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-AN160640001-21

November 2, 2021

Michael Welch
Aligned Energy Data Centers (WVC) PropCo, LLC
2800 Summit Avenue
Plano, TX 75074
michael.welch@alignedenergy.com

Dear Mr. Welch:

Re: Approval Order:
New West Valley Data Center
Project Number: N160640001

The attached Approval Order (AO) is issued pursuant to the Notice of Intent (NOI) received on May 28, 2021. Aligned Energy Data Centers (WVC) PropCo, LLC must comply with the requirements of this AO, all applicable state requirements (R307), and Federal Standards.

The project engineer for this action is **Dylan Frederick**, who can be contacted at (385) 306-6529 or dfrederick@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:DF:sa

cc: Salt Lake County Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

APPROVAL ORDER
DAQE-AN160640001-21
New West Valley Data Center

Prepared By
Dylan Frederick, Engineer
(385) 306-6529
dfrederick@utah.gov

Issued to
Aligned Energy Data Centers (WVC) PropCo, LLC - West Valley City Data Center

Issued On
November 2, 2021

Issued By



Bryce C. Bird
Director
Division of Air Quality

TABLE OF CONTENTS

TITLE/SIGNATURE PAGE 1

GENERAL INFORMATION 3

CONTACT/LOCATION INFORMATION 3

SOURCE INFORMATION 3

General Description 3

NSR Classification 3

Source Classification 3

Applicable Federal Standards 3

Project Description 3

SUMMARY OF EMISSIONS 4

SECTION I: GENERAL PROVISIONS 4

SECTION II: PERMITTED EQUIPMENT 5

SECTION II: SPECIAL PROVISIONS 5

PERMIT HISTORY 7

ACRONYMS 8

GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
Aligned Energy Data Centers (WVC) PropCo, LLC

Source Name
Aligned Energy Data Centers (WVC) PropCo, LLC - West Valley City Data Center

Mailing Address
2800 Summit Avenue
Plano, TX 75074

Physical Address
6368 West Beagley Road
West Valley City, UT 84128

Source Contact
Name Michael Welch
Phone (203) 981-6922
Email michael.welch@alignedenergy.com

UTM Coordinates
412,218 m Easting
4,507,632 m Northing
Datum NAD83
UTM Zone 12

SIC code 7376 (Computer Facilities Management Services)

SOURCE INFORMATION

General Description
Aligned Energy Data Centers (WVC) PropCo, LLC (Aligned) will operate a data center in West Valley City, Utah. The data center houses servers for various clients, and will operate emergency backup generators in the case of a loss of power. Diesel storage tanks will be attached to each emergency generator unit.

NSR Classification
New Minor Source

Source Classification
Located in Northern Wasatch 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), ZZZZ: NESHAP for Stationary Reciprocating Internal Combustion Engines

Project Description
Aligned has requested a new minor source to house a data center. The data center will require multiple emergency backup generators in order to ensure client servers are protected from power outages. The site will operate eight (8) 3,000 kW backup generators and eight (8) associated diesel storage tanks with a 5,000 gallon capacity each.

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		1880.00
Carbon Monoxide		4.26
Nitrogen Oxides		4.13
Particulate Matter - PM_{10}		0.28
Particulate Matter - $PM_{2.5}$		0.28
Sulfur Dioxide		0.00
Volatile Organic Compounds		0.28

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Benzene (Including Benzene From Gasoline) (CAS #71432)		2
	Change (TPY)	**Total (TPY)**
Total HAPs		0.00

SECTION I: GENERAL PROVISIONS

I.1	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
I.2	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
I.3	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
I.4	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
I.5	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.6	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
I.7	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]

I.8	The owner/operator shall submit documentation of the status of construction or modification to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18]

SECTION II: PERMITTED EQUIPMENT

II.A THE APPROVED EQUIPMENT

II.A.1	**Data Center**
II.A.2	**Eight (8) Emergency Engines** Rating: 3,000 kW (4023 hp) each Fuel: Diesel Controls: Selective Catalytic Reduction NSPS Applicability: Subpart IIII MACT Applicability: Subpart ZZZZ
II.A.3	**Eight (8) Diesel Storage Tanks** Capacity: 5,000 gallons each

SECTION II: SPECIAL PROVISIONS

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	**Facility-Wide Requirements**
II.B.1.b	The owner/operator shall not allow visible emissions from any source on site exceed 20% opacity. [R307-201-3, R307-401-8]
II.B.1.b.1	Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9. [R307-201-3]
II.B.2	**Emergency Engine Requirements**
II.B.2.a	The owner/operator shall comply with the following operational limits: A. The owner/operator shall not operate the emergency generator engines for maintenance and testing operations before 6:00 am or after 8:00 pm each day. B. The owner/operator shall not operate more than one (1) emergency generator engine at the same time during maintenance and testing operations. [R307-401-8]

II.B.2.a.1	The owner/operator shall: A. Record the date and time that the maintenance and testing was performed. B. Record the emergency generator engine that was maintained and tested. C. Maintain records of maintenance and testing on a daily basis. [R307-401-8]
II.B.2.b	The owner/operator shall install each emergency generator engine such that each engine has a stack height of no less than 37 feet measured from the ground. [R307-401-8]
II.B.2.c	The owner/operator shall certify that each emergency generator engine installed on site has a controlled (i.e., accounting for SCR) NO_x emission rate of 10.31 lb/hr or less at the exhaust point. [R307-401-8]
II.B.2.c.1	To demonstrate compliance with the above condition, the owner/operator shall either: A. Purchase a stationary internal combustion engine which has obtained certification as defined in 40 CFR 1039.801; or B. Conduct an initial performance test according to 40 CFR part 1039. C. Maintain the manufacturer's emissions guarantee for the installed engine model. [R307-401-8]
II.B.2.d	The owner/operator shall install selective catalytic reduction controls on each emergency generator engine. Emissions from the engine exhaust shall be routed through the selective catalytic reduction unit before being vented to the atmosphere. [R307-401-8]
II.B.2.e	The owner/operator shall operate the SCRs in accordance with manufacturer specifications and recommendations to minimize ammonia slip. [R307-401-8]
II.B.2.e.1	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.2.f	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. [R307-401-8, 40 CFR 63 Subpart ZZZZ]

II.B.2.f.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.2.f.2	To determine the duration of operation, the owner/operator shall install a non-resettable hour meter for each emergency engine. [R307-401-8, 40 CFR 63 Subpart ZZZZ]
II.B.2.g	The owner/operator shall only use diesel fuel (e.g. fuel oil #1, #2, or diesel fuel oil additives) as fuel in each emergency engine. [R307-401-8]
II.B.2.g.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.2.g.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 the diesel fuel meets the ULSD requirements. [R307-401-8]

PERMIT HISTORY

This Approval Order shall be based on the following documents:

Is Derived From	NOI dated May 28, 2021
Incorporates	Additional Information dated July 8, 2021
Incorporates	Additional Information dated August 30, 2021
Incorporates	Additional Information dated September 23, 2021

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