

# Department of Environmental Quality

Kimberly D. Shelley Executive Director

DIVISION OF AIR QUALITY Bryce C. Bird Director

DAQE-IN103770012-21

September 16, 2021

Rodrigo Nascimento BD Medical 9450 South State Street Sandy, UT 84070 stephanie.rucks@bd.com

Dear Mr. Nascimento:

Re: Intent to Approve:

Minor Modification to DAQE-AN103770010-18 to Add Two (2) Process Lines and Update

Equipment

Project Number: N103770012

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, **Andrea Marino**, as well as the DAQE number as shown on the upper right-hand corner of this letter. Andrea Marino, can be reached at (801) 834-8417 or abartlett@utah.gov, if you have any questions.

Sincerely,

Alan D. Humpherys, Manager New Source Review Section

alm D. Thuslener

ADH:AM:sb

cc: Salt Lake Valley Health Department

# STATE OF UTAH Department of Environmental Quality Division of Air Quality

# INTENT TO APPROVE DAQE-IN103770012-21 Minor Modification to DAQE-AN103770010-18 to Add Two (2) Process Lines and Update Equipment

Prepared By Andrea Marino, Engineer (801) 834-8417 abartlett@utah.gov

Issued to BD Medical

Issued On September 16, 2021

alm D. Huzlur

New Source Review Section Manager Alan D. Humpherys

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#### **GENERAL INFORMATION**

#### **CONTACT/LOCATION INFORMATION**

Owner NameSource NameBD MedicalBD Medical

Mailing AddressPhysical Address9450 South State Street9450 South State

9450 South State Street 9450 South State Street Sandy, UT 84070 Sandy, UT 84070

Source Contact UTM Coordinates
Name Stephanie Rucks 424,505 m Easting

Phone (801) 304-3930 4,492,433 m Northing Email stephanie.rucks@bd.com Datum NAD83 UTM Zone 12

SIC code 3841 (Surgical & Medical Instruments & Apparatus)

#### **SOURCE INFORMATION**

#### General Description

BD Medical is a medical device manufacturing facility in Salt Lake County. The facility manufactures intravenous therapy catheters, medical devices for infusion therapy, surgical scrub brushes, and antimicrobial soap. The facility performs its own sterilization onsite. Emissions are from various manufacturing lines, the combustion of VOCs, emergency diesel engines, and ethylene oxide sterilization.

#### **NSR Classification**

Minor Modification at Minor Source

#### Source Classification

 $Located \ in \ Northern \ Was atch \ Front \ O3 \ NAA, \ Salt \ Lake \ City \ UT \ PM_{2.5} \ NAA, \ Salt \ Lake \ County \ SO_2$ 

NAA

Salt Lake 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), O: Ethylene Oxide Emissions Standards for Sterilization Facilities

MACT (Part 63), ZZZZ: National Emissions Standards for Hazardous Air Pollutants for

Stationary Reciprocating Internal Combustion Engines

#### **Project Description**

BD Medical has requested the following changes to their AO:

1. Add two (2) medical-grade tubing manufacturing processes (II.A.15 and II.A.16).

The requested equipment follows:

#### **Nextrusion Lines:**

Six (6) Tower Ovens

Two (2) Post Cure Ovens

One (1) Large Annealing Oven

One (1) Small Annealing Oven

Two (2) Extrusion Lines

Three (3) Silicone Lines

One (1) Small Cleaning Oven

One (1) Large Cleaning Oven

#### **Extrusion Lines:**

Ten (10) Extrusion Lines

Two (2) Compounding Machines with Conveyor Ovens (One (1) new, One (1) existing)

Two (2) Material Ovens

One (1) Annealing Oven

#### R&D

One (1) Extrusion Line

- 2. Replace a 465 hp emergency diesel generator (previously II.A.8) with a 410 hp emergency diesel generator (II.A.19).
- 3. Replace a 900 hp emergency diesel generator (previously II.A.8) with a 1220 hp emergency diesel generator (II.A.19).
- 4. Replace a 310 hp fire suppression pump engine (previously II.A.7) with a 286 hp emergency diesel generator (II.A.18).
- 5. Remove condition II.B.1.e regarding the VOCs from the coating of products. The HFE solvent is no longer used for this process.
- 6. Remove one (1) Push-Button Blood Collection System line from the equipment list (previously II.A.3). It has been removed from the facility.
- 7. Add VOC emissions for the adhesive bonding that is part of the Q-Syte production process.
- 8. Update facility-wide PTE

#### **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 <sub>2</sub> Equivalent	15	20285.00
Carbon Monoxide	0.04	13.23
Nitrogen Oxides	-1.42	16.76
Particulate Matter - PM <sub>10</sub>	4.40	5.71
Particulate Matter - PM <sub>2.5</sub>	4.83	6.14
Sulfur Dioxide	-0.05	0.76
Volatile Organic Compounds	6.14	31.34

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
2,2,4-Trimethylpentane (CAS #540841)	0	542
Diethanolamine (CAS #111422)	0	462
Ethylene Glycol (CAS #107211)	0	409
Ethylene Oxide (CAS #75218)	0	476
Formaldehyde (CAS #50000)	307	307
Generic HAPs (CAS #GHAPS)	11	1056
Hexane (CAS #110543)	0	592
Methanol (CAS #67561)	0	655
Styrene (CAS #100425)	10	10
	Change (TPY)	Total (TPY)
Total HAPs	0.16	2.25

#### 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 Salt Lake Tribune and Deseret News on September 19, 2021. 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	Medical Device Manufacturing Plant
II.A.2	Ethylene Oxide Sterilization Process Six (6) Sterilization Chambers Six (6) Aeration Rooms One (1) Desorption Tower One (1) Concentration Balancing Tank One (1) Lesni Catalytic Oxidizer MACT Applicability: Subpart O
II.A.3	Three (3) Nexiva Catheter Zone 3 Manufacturing Lines Control: Alliance Thermal Incinerator
II.A.4	Three (3) Autoguard Catheter Manufacturing Lines Control: Alliance Thermal Incinerator
II.A.5	One (1) Push Button Blood Collection Manufacturing Line Control: Alliance Thermal Incinerator
II.A.6	Alliance Thermal Incinerator Fuel: Natural Gas or Process Off-gas Capacity: < 5 MMBtu/hr
II.A.7	Eight (8) Autoguard Catheter Manufacturing Lines Control: Lesni Regenerative Thermal Oxidizer
II.A.8	Three (3) Nexiva Manufacturing Lines Control: Lesni Regenerative Thermal Oxidizer
II.A.9	Lesni Regenerative Thermal Oxidizer Fuel: Natural Gas or Process Off-gas Capacity: < 5 MMBtu/hr
II.A.10	Three (3) Autoguard Catheter Manufacturing Lines Control: Alliance Boxidizer Regenerative Thermal Oxidizer
II.A.11	Alliance Boxidizer Regenerative Thermal Oxidizer Fuel: Natural Gas or Process Off-gas Capacity: < 5 MMBtu/hr
II.A.12	Two (2) Boilers Fuel: Natural Gas Capacity: 5.9 MMBtu/hr each Control: Low-NO <sub>x</sub> Burners

II.A.13	Six (6) Molding Operations Electric Silicone Post Curing Ovens Control: Electrostatic Precipitator (exhaust pre-treatment on one (1) curing oven) Mist Eliminator Condensate Knockout Chamber Coalescing Filter HEPA Filter
II.A.14	Molding Operations Cleaning Oven Fuel: Natural Gas Capacity: 0.3 MMBtu/hr Control: Thermal Oxidation
II.A.15	Nextrusion Lines (NEW) Six (6) Tower Ovens Two (2) Post-Curing Ovens Control: HEPA Filter Two (2) Annealing Ovens Two (2) Extrusion Lines Three (3) Silicone Lines Two (2) Cleaning Ovens Control: Condensate Traps
II.A.16	Extrusion Lines (NEW) Ten (10) Extrusion Lines Two (2) Material Warming Ovens One (1) Annealing Oven Two (2) Compounding Machines with Conveyor Ovens (One (1) NEW, One (1) existing)
II.A.17	Research and Development Extrusion Line One (1) Extrusion Line (NEW)
II.A.18	Two (2) Fire Suppression System Pump Engines Fuel: Ultra-Low Sulfur Diesel (ULSD) Rated: 286 hp*, 157 hp NSPS Applicability: Subpart IIII MACT Applicability: Subpart ZZZZ *NEW
II.A.19	Three (3) Emergency Power Generator Engines Fuel: ULSD Rated: 939 hp, 1220 hp*, 402 hp* NSPS Applicability: Subpart IIII MACT Applicability: Subpart ZZZZ  * NEW
II.A.20	Sand Baths (NEW) Two (2) Sand Baths Listed for informational purposes only
II.A.21	Five (5) Storage Tanks Diesel storage service
II.A.22	Ten (10) Cooling Towers

II.A.23	Miscellaneous Operations Various Quality Assurance and Research and Development Laboratories Q-Syte Production Lines Antimicrobial Compound Operations Mold Press Operations Various Forklifts and Yard Tractors
II.A.24	Various HVAC Units Fuel: Natural Gas Rating: < 5 MMBtu/hr For Informational Purposes Only
II.A.25	Various Boilers Fuel: Natural Gas Rating: < 5 MMbtu/hr 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 from the following emissions points to exceed the following values:
	A. Diesel-fired emergency generator engines and fire pump engines - 20% opacity
	B. All other stationary point or fugitive emissions sources - 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.2	VOC & HAP Requirements:
II.B.2.a	The owner/operator shall not emit more than the following from evaporative sources on site:
	26.2 tons per rolling 12-month period of VOCs
	1.77 tons per rolling 12-month period of all HAPs combined
	Evaporative sources include coating of products on medical devices, cleaning, fabrication of medical devices and associated product lines, research and development activities, laboratory activities, etc. It excludes products of incomplete combustion from boilers, catalytic oxidizers, incinerators, regenerative thermal oxidizers, or internal combustion engines.
	[R307-401-8]

II.B.2.a.1	The owner/operator shall calculate a new 12-month total quarterly, by the 20th day of January, April, July, and October using data from the previous 12 months. If for the previous period, total VOC and combined HAP emissions are greater than 75% of the above limits, the owner/operator shall calculate the 12-month total monthly, by the twentieth day of each month, until total VOC and combined HAP emissions are less than 75% of the above limits for three (3) consecutive 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 controlled and treated by a thermal or catalytic oxidizer. The owner/operator shall subtract the amount of VOCs and HAPs controlled/treated from the quantities calculated above to provide the total emissions of VOCs and HAPs. [R307-401-8]
II.B.2.a.3	The owner/operator shall keep records 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 comply with R307-304, Solvent Cleaning. [R307-304]
II.B.3	Ethylene Oxide Sterilization Conditions
II.B.3.a	The owner/operator shall not consume more than 456,000 pounds of ethylene oxide per rolling 12-month period. [R307-401-8]
II.B.3.a.1	The owner/operator shall:
	A. Determine consumption based on inventory and purchase records.
	B. Use consumption records to calculate a new rolling 12-month total by the 20th day of each month using data from the previous 12 months.
	[R307-401-8]

II.B.4	Catalytic Oxidation Requirements:
II.B.4.a	The owner/operator shall route emissions from each sterilization chamber to the concentration-balancing tank, prior to being discharged to and processed by the desorption tower. [R307-401-8]
II.B.4.b	The owner/operator shall route emissions from the concentration-balancing tank desorption tower, and the aeration rooms to the catalytic oxidizer before being discharged to the atmosphere. [R307-401-8]
II.B.4.c	The owner/operator shall maintain a temperature at or above 140 degrees Celsius in the catalytic oxidizer catalyst bed while any of the associated process lines are operating.  [40 CFR 63 Subpart O, R307-401-8]
II.B.4.c.1	The owner/operator shall install, calibrate, maintain, and operate a device to monitor the operating temperature of the catalytic oxidizer in accordance with 40 CFR 63 Subpart O. The owner/operator shall maintain records as specified in 40 CFR 63 Subpart O. [40 CFR 60 Subpart O]
II.B.5	Alliance Thermal Incinerator Requirements:
II.B.5.a	The owner/operator shall route all non-fugitive emissions from the process lines on the north side of the plant to the Alliance Thermal Incinerator before being discharged to the atmosphere, except when routed to the Boxidizer thermal incinerator or during periods of thermal incinerator bypass. The north side of the plant includes but is not limited to, one (1) Push Button Blood Collection line, three (3) Nexiva Zone 3 lines, and three (3) Autoguard manufacturing lines (including spring winders). [R307-401-8]
II.B.5.b	The owner/operator shall not bypass the Alliance thermal incinerator for more than 96 hours per rolling 12-month period. [R307-401-8]
II.B.5.b.1	The owner/operator shall:
	A. Determine hours of bypass by monitoring and maintaining an operating log.
	B. Record of date, time, and reason the Alliance thermal incinerator was bypassed.
	C. Use the hours of bypass to calculate a new rolling 12-month total by the 20th day of each month using data from the previous 12 months.
	[R307-401-8]
II.B.5.c	The owner/operator shall maintain a temperature at or above 1,400 degrees Fahrenheit in the Alliance thermal incinerator when any associated process lines are running. [R307-401-8]
II.B.5.c.1	The owner/operator shall:
	A. Install, calibrate, maintain, and operate a device to monitor the operating temperature of the thermal incinerator.
	B. Place the monitoring device in a readily accessible location
	C. Record the temperature of the thermal incinerator daily when any associated process lines are operating.
	[R307-401-8]

II.B.6	Regenerative Thermal Oxidizer (Lesni and Boxidizer) Requirements:
II.B.6.a	The owner/operator shall route all non-fugitive emissions from the process lines on the south side of the plant to the Lesni regenerative oxidizer before being discharged to the atmosphere, except during periods of regenerative oxidizer bypass. This includes, but is not limited to, eight (8) Autoguard lines (including spring winders), and three (3) Nexiva manufacturing lines. [R307-401-8]
II.B.6.b	The owner/operator shall route all non-fugitive emissions from the three (3) Autoguard Lines (including spring winders) to the Alliance Boxidizer before being discharged to the atmosphere, except during periods of regenerative thermal incinerator bypass. [R307-401-8]
II.B.6.c	The owner/operator shall not bypass either regenerative thermal incinerator for more than 96 hours each per rolling 12-month period. [R307-401-8]
II.B.6.c.1	The owner/operator shall:
	A. Determine hours of bypass by monitoring and maintaining an operators log.
	B. Record of date, time, and reason the regenerative thermal incinerator(s) was/were bypassed.
	C. Use the hours of bypass to calculate a new rolling 12-month total by the 20th day of each month using data from the previous 12 months for each regenerative thermal incinerator.
	[R307-401-8]
II.B.6.d	The owner/operator shall maintain the following temperatures in the regenerative thermal incinerators when any associated process lines are running:
	A. A temperature at or above 1,400 degrees Fahrenheit in the Alliance Boxidizer regenerative thermal oxidizer
	B. A temperature at or above 700 degrees Celsius in the Lesni regenerative thermal oxidizer.
	[R307-401-8]
II.B.6.d.1	The owner/operator shall:
	A. Install, calibrate, maintain, and operate a device to monitor the operating temperature of each regenerative thermal incinerator.
	B. Place the monitoring devices in a readily accessible location
	C. Record the temperatures of each regenerative thermal incinerator daily when any associated process lines are operating.
	[R307-401-8]
II.B.7	Molding Operations Electric Silicone Post-Curing Ovens Requirements:
II.B.7.a	The owner/operator shall route all non-fugitive emissions from the curing oven to the Filter Trains before being discharged to the atmosphere. The filter trains include an electrostatic precipitator (one (1) train only), a mist eliminator, a condensate blowout chamber, a coalescing filter, and finally a HEPA filter. [R307-401-8]

II.B.8	Molding Operations Cleaning Oven Requirements:
II.B.8.a	The owner/operator shall route all non-fugitive emissions from the Molding Operations Cleaning
Π.Β.σ.α	Oven through the oven's thermal oxidizer before being discharged to the atmosphere. [R307-401-
	[8]
H D O I	
II.B.8.b	The owner/operator shall maintain a temperature at or above 1,400 degrees in the thermal incinerator attached to the Molding Operations Cleaning Oven when the oven is operating.
	[R307-401-8]
II.B.8.b.1	The owner/operator shall:
	A. Install, calibrate, maintain, and operate a device to monitor the
	operating temperature of the thermal incinerator.
	operating temperature of the thermal memorator.
	B. Place the monitoring device in a readily accessible location
	C. Record the temperature of the thermal incinerator daily when
	cleaning oven is in use.
	[R307-401-8]
	[K307-401-0]
II.B.9	Nextrusion Lines and Extrusion Lines Requirements:
II.B.9.a	The owner/operator shall install a HEPA filter on the Nextrusion Line post-curing ovens.
	[R307-401-8]
II.B.9.a.1	The owner/operator shall replace the filters according to system design/manufacturer
	recommendations. [R307-401-4, R307-401-8]
II.B.9.b	The owner/operator shall equip the cleaning ovens with condensate traps for particulate control.
11.D.9.0	[R307-401-8]
II.B.9.b.1	The owner/operator shall clean and maintain condensate traps in accordance with the
	manufacturer recommendations. [R307-401-8]
II.B.10	Emergency Engine Requirements
II.B.10.a	The owner/operator shall not operate each emergency engine or fire pump 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 60 Subpart ZZZZ, R307-401-8]
	[40 CFR 00 Subpart ZZZZ, RS07-401-6]
II.B.10.a.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. 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 60 Subpart ZZZZ, R307-401-8]
II.B.10.a.2	To determine the duration of operation, the owner/operator shall install a non-recettable have
11.D.10.a.2	To determine the duration of operation, the owner/operator shall install a non-resettable hour meter for each emergency engine and fire pump engine on site.
	[40 CFR 60 Subpart ZZZZ, R307-401-8]

II.B.10.b	The owner/operator shall only use diesel fuel (e.g. fuel oil #1, #2, or diesel fuel oil additives) in each emergency engine. [R307-401-8]
II.B.10.b.1	The owner/operator shall only combust diesel fuel that meets the definition of ultra-low sulfur diesel (ULSD), which has a sulfur content of 15 ppm or less. [R307-401-8]
II.B.10.b.2	To demonstrate compliance with the ULSD fuel requirement, the owner/operator shall maintain records of diesel fuel purchase invoices or obtain certification of sulfur content from the diesel fuel supplier. The diesel fuel purchase invoices shall indicate that the diesel fuel meets the ULSD requirements. [R307-401-8]

## PERMIT HISTORY

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

Supersedes	DAQE-AN103770010-18 dated November 15, 2018
Is Derived From	NOI dated February 5, 2021
Incorporates	Additional Information dated March 17, 2021
Incorporates	Additional Information dated April 19, 2021
Incorporates	DAQE-MN103770012-21 dated May 28, 2021
Incorporates	Additional Information dated June 11, 2021
Incorporates	Additional Information dated September 1, 2021

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#### **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<sub>2</sub> Carbon Dioxide

CO<sub>2</sub>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

NAAOS National Ambient Air Quality Standards

NESHAP National Emission Standards for Hazardous Air Pollutants

NOI Notice of Intent NO<sub>x</sub> Oxides of nitrogen

NSPS New Source Performance Standard

NSR New Source Review

PM<sub>10</sub> Particulate matter less than 10 microns in size PM<sub>2.5</sub> 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<sub>2</sub> 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