



State of Utah

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Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-AN140150004-23

November 7, 2023

Michael Riley
ATI Titanium, LLC
1600 Old Salem Road Northeast
Albany, OR 97321
michael.riley@ATImaterials.com

Dear Mr. Riley:

Re: Approval Order: Administrative Amendment to Approval Order DAQE-AN140150003-12 for a
10-Year Review and Permit Updates
Project Number: N140150004

The attached Approval Order (AO) is issued pursuant to the Division of Air Quality conducting a 10-year administrative review of this source and its respective AO. ATI Titanium, LLC 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: Tooele County Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

APPROVAL ORDER
DAQE-AN140150004-23
Administrative Amendment to Approval Order
DAQE-AN140150003-12 for a 10-Year Review
and Permit Updates

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

Issued to
ATI Titanium, LLC - Titanium Sponge Manufacturing Facility

Issued On
November 7, 2023

Issued By



Bryce C. Bird
Director
Division of Air Quality

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GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name

ATI Titanium, LLC

Source Name

ATI Titanium, LLC - Titanium Sponge
Manufacturing Facility

Mailing Address

1600 Old Salem Road Northeast
Albany, OR 97321

Physical Address

12633 North Rowley Road
Tooele, UT 84029

Source Contact

Name Michael Riley
Phone (541) 812-7230
Email michael.riley@ATImaterials.com

UTM Coordinates

353,720 m Easting
4,530,280 m Northing
Datum NAD83
UTM Zone 12

SIC code 3339 (Primary Smelting & Refining of Nonferrous Metals, Except Copper & Aluminum)

SOURCE INFORMATION

General Description

ATI Titanium, LLC is the owner and operator of a Titanium Sponge Manufacturing Facility in Tooele County. This facility produces titanium metal from titanium tetrachloride.

NSR Classification

10-Year Review

Source Classification

Located in Attainment Area
Tooele 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
MACT (Part 63), A: General Provisions
MACT (Part 63), ZZZZ: National Emissions Standards for Hazardous Air Pollutants for
Stationary Reciprocating Internal Combustion Engines

Project Description

This project is a 10-year review of this source and the Approval Order associated with it.

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	64334.00
Carbon Monoxide	0	16.17
Nitrogen Oxides	0	6.32
Particulate Matter - PM ₁₀	0	14.87
Particulate Matter - PM _{2.5}	0	14.87
Sulfur Dioxide	0	0.33
Volatile Organic Compounds	0	1.18

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Chromium Compounds (CAS #CMJ500)	0	8
Cobalt (TSP) (CAS #7440484)	0	0
Hydrochloric Acid (Hydrogen Chloride) (CAS #7647010)	0	9260
Manganese (TSP) (CAS #7439965)	0	2
Titanium Tetrachloride (CAS #7550450)	0	1780
	Change (TPY)	Total (TPY)
Total HAPs	0	5.53

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]

SECTION II: PERMITTED EQUIPMENT

II.A THE APPROVED EQUIPMENT

II.A.1	ATI Titanium L.L.C. A titanium metal production facility
II.A.2	Six (6) fabric filter baghouses
II.A.3	Fourteen (14) portable fume collectors Used during welding and cutting activities
II.A.4	Five (5) 1000 kW-emergency generators Fuel type: Diesel Three (3) emergency generators have not been installed
II.A.5	One (1) fire water pump emergency generator Fuel type: Diesel Power rating: 252 hp
II.A.6	Five (5) 750 kW-emergency generators Fuel type: Diesel
II.A.7	Three (3) natural gas-fired furnaces Power rating: 1.5 MBTU/hr
II.A.8	Rail car unloading station
II.A.9	Miscellaneous sponge processing equipment 1) Four (4) chippers 2) Four (4) shears 3) Twelve (12) crushers 4) Ten (10) screens 5) Sixteen (16) conveyors 6) Numerous loading points
II.A.10	Various fume hoods

II.A.11	<p>Reduction holding furnaces cover gases SF6 and HFC-134a</p>
II.A.12	<p>LPG-fueled equipment Space heaters, equipment drying, weed burn torches, etc.</p> <p>For informational purposes only</p>
II.A.13	<p>Process equipment cleaning process Nitric or hydrochloric acid baths Emissions from the baths are routed either to the process equipment cleaning scrubber or the reduction process scrubber</p> <p>For informational purposes only</p>
II.A.14	<p>Three (3) venturi/packed bed scrubbers Reduction process Scrubber type: Venturi with packed tower Design air flow design rate: 50,000 acfm Design pressure drop: 40" water gauge Design liquid injection rate: 470 gpm Lower limit liquid flow rate: 300 gpm Upper limit liquid flow rate: 600 gpm Scrubbing medium: Water Stack height: No less than 90 feet above ground level</p>
II.A.15	<p>One (1) venturi/packed bed scrubber TiCl4 receiving and storage Scrubber type: Venturi with packed tower Design air flow design rate: 10,000 acfm Minimum pressure drop: 15" water gauge Design liquid injection rate: 110 gpm Lower limit liquid flow rate: 60 gpm Upper limit liquid flow rate: 230 gpm Scrubbing medium: Water Stack height: No less than 50 feet above ground level</p>
II.A.16	<p>One (1) venturi/packed bed scrubber Process equipment cleaning Scrubber type: Venturi with packed tower Minimum air flow design rate: 5,000 acfm Design pressure drop: 15" water gauge Design liquid injection rate: 250 gpm Scrubbing medium: Water Stack height: No less than 90 feet above ground level</p>
II.A.17	<p>Eight (8) TiCl4 storage tanks Six (6) - 25,000-gallon tanks Two (2) - 6,000-gallon vent tanks</p>
II.A.18	<p>LPG Tank Capacity: 1,000 gallons</p> <p>For information purposes only</p>

SECTION II: SPECIAL PROVISIONS

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	Site-Wide Requirements
II.B.1.a	<p>The owner/operator shall not emit more than the following on site:</p> <ul style="list-style-type: none"> A. 1.18 tons per rolling 12-month period for VOCs B. 8 pounds per rolling 12-month period for chromium compounds C. 0.01 pounds per rolling 12-month period for cobalt D. 4.63 tons per rolling 12-month period for hydrochloric acid E. 2.6 pounds per rolling 12-month period for manganese F. 0.44 pounds per rolling 12-month period for nickel G. 0.89 tons per rolling 12-month period for titanium tetrachloride. <p>[R307-401-8]</p>
II.B.1.a.1	<p>The owner/operator shall:</p> <ul style="list-style-type: none"> A. Determine compliance on a rolling 12-month total, based on the last day of each month B. Determine a new rolling 12-month total by no later than 30 days after the end of each calendar month using data from the previous 12 months. <p>[R307-401-8]</p>
II.B.1.b	<p>The owner/operator shall not consume more than the following on site:</p> <ul style="list-style-type: none"> A. 80,000 tons of TiCl₄ per rolling 12-month period B. 365,000 decatherms of natural gas per rolling 12-month period C. 3,852 pounds of SF₆ per rolling 12-month period D. 2,652 pounds of HFC-134a per rolling 12-month period. <p>[R307-401-8]</p>

II.B.1.b.1	<p>The owner/operator shall:</p> <ul style="list-style-type: none"> A. Determine consumption B. Record natural gas consumption on a monthly basis C. Record all other consumption on a daily basis D. Use the consumption records to calculate a new rolling 12-month total by no later than 30 days after the end of each calendar month using data from the previous 12 months. E. Keep consumption records for all periods the plant is in operation. <p>[R307-401-8]</p>
II.B.1.c	<p>The owner/operator shall not exceed the following opacity limits for indicated the emission units.</p> <ul style="list-style-type: none"> A. Scrubbers - 15% opacity B. Baghouse - 10% opacity C. Generators - 20% opacity D. Haul-road traffic and mobile equipment in operational areas - 20% opacity E. All other points - 20% opacity <p>[R307-401-8]</p>
II.B.1.c.1	<p>Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.</p> <p>Opacity observations of emissions from haul-road traffic and mobile equipment in operational areas shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Visible emissions shall be measured at the densest point of the plume but at a point not less than 1/2 vehicle length behind the vehicle and not less than 1/2 the height of the vehicle.</p> <p>[R307-401-8]</p>
II.B.1.d	<p>The owner/operator shall pave all access roads within the site. [R307-401-8]</p>
II.B.2	<p>Baghouse and Portable Fume Collector Requirement</p>
II.B.2.a	<p>The owner/operator shall use baghouses or portable fume collectors to control particulate emissions in the exhaust air from stainless steel welding and cutting from production-related processes. [R307-401-8]</p>
II.B.2.b	<p>The owner/operator shall install a manometer or magnehelic pressure gauge to measure the static pressure differential across each baghouse. [R307-401-8]</p>
II.B.2.b.1	<p>The pressure gauge shall be located such that an inspector/operator can safely read the indicator at any time. [R307-401-8]</p>
II.B.2.c	<p>During operation of each baghouse, the owner/operator shall maintain the static pressure differential across the baghouse between 2 and 7 inches of water column. [R307-401-8]</p>

II.B.2.c.1	The accuracy of the pressure drop shall be plus or minus 2 inches of water column, or less. [R307-401-8]
II.B.2.d	At least once every 12 months, the owner/operator shall calibrate the pressure gauge in accordance with the manufacturer's instructions. [R307-401-8]
II.B.2.e	The owner/operator shall clean or replace the air filter on the portable fume collectors frequently enough so that the magnehelic pressure gauge indicates "green.". [R307-401-8]
II.B.2.f	The owner/operator shall maintain the self-cleaning filter mechanism in the portable fume collectors in accordance with the manufacturer's instructions. The owner/operator shall periodically empty the dust from the air stream that collects in the system's container. [R307-401-8]
II.B.3	Fire Water Pump Emergency Generator and Emergency Generator Requirements
II.B.3.a	The owner/operator shall not operate each emergency engine on site for more than 100 hours per rolling 12-month period 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.3.a.1	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.4	Furnace Requirements
II.B.4.a	The owner/operator shall only use natural gas as fuel in fuel-fired furnaces. [R307-401-8]
II.B.5	Venturi/Packed Bed Scrubbers-Reduction Process Requirements
II.B.5.a	The owner/operator shall use wet scrubbers to control the process off-gas from the reduction distillation processes. The process off-gas that is required to be routed to the scrubbers is that air stream with regulated air pollutants added during the reduction distillation processes. The non-contact cooling air stream that passes over the blower and onto the outside of the retorts does not need to be routed to the scrubbers before being discharged to the atmosphere. [R307-401-8]
II.B.5.b	<p>The owner/operator shall maintain the following operating parameters within the indicated ranges for each scrubber:</p> <ul style="list-style-type: none"> A. The water pressure shall not be less than 25 psig B. The liquid flow rate shall not be less than 300 gallons/minute and not more than 600 gallons/minute C. The discharge water pH shall not be less than 2.0 <p>Items A, B, and C of this section shall be monitored with equipment located such that an inspector/operator can safely read the output anytime. The readings shall be accurate to within the following ranges:</p> <ul style="list-style-type: none"> D. The water pressure - plus or minus 3 psig E. The liquid flow rate - plus or minus 15 gallons/minute F. The discharge water pH - plus or minus 0.5 <p>The instruments used to measure the venturi flow rate, water pressure, and pH shall each be calibrated according to the manufacturer's instructions at least once every 12 months.</p> <p>[R307-401-8]</p>

II.B.5.b.1	The owner/operator shall record flow rate, the pressure, and the pH during normal operations. Each parameter shall be recorded on a weekly basis. [R307-401-8]
II.B.6	Venturi/Packed Bed Scrubbers-TiCl₄ Receiving and Storage Requirements
II.B.6.a	The owner/operator shall use a wet scrubber to control the process off-gas from the TiCl ₄ receiving and storage process. [R307-401-8]
II.B.6.b	The owner/operator shall install a scrubber that can handle no less than 8,000 ACFM for the existing conditions. [R307-401-8]
II.B.6.c	<p>The owner/operator shall maintain the following operating parameters within the indicated ranges for the scrubber:</p> <ul style="list-style-type: none"> A. The water pressure shall not be less than 15 psig B. The liquid flow rate shall not be less than 60 gallons/minute and not more than 230 gallons/minute <p>Items A and B of this section shall be monitored with equipment located such that an inspector/operator can safely read the output anytime. The readings shall be accurate to within the following ranges:</p> <ul style="list-style-type: none"> C. The water pressure - plus or minus 3 psig D. The liquid flow rate - plus or minus 15 gallons/minute <p>The instruments used to measure the venturi flow rate and water pressure shall each be calibrated according to the manufacturer's instructions at least once every 12 months.</p> <p>[R307-401-8]</p>
II.B.6.c.1	The owner/operator shall record flow rate and the pressure during normal operations. Each parameter shall be recorded on a weekly basis. [R307-401-8]
II.B.7	Venturi/Packed Bed Scrubbers - Process Equipment Cleaning Requirements
II.B.7.a	The owner/operator shall use a wet scrubber to control the off-gas from process equipment cleaning operations. [R307-401-8]
II.B.7.b	The owner/operator shall install a scrubber that can handle no less than 5,000 ACFM for the existing conditions. [R307-401-8]

<p>II.B.7.c</p>	<p>The owner/operator shall maintain the following operating parameters within the indicated ranges for the scrubber:</p> <ul style="list-style-type: none"> A. The water pressure shall not be less than 15 psig B. The liquid flow rate shall not be less than 230 gallons/minute and not more than 290 gallons/minute <p>Items A and B of this section shall be monitored with equipment located such that an inspector/operator can safely read the output anytime. The readings shall be accurate to within the following ranges:</p> <ul style="list-style-type: none"> C. The water pressure - plus or minus 3 psig D. The liquid flow rate - plus or minus 15 gallons/minute <p>The instruments used to measure the venturi flow rate and water pressure shall each be calibrated according to the manufacturer's instructions at least once every 12 months.</p> <p>[R307-401-8]</p>
<p>II.B.7.c.1</p>	<p>The owner/operator shall record flow rate and the pressure during normal operations. Each parameter shall be recorded on a weekly basis. [R307-401-8]</p>

PERMIT HISTORY

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

Supersedes

AO DAQE-AN140150003-12 dated January 24, 2012

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 ₂ e	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