State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-IN107900021-23

April 10, 2023

Brian Harris
Brigham Young University
PO Box 20100
Provo, UT 84602
brian_harris@byu.edu

Dear Mr. Harris:

Re: Intent to Approve:
Modification to Approval Order DAQE-AN107900019-20 to Remove, Replace, and Add Equipment
Project Number: N107900021

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, **Ana Williams,** as well as the DAQE number as shown on the upper right-hand corner of this letter. Ana Williams, can be reached at (385) 306-6505 or anawilliams@utah.gov, if you have any questions.

Sincerely,

Jon L. Black
Jon Black (Apr 5, 2023 16:15 MDT)

Jon L. Black, Manager
New Source Review Section

JLB:AW:jg

cc: Utah County Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

INTENT TO APPROVE
DAQE-IN107900021-23
Modification to Approval Order DAQE-AN107900019-20 to Remove, Replace, and Add Equipment

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

Issued to
Brigham Young University - Main Campus

Issued On
April 10, 2023

Jon Black (Apr 5, 2023 16:15 MDT)

New Source Review Section Manager
Jon L. Black

TABLE OF CONTENTS

GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
Brigham Young University

Source Name
Brigham Young University - Main Campus

Mailing Address
PO Box 20100
Provo, UT 84602

Physical Address
B-340 ASB Brigham Young University
Provo, UT 84602

Source Contact
Name Brian Harris
Phone (801) 422-2804
Email brian_harris@byu.edu

UTM Coordinates
445,000 m Easting
4,455,200 m Northing
Datum NAD27
UTM Zone 12

SIC code 8221 (Colleges, Universities, & Professional Schools)

SOURCE INFORMATION

General Description
Brigham Young University (BYU) is a higher education institution in Provo, Utah County. The BYU main campus consists of several different types of buildings and facilities, and operates a variety of emission sources. These emission sources are primarily boilers, emergency generator engines, various small paint booths, and fuel storage tanks, and are associated with the daily operations on campus.

Industrial boilers are located in the Central Heating Plant on campus. A Cogeneration Unit consisting of a natural gas-fired turbine and heat recovery unit (HRU) duct burner is also located in the Central Heating Plant. In addition to the Central Heating Plant, several other natural gas-fired small boilers are operated to support individual building needs.

Diesel-fired emergency generator engines are installed at several buildings around campus. Diesel and propane-fired portable emergency generator engines are used around campus as needed.

Other small emission sources include small paint booths, dry cleaning units, laboratory equipment, printing equipment, fuel storage tanks, and dust collectors.

NSR Classification
Minor Modification at Minor Source

Source Classification
Located in Southern Wasatch Front O3 NAA, Provo CO Maintenance Area, Provo UT $PM_{2.5}$ NAA
Utah County
Airs Source Size: B

Applicable Federal Standards
NSPS (Part 60), A: General Provisions
NSPS (Part 60), Db: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
NSPS (Part 60), IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
NSPS (Part 60), KKKK: Standards of Performance for Stationary Combustion Turbines
MACT (Part 63), A: General Provisions
MACT (Part 63), ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
Title V (Part 70) Area Source

Project Description
BYU has requested a modification to AO DAQE-AN107900019-20, dated January 29, 2020, for the following changes:

- Revise the emission limitations in Condition II.B.2.b for CHP Boilers #4 and #6 from 38.5 lb/hr and 54 ppmdv (each) to 19.2 lb/hr and 36 ppmdv (each). These updates are based on the limitations required in Utah State Implementation Plan Section IX, Part H.3.a.ii.
- Replace the two University Laundry Building boilers with two new 8.0 MMBtu/hr natural gas-fired boilers.
- Remove the 167 hp diesel-fired emergency generator engine in the Crabtree Building.
- Add one 198 hp diesel-fired emergency generator engine to the Music Hall.
- Replace the 150 hp diesel-fired emergency generator engine in the Chemicals Management Building with a 324 hp diesel-fired emergency generator engine.
- Add two new diesel fuel storage tanks.
- Update the stack testing frequency requirements in Condition II.B.2.b for the CHP CoGen Operation in accordance with NSPS Subpart KKKK. These stack testing requirements were unintentionally omitted in the previous AO modifications for the CHP CoGen Operation.

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	-287	118451.00
Carbon Monoxide	-0.20	56.24
Nitrogen Oxides	-0.07	66.55
Particulate Matter - PM_{10}	-0.04	15.80
Particulate Matter - $PM_{2.5}$	-0.04	14.40
Sulfur Dioxide	0.02	0.63
Volatile Organic Compounds	0.01	14.95

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Acetaldehyde (CAS #75070)	0	536
Acrolein (CAS #107028)	0	8
Benzene (Including Benzene From Gasoline) (CAS #71432)	0	618
Formaldehyde (CAS #50000)	0	922
Generic HAPs (CAS #GHAPS)	0	2502
Hexane (CAS #110543)	0	2260
Metal HAPs (CAS #MHAPS)	0	8
Propylene Dichloride (1,2-Dichloropropane) (CAS #78875)	0	0
Propylene Oxide (CAS #75569)	0	1708
Selenium & Compounds (CAS #253)	0	0
Toluene (CAS #108883)	0	434
Xylenes (Isomers And Mixture) (CAS #1330207)	0	600
	Change (TPY)	**Total (TPY)**
Total HAPs	0	4.80

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 Daily Herald on April 12, 2023. 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	**Main Campus** BYU Main Campus	
II.A.2	**Cogen Unit** One (1) Combustion Turbine Fuel type: Maximum turbine rating: Location: Heat Recovery Unit (HRU) Associated Duct Burners Fuel type: Maximum heat input: Controls: NSPS:	 Natural Gas 16.2 megawatt (MW) | (170 MMBtu/hr) Central Heating Plant Natural Gas 85 MMBtu/hr SCR and Oxidation Catalyst Subpart KKKK
II.A.3	**Two (2) Boilers (**NEW**)** Fuel type: Maximum heat input capacity: Location: Controls:	 Natural gas 8.0 MMBTU/hr (each) University Laundry Building Low NO_x burner, oxygen trim, and flue gas recirculation

II.A.4	**Two (2) Boilers (Unit #4 & Unit #6)** Fuel type: Natural gas with fuel oil as a backup fuel Maximum heat input capacity: 192.0 MMBTU/hr (each) Location: Central Heating Plant NSPS: Subpart Db
II.A.5	**Boilers*** Fuel type: Natural Gas Maximum heat input capacity: Each less than 5.0 MMBTU/hr Location: Various buildings *This equipment is listed for informational purposes only.
II.A.6	**Dry Cleaning Equipment** Three (3) dry cleaning units utilizing iso-paraffin hydrocarbon (IPH) as solvent
II.A.7	**Teaching Kilns*** Fuel type: Natural gas Location: East of Building #66 *Listed for informational purposes only.
II.A.8	**Four (4) Paint Booths** Locations: Brewster Building Auto Shop Snell Building Auxiliary Services Building Associated controls: Particulate arrestor filters
II.A.9	**Small Paint Booths** Paint booths using spray cans for minor painting/teaching. The paint booths are located at several locations at the BYU Campus: B73- East of Snell Building, Brewster Building, Clyde Building, Fletcher Building, Harris Fine Arts Center, Monte L Bean Building, Stephen L Richards Building, University Press Building, Wilkinson Building Student Center, Museum of Art, IT Building.
II.A.10	**Bio-Safety Laboratory** Associated controls: HEPA filtering system controls emissions from the containment hood exhaust stack.
II.A.11	**Printing Equipment**

II.A.12	**Six Fuel Storage Tanks** Location: Central Heating Plant Capacity: 30,000 gallons each (three tanks) Fuel type: Fuel oil Location: Broadcast Building Capacity: 20,000 gallons (one tank) Fuel type: Fuel oil Location: Music Hall (**NEW**) Capacity: 225 gallons (one tank) Fuel type: Diesel Location: Chemicals Management Building (**NEW**) Capacity: 374 gallons (one tank) Fuel type: Diesel
II.A.13	**One (1) Cyclonic Dust Collector** Location: Snell Building This dust collector was installed prior to November 29, 1969 and has no permit requirements.
II.A.14	**Two (2) Baghouse Dust Collectors*** Location: Brewster Carpentry Shop Flow Rate: Max of 20,000 cfm Location: Auxiliary Services Building *Note: This equipment vents inside the building.
II.A.15	**Diesel-Fired Emergency Generators <200 Hp** Location — Maximum Engine Rating (hp) Miller Park Baseball Fields (26 hp) Wyview Telephone Node (67 hp) Wyview Park (67 hp) West Substation (69 hp) Helaman Halls Telephone Node (75 hp) Ellsworth Building (99 hp) J. Reuben Clarke Law Building (145 hp) Brimhall Building (150 hp) Music Hall (198 hp) (**NEW**)
II.A.16	**Diesel-Fired Emergency Generators 200-350 Hp** Location — Maximum Engine Rating (hp) Bean Life Science Museum (324 hp) Conference Center (201 hp) Harman Continuing Education Building (324 hp) Information Technology Building (250 hp) Wilkinson Center (268 hp) Indoor Practice Facility (308 hp) Life Science Greenhouse (324 hp) LaVell Edwards Stadium (324 hp) Chemicals Management Building (324 hp) (**NEW**) Smoot Administration Building #1 (335 hp) Smoot Administration Building #2 (335 hp) Cannon Center (352 hp)

II.A.17	**Diesel-Fired Emergency Generators 350-600 Hp** Location — Maximum Engine Rating (hp) Jesse Knight Building (380 hp) Joseph F. Smith Building (450 hp) Marriott Center (464 hp) Auxiliary Services Laundry Building (464 hp)
II.A.18	**Diesel-Fired Emergency Generators 600-2000 Hp** Location — Maximum Engine Rating (hp) Tanner Building (755 hp) Clyde Engineering Building (755 hp) Kimball Tower (755 hp) Student Health Center (804 hp) New Engineering Building (1490 hp) Benson Building #1 (1005 hp) Benson Building #2 (1005 hp) Heritage Hall Complex #1 (1220 hp) Heritage Hall Complex #2 (1220 hp)
II.A.19	**Diesel-Fired Emergency Generators >2000 Hp** Location — Maximum Engine Rating (hp) Broadcast Building #1 (2922 hp) Broadcast Building #2 (2922 hp) Physical Plant Central Heating (2220 hp) Talmage Building #1 (2220 hp) Talmage Building #2 (2220 hp) Talmage Building #3 (2220 hp) Life Science Building (2220 hp)
II.A.20	**Portable Emergency Generators*** Diesel and propane fired emergency generators that are moved to various locations on campus as needed. *This equipment 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	**Campus Wide Limitations and Requirements**
II.B.1.a	Visible emissions from the following emission points shall not exceed the following values: A. Cogen Unit (Combustion turbine and HRU duct burners) - 10% opacity B. All-natural gas fueled boilers equal to or greater than 5.0 MMBTU/hr - 10% opacity C. All paint booth exhaust stacks - 10% opacity D. All baghouse exhaust stacks - 10% opacity E. All cyclonic separator exhaust stacks - 20% opacity F. All print shop equipment exhaust stacks - 10% opacity G. All diesel engines - 20% opacity H. All other emission points - 20% opacity [R307-305-3]
II.B.1.a.1	Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-305-3]
II.B.2	**Central Heating Plant**
II.B.2.a	The owner/operator shall be limited to the following consumption/operating conditions: A. Unit #4 shall not exceed 151,373 MMBtu/yr of heat input per calendar year* B. Unit #6 shall not exceed 151,373 MMBtu/yr of heat input per calendar year* C. The Duct Burner shall not exceed 365,292 MMBtu/yr heat input per calendar year* D. The Combustion Turbine bypass shall not exceed 297,840 MMBtu/yr heat input per calendar year* E. Fuel oil usage shall not exceed 90,000 gallons per calendar year** *Calendar year is defined as January 1st through December 31st **This limitation shall not apply during times of natural gas curtailment. [R307-401-8]

II.B.2.a.1

Compliance with these limitations shall be determined on an annual basis. Based on the first day of each month, a new monthly total shall be calculated. Monthly calculations shall be made no later than 20 days after the end of each calendar month. Monthly totals for January through December shall determine annual compliance. Records of fuel oil consumption shall be kept for all periods when the Central Heating Plant is in operation. Consumption of fuel oil shall be determined by examination of each fuel supplier's billing records along with supervisor monitoring and maintaining operations logs showing which day(s) fuel oil was used. The records of consumption shall be kept on a daily basis. [R307-401-8]

II.B.2.b

Emissions to the atmosphere at all times from the indicated emission point(s) shall not exceed the following rates and concentrations (all ppmdv @ 15% O_2 dry) :

CHP Boilers	Pollutant	lb/hr	ppmdv
Boiler #4	NO_x	19.2	36
Boiler #6	NO_x	19.2	36

CHP CoGen Operation	Pollutant	lb/hr	ppmdv
HRU Stack (Duct Burner + Turbine):	NO_x	2.3	2.5
	CO	1.6	3.0

CHP CoGen Operation	Pollutant	lb/hr	ppmdv	lb/mmbtu
Bypass Stack:	NO_x	9.2	15.0	0.054
	CO	9.4	25.0	0.055

Testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below:

CHP

Emission Point	Pollutant	Testing Status	Test Frequency
Boiler #4 Stack	NO_x	*	#
Boiler #6 Stack	NO_x	*	#
HRU Stack	NO_x	**	##
	CO	**	#
Bypass Stack	NO_x	**	##
	CO	**	#

Testing Status

* The initial testing has already been performed.
** Initial testing shall be performed within 180 days of the start of the first winter season (November - February) of the CoGen plant startup.
\# The test shall be performed at least once every 3 years based on the date of the last stack test.
The test shall be performed as per the schedule contained in 40 CFR 60 Subpart KKKK subsequent to the initial compliance test - at least once every year if the previous compliance test exceeds 75% of the NO_x emission limit or once every 2 years if the previous compliance test is less than or equal to 75% of the NO_x emission limit (no more than 26 calendar months following the previous performance test).

[R307-401]

II.B.2.c	A. Notification Testing shall be performed between November 1 and February 28/29. A source test protocol shall be submitted to the Director by October 1, with notification of actual testing at least 10 days prior to conducting any emission testing required under any part of UAC, R307. The owner or operator shall notify the Director of the date, time and place of such testing and shall submit a source test protocol to the Director. The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. If directed by the Director, the owner/operator shall attend a pretest conference. The pretest conference shall include representation from the owner/operator, the tester, and the Director. B. Reporting Upon completion of the DAQ accepted testing methods, the owner/operator shall submit a copy of the results from each performance test as conducted to the Director within 60 days after the test has been completed. C. Sample Location The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location. D. Volumetric Flow Rate 40 CFR 60, Appendix A, Method 2 or other EPA-approved testing method, as acceptable to the Director. E. Carbon Monoxide (CO) 40 CFR 60, Appendix A, Method 10, or other EPA approved test method, as acceptable to the Director. F. Nitrogen Oxides (NO_x) 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, 7E, or other EPA-approved testing method, as acceptable to the Director. G. Calculations To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director, to give the results in the specified units of the emission limitation. H. New Source Operation (Combustion Turbine & Duct Burner) For the combustion turbine, the production rate during the initial compliance test shall be no less than 90% of the production rate listed in this AO. If 90% of the maximum AO allowable production rate has not been achieved at the time of the test, the following procedure shall be followed: 1) Testing shall be at no less than 90% of the production rate achieved to date. 2) If the test is passed, the new maximum allowable production rate shall be 110% of the tested achieved rate, but not more than the maximum allowable production rate. This new allowable maximum production rate shall remain in effect until successfully tested at a higher rate. 3) The owner/operator shall request a higher production rate when necessary. Testing at no less than 90% of the higher rate shall be conducted. A new maximum production rate (110% of the new rate) will then be allowed if the test is successful. This process may be repeated until the maximum AO production rate is achieved.

	For the duct burner, the production rate during the initial compliance test shall be no less than 90% of the production rate achieved to date. I. Existing Source Operation For an existing source/emission point, the production rate during all compliance testing shall be no less than 90% of the average production achieved in the previous three years. The source test protocol shall be approved by the Director prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Director. [R307-165, R307-401-8]
II.B.2.d	The owner/operator shall burn natural gas as fuel in the CoGen Unit. The sulfur emissions shall not exceed 0.06 lb SO_2/MMBtu heat input. [40 CFR 60 Subpart KKKK, R307-401-8]
II.B.2.d.1	The owner/operator shall monitor the total sulfur content of the fuel being fired in the CoGen Unit, except as provided in 40 CFR 60 Subpart 60.4365. The sulfur content of the fuel shall be determined using total sulfur methods described in 40 CFR 60 Subpart 60.4415. [R307-401-8]
II.B.2.d.2	Records of fuel sulfur content shall be maintained by the owner/operator and made available to the Director or Director's representative upon request. [R307-401-8]
II.B.3	**Federal Combustion Turbine Limitations and Requirements**
II.B.3.a	If the owner/operator supplies more than one third of the gas turbine potential electrical output capacity to any power distribution system for sale, the turbine will be considered as a utility unit and will be classified as an unaffected unit by the Acid Rain Program regulations, except for 40 CFR 72.2 through 72.7 and 72.10 through 72.13. An Acid Rain permit will not be required, nor acid rain emission monitoring and reporting, but the owner/operator shall be subject to submittal of the New Unit Exemption form to the permitting authority by the end of the first calendar year for which the exemption is to apply. [R307-415]
II.B.4	**Dry Cleaning Equipment**
II.B.4.a	Dry cleaning equipment shall not exceed 55.6 gallons of iso-paraffin hydrocarbon (IPH) consumption per rolling 12-month period. At initial start-up, all dry-cleaning equipment will be filled to a volume of up to 175 gallons total of IPH. This initial fill volume shall not be included in the rolling 12-month total. No other VOC or HAP emitting solvent shall be used for dry cleaning application. [R307-401-8]
II.B.4.a.1	Compliance shall be determined on a rolling 12-month total. Based on the first day of each month, a new 12-month total shall be calculated using data from the previous 12 months. Monthly calculations shall be made no later than 20 days after the end of each calendar month. Consumption shall be determined by examination of each supplier's billing records and use of IPH each month. Records of consumption shall be kept for all periods when the dry-cleaning system is in operation. [R307-401-8]

II.B.5	**Paint Booth and Printing/Publishing Limitations**
II.B.5.a	The plant-wide emissions of VOCs and HAPs from the paint booths and printing/publishing operations shall not exceed: A. 16.00 tons per rolling 12-month period for VOCs B. 0.30 tons per rolling 12-month period for Xylene C. 3.42 tons per rolling 12-month period for any combination of HAPs not listed above. Compliance with each limitation shall be determined on a rolling 12-month total. No later than 20 days after the end of each month, a new 12-month total shall be calculated using data from the previous 12 months. [R307-401-8]
II.B.5.a.1	The VOC and HAP emissions shall be determined by maintaining a record of VOC- and HAP-emitting materials used each month. The record shall include the following data for each material used: A. Name of the VOC- and HAP- emitting material, such as: paint, adhesive, solvent, thinner, reducers, chemical compounds, toxics, isocyanates, etc. B. Density of each material used (pounds per gallon) C. Percent by weight of all VOC and HAP in each material used D. Gallons of each VOC- and HAP-emitting material used E. The amount of VOC and HAP emitted monthly by each material used shall be calculated by the following procedure: VOC = (% VOC by Weight/100) x [Density (lb/gal)] x Gal Consumed x 1 ton/2000 lb HAP = (% HAP by Weight/100) x [Density (lb/gal)] x Gal Consumed x 1 ton/2000 lb F. The amount of VOC or HAP emitted monthly from all materials used. G. The amount of VOCs or HAPs reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated above to provide the monthly total VOC or HAP emissions. [R307-401-8]
II.B.5.b	The paint booth locations at the Brewster Building, Auto Shop, Auxiliary Services Building, and Snell Building shall be equipped with a paint arrestor particulate filter, or equivalent, to control particulate emissions. All exhaust air from each of the paint booths shall be routed through its particulate control system before being exhausted to the atmosphere. [R307-401-8]
II.B.6	**Emergency Diesel Generator Requirements**
II.B.6.a	The owner/operator shall not operate each emergency generator 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.6.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: 1. The date the emergency engine was used 2. The duration of operation in hours 3. The reason for the emergency engine usage. [40 CFR 63 Subpart ZZZZ, R307-401-8]
II.B.6.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.6.b	The sulfur content of any fuel oil burned in the stationary diesel engines on site shall not exceed 15 ppm by weight. [40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ, R307-401-8]
II.B.6.c	The sulfur content shall be determined by ASTM Method D2880-71, D4294-89, or approved equivalent. Certification of diesel fuel shall be either by the owner/operator's own testing or by test reports from the diesel fuel marketer. [R307-203-1]

PERMIT HISTORY

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

Supersedes	AO DAQE-AN107900019-20 dated January 29, 2020
Is Derived From	Notice of Intent dated September 1, 2021
Incorporates	Additional Information dated November 10, 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