-401-8]
II.B.3.e.2	The owner/operator shall maintain the following records of the static pressure differential: A. Unit identification; B. Weekly static pressure differential readings; C. Date of reading [R307-401-8]
II.B.3.f	At least once every 12 months, the owner/operator shall calibrate each pressure gauge in accordance with the manufacturer's instructions or replace the pressure gauge. [R307-401-8]
II.B.3.f.1	The owner/operator shall maintain records of the pressure gauge calibrations and replacements. [R307-401-8]

PERMIT HISTORY

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

Supersedes	AO DAQE-AN160570001-22 dated March 16, 2022
Is Derived From	NOI dated October 23, 2024
Incorporates	Additional Information dated December 6, 2024

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