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-IN159410007-22

December 7, 2022

Kathy Rushmore
Stadion, LLC
1 Hacker Way
Menlo Park, CA 94025
environmental@meta.com

Dear Ms. Rushmore:

Re: Intent to Approve:
Modification to Approval Order to DAQE-AN159410005-21, to Add Additional Diesel-fired Emergency Generators
Project Number: N159410007

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, **Tad Anderson,** as well as the DAQE number as shown on the upper right-hand corner of this letter. Tad Anderson, can be reached at (385) 306-6515 or tdanderson@utah.gov, if you have any questions.

Sincerely,

Jon L. Black
Jon Black (Dec 5, 2022 11:13 MST)

Jon L. Black, Manager
New Source Review Section

JLB:TA:jg

cc: Utah County Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

INTENT TO APPROVE
DAQE-IN159410007-22
Modification to Approval Order to DAQE-AN159410005-21, to Add Additional Diesel-fired Emergency Generators

Prepared By
Tad Anderson, Engineer
(385) 306-6515
tdanderson@utah.gov

Issued to
Stadion, LLC - Eagle Mountain Data Center

Issued On
December 7, 2022

Jon Black (Dec 5, 2022 11:13 MST)

New Source Review Section Manager
Jon L. Black

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GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
Stadion, LLC

Source Name
Stadion, LLC - Eagle Mountain Data Center

Mailing Address
1 Hacker Way
Menlo Park, CA 94025

Physical Address
1499 North Pony Express Parkway
Eagle Mountain, UT 84005

Source Contact
Name Kathy Rushmore
Phone (650) 308-7461 Ext

Email environmental@meta.com

UTM Coordinates
413405 m Easting
4458124 m Northing

Datum NAD83
UTM Zone 12

SIC code 7374 (Computer Processing & Data Preparation & Processing Services)

SOURCE INFORMATION

General Description
Stadion, LLC (Stadion) operates a data center in Eagle Mountain. The data center consists of five existing buildings with administration areas, server rooms, and electrical and maintenance areas. Each existing building has a dedicated generator yard. Primary power to the facility is supplied by the local electric utility.

Secondary backup power is provided by emergency generator engines. Each emergency generator engine is equipped with a Selective Catalytic Reduction (SCR) system. A diesel belly storage tank is installed for each generator. Stadion also operates one fire pump engine rated at 121 hp (90 kW) for a proposed warehouse.

The existing emergency generator engines at the Eagle Mountain data center are divided into two main groups, Group 1 and Group 2. The engines in Group 1 have a maximum power rating of 3.2 MW and are divided into two subgroups, Group 1A and Group 1B. Group 1A are equipped with Type I SCRs, which have a 7-minute startup duration and a 10 ppmvd ammonia concentration in the exhaust. Group 1B are equipped with Type II SCRs, which have a 6.2-minute startup duration and an 8 ppmvd ammonia concentration in the exhaust.

NSR Classification
Minor Modification at Minor Source

Source Classification
Located in Southern Wasatch Front O3 NAA, Provo UT $PM_{2.5}$ NAA
Utah 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
Stadion has requested to add fourteen new generators as Group 1C to support 2 new buildings with emergency power. The fourteen emergency generators will be the same make and model as the existing emergency generators and have Type II SCRs as Group 1B but will also be equipped with Diesel Oxidation Catalysts (DOCs) and Diesel Particulate Filters (DPFs).

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)
Ammonia	0.14	0.46
CO_2 Equivalent	3265	9884.00
Carbon Monoxide	0.77	6.35
Nitrogen Oxides	4.92	15.57
Particulate Matter - PM_{10}	0.24	2.26
Particulate Matter - $PM_{2.5}$	0.24	2.26
Sulfur Dioxide	0.05	0.11
Volatile Organic Compounds	0.42	2.57

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Generic HAPs (CAS #GHAPS)	80	200
	Change (TPY)	**Total (TPY)**
Total HAPs	0.04	0.10

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 December 8, 2022. 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 within 18 months from the date of this AO for the 14 new emergency generator engines in Group 1C (II.A.5). 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	**Stadion LLC - Eagle Mountain Data Center**
II.A.2	**Group 1A Emergency Generator Engines** Fuel: Diesel Number of Units: Thirteen (13) Maximum Rating: 3,212 kW each Model Year: 2018 or later Control: Selective Catalytic Reduction
II.A.3	**Group 1B Emergency Generator Engines** Fuel: Diesel Number of Units: Fifteen (15) Maximum Rating: 3,212 kW each Model Year: 2018 or later Control: Selective Catalytic Reduction
II.A.4	**Group 2 Emergency Generator Engine** Fuel: Diesel Number of Units: One (1) Maximum Rating: 1,105 kW Model Year: 2018 or later Control: Selective Catalytic Reduction
II.A.5	**Group 1C Emergency Generator Engines (NEW)** Fuel: Diesel Number of Units: Fourteen (14) Maximum Rating: 3,212 kW each Model Year: 2022 or later Control: Selective Catalytic Reduction, Diesel Oxidation Catalyst, Diesel Particulate Filter
II.A.6	**Fire Pump Engine** Fuel: Diesel Number of Units: One (1) Maximum Rating: 90 kW Model Year: 2018 or later
II.A.7	**Diesel Storage Tanks** Group 1 Tank Capacity (Approximate): 6,668 gallons Group 2 Tank Capacity (Approximate): 2,350 gallons
II.A.8	**Cooling Units** Negligible emissions. Listed for information 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	**Source-Wide Requirements**
II.B.1.a	Visible emissions from any stationary point or fugitive emission source associated with the source or with the control facilities shall not exceed 20% opacity, except for a period not exceeding three minutes in any one hour. [R307-305-3, R307-401-8]
II.B.1.a.1	Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9. [R307-305, R307-401-8]
II.B.1.b	The owner/operator shall use the emergency generator engines for electricity-producing operation only during the periods when electric power from the public utilities is interrupted or for non-emergency purposes allowed under 40 CFR 60 Subpart IIII. [40 CFR 60 Subpart IIII, R307-401-8]
II.B.1.c	Each emergency generator engine and the fire pump engine shall not exceed 100 hours of operation for testing and maintenance per rolling 12-month period. The 100 hours of operation for testing and maintenance purposes may include up to 50 hours per calendar year for operation in nonemergency situations as provided in 40 CFR 60.4211(f). The 50 hours per calendar year allowed for nonemergency situations shall include emergency generator usage during unscheduled critical maintenance events of the facility's electrical system. [40 CFR 60 Subpart IIII, R307-401-8]
II.B.1.c.1	Compliance with the limit of the hours of operation shall be determined by installation of an hour meter on the emergency generator engines and fire pump engine and by recording hours of operation in an operations log. Records documenting the operation of the emergency generator engines and the fire pump engine shall be kept in a log and shall include the following: A. The date the emergency generator engine or fire pump engine was used; B. The duration of operation for each run; and C. The reason for the emergency generator engine usage. [R307-401-8]
II.B.1.c.2	To determine compliance with the 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. [R307-401-8]
II.B.1.d	The owner/operator shall not operate more than two (2) emergency engines per generator yard at a time at buildings EAG1, EAG2, EAG3, EAG5, EAG6 during testing, maintenance, or non-emergency situations defined in 40 CFR 60.4211(f), except that more than two (2) emergency engines per generator yard at a time at buildings EAG1, EAG2, EAG3, EAG5, EAG6 may be operated during unscheduled critical maintenance events of the facility's electrical system. There is no limit on the number of Group 1C generators that can be operated at the UCO buildings, and engines at buildings EAG1, EAG2, EAG3, EAG5, EAG6 and UCO buildings may be operated simultaneously. [R307-401-8]

II.B.1.e	The owner/operator shall conduct maintenance and testing of the emergency generator engines between the hours of 7:00 AM to 7:00 PM. Unscheduled critical maintenance events of the facility's electrical system may occur at any time of day. [R307-401-8]
II.B.1.f	The sulfur content of any fuel oil or diesel fuel burned shall not exceed 15 ppm by weight. [R307-401-8]
II.B.1.f.1	The sulfur content shall be determined by ASTM Method D2880-71, D4294-89, or approved equivalent. Certification of fuel oil and diesel fuel shall be either by the owner/operator's own testing or by test reports from the fuel oil or diesel fuel marketer. [R307-203-1]
II.B.1.g	The owner/operator shall operate the SCRs in accordance with manufacturer specifications and recommendations to minimize ammonia slip. Records of manufacturer specifications shall be kept on site. [R307-401-8]
II.B.1.h	The owner/operator shall inspect the SCRs each calendar year and replace the catalyst in accordance with manufacturer recommendations. Records of SCR inspections and catalyst replacement shall be kept for the life of the equipment. [R307-401-8]
II.B.1.i	The owner/operator shall operate the DPF and DOC on the Group 1C Emergency Generator Engines in accordance with manufacturer specifications and recommendations. [R307-401-8]
II.B.1.i.1	The owner/operator shall inspect the DPF and DOC each calendar year and replace each in accordance with manufacturer recommendations. Records of DPF and DOC inspections and replacement shall be kept for the life of the equipment. [R307-401-8]

PERMIT HISTORY

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

Supersedes	DAQE-AN159410005-21 dated March 25, 2021
Is Derived From	NOI dated September 19, 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