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-IN108190010-24

December 19, 2024

Mike Pool
Springville City Corporation
450 West 600 North
Springville, UT 84663
mpool@springville.org

Dear Mr. Pool:

Re: Intent to Approve: Modification to Approval Order DAQE-AN108190009-24 to Remove Engine Startup Hours Limitation
Project Number: N108190010

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, **Stockton Antczak,** as well as the DAQE number as shown on the upper right-hand corner of this letter. Stockton Antczak can be reached at (385) 306-6724 or santczak@utah.gov if you have any questions.

Sincerely,

Jon L. Black
Jon Black (Dec 19, 2024 09:28 MST)

Jon L. Black, Manager
New Source Review Section

JLB:SA:jg

cc: Utah County Health Department
EPA Region 8

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

INTENT TO APPROVE
DAQE-IN108190010-24
Modification to Approval Order DAQE-AN108190009-24 to Remove Engine Startup Hours Limitation

Prepared By
Stockton Antczak, Engineer
(385) 306-6724
santczak@utah.gov

Issued to
Springville City Corporation - Whitehead Power Plant

Issued On
December 19, 2024

Jon Black (Dec 19, 2024 09:28 MST)

New Source Review Section Manager
Jon L. Black

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 4

SUMMARY OF EMISSIONS 4

PUBLIC NOTICE STATEMENT 4

SECTION I: GENERAL PROVISIONS 5

SECTION II: PERMITTED EQUIPMENT 5

SECTION II: SPECIAL PROVISIONS 6

PERMIT HISTORY 9

ACRONYMS 10

GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
Springville City Corporation

Source Name
Springville City Corporation - Whitehead Power Plant

Mailing Address
450 West 600 North
Springville, UT 84663

Physical Address
450 West 700 North
Springville, UT 84663

Source Contact
Name: Mike Pool
Phone: (801) 489-2750
Email: mpool@springville.org

UTM Coordinates
447400 m Easting
4447250 m Northing
Datum NAD83
UTM Zone 12

SIC code 4911 (Electric Services)

SOURCE INFORMATION

General Description
Springville Power Corporation (Springville) operates the Whitehead Power Plant. The facility is a minor source, a municipal power plant. The plant consists of two (2) Enterprise engines (K-1 and K-2), five (5) Caterpillar G3520H engines (K-3-K-7), and one (1) 6 MMBtu/hr natural gas boiler.

NSR Classification
Minor Modification at Minor Source

Source Classification
Located in Southern Wasatch Front O3 NAA, Utah County PM_{10} Maint Area, Provo UT $PM_{2.5}$ NAA Utah County
Airs Source Size: SM

Applicable Federal Standards
NSPS (Part 60), A: General Provisions
NSPS (Part 60), JJJJ: Standards of Performance for Stationary Spark 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
Title V (Part 70) Area Source

Project Description
Springville has requested the removal of condition II.B.2.e, which limits the start-up hours for the Caterpillar engines from 8:00-11:00 AM daily. Updated modeling has been submitted in support of removing this condition. Permitted emissions will not change as a result of this project.

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	60262.00
Carbon Monoxide	0	18.43
Nitrogen Oxides	0	45.40
Particulate Matter - PM_{10}	0	4.19
Particulate Matter - $PM_{2.5}$	0	4.19
Sulfur Dioxide	0	0.24
Volatile Organic Compounds	0	26.37

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Formaldehyde (CAS #50000)	0	17320
Generic HAPs (CAS #GHAPS)	0	7800
	Change (TPY)	**Total (TPY)**
Total HAPs	0	12.56

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 21, 2024. 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 Utah Administrative Code (UAC) Rule 307 (R307) and Title 40 of the Code of Federal Regulations (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. Inventories, Testing and Monitoring. [R307-150]

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	**Springville City Corporation** White Head Power Plant
II.A.2	**B-1** Boiler Fuel: Natural gas Rating: 6.0 MMBtu/hr

II.A.3	**Engines K-1 & K-2** Enterprise DGSRV-16-4 engine generators Fuel: Dual fuel (diesel and natural gas) Rating: 5.5 MW/hr
II.A.4	**K-3 through K-7** Engine Type: Four (4) stroke lean burn Fuel: Natural gas Control: SCR and oxidation catalyst Rating: 3422 hp
II.A.5	**Cooling Towers**

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	Visible emissions from any point or stationary fugitive emission source associated with the installation or control facilities shall not exceed 10% opacity, with the exception of an initial start-up period of 15 minutes. [R307-401-8]
II.B.1.b	The owner/operator shall use the specified fuel mixtures as a primary fuel in the following equipment: A. No less than 99% natural gas in the K-1 and K-2 engine/generators, except during a period of 30 minutes for start-up or shutdown B. Natural gas 100% of the time in the 6.0 MMBTU/hr boiler C. Natural gas 100% of the time in the K-3 through K-7 engine/generators. The engine/generators (K-1 and K-2) may be operated using diesel fuel only during the initial startup mode, shutdown mode, or during natural gas curtailment. Hours of operation during natural gas curtailment shall be limited to 72 hours per calendar year. The owner/operator shall notify the Director within 24 hours of natural gas being curtailed, the reason for the curtailment, and the expected length of the curtailment. [R307-401, R307-401-8]

II.B.1.c	Stack testing to demonstrate compliance with daily and rolling 12-month emission limitations shall be performed in accordance with the following: A. 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 methods acceptable to the Director. Occupational Safety and Health Administration (OSHA) approvable access shall be provided to the test location B. Volumetric Flow Rate: 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing methods acceptable to the Director C. NO_x: 40 CFR 60 Appendix A, Method 7E, or other EPA-approved testing methods acceptable to the Director D. CO: 40 CFR 60 Appendix A, Method 10, 10B, or other EPA-approved testing methods acceptable to the Director E. 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 to give the results in the specified units of the emission limitation. A stack test protocol shall be provided at least 30 days prior to the test. A pretest conference shall be held if directed by the Director F. The production rate during all compliance testing shall be no less than 90% of the maximum production rate achieved in the previous three (3) years. If the desired production rate is not achieved at the time of the test, the maximum 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. 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 allowable production rate is achieved. G. Stack testing on each internal combustion engine shall be performed once every 8,760 hours of operation of that engine, but no less frequently than once every three (3) years, whichever condition is met first. [40 CFR 60 Subpart JJJJ, R307-165]
II.B.2	**K-1, K-2, K-3, K-4, K-6, and K-7 Engine Requirements**
II.B.2.a	Emissions to the atmosphere from the engine generators K-1 and K-2 shall each not exceed the following rates and concentrations: NO_x 18.01 lb/hr CO 2.5 lb/hr Emissions to the atmosphere from the engine generators K-3 through K-7 shall each not exceed the following rates and concentrations: NO_x 0.07 g/hp-hr CO 0.108 g/hp-hr Stack testing to show compliance with the above emission limitations shall be performed as outlined in condition II.B.1.c. [R307-165, R307-401-8]

II.B.2.b	NO_x emissions from the operation of all engines and boilers at the plant shall not exceed 1.68 tons per day and 45.4 tons per rolling 12-month period. CO emissions from the operation of all engines and boilers at the plant shall not exceed 1.15 tons per day and 18.5 tons per rolling 12-month period. Stack testing to show compliance with the above emission limitations shall be performed as outlined in condition II.B.1.c. [R307-165, R307-401-8]
II.B.2.c	Internal combustion engine emissions shall be calculated using the emission factors generated from the most recent stack test. Emissions totals from all engines shall be kept in table format, listing month, operating hours, and emissions for each individual engine. Stack testing shall be performed as outlined in condition II.B.1.c. A day is equivalent to the time period from midnight to the following midnight. Emissions shall be calculated for NO_x and CO for each individual engine with the following equations: Daily Rate Calculation: D = (X * H) Where: X = lb/hr rate for each generator (based on the most recent stack test for that generator) H = total hours of operation for that generator each day (recorded by hour meter) D = daily output of pollutant in lbs/day Monthly Rate Calculation: The emissions (lb/hr) for each pollutant shall be calculated by summing the daily emissions for each month. Annual Rate Calculation: The annual emissions shall be calculated by summing the emissions from each of the previous 12 months. The lb per rolling 12-month rate shall be divided by 2000 pounds per ton to calculate tons per rolling 12-month period emissions. The rolling 12-month total shall be calculated by the twentieth day of each month. [R307-170, R307-401-8]
II.B.2.d	The sulfur content of any diesel burned shall not exceed 15 ppm by weight for fuels used in the dual fuel engines. The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of diesel fuel sulfur content shall be either by Springville's own testing or test reports from the fuel marketer. [R307-401]
II.B.2.e	The stack heights of each engine (K-1 through K-7) shall be no less than 60 feet, as measured from ground level. [R307-410]
II.B.3	**Boiler Requirements**
II.B.3.a	The boiler shall not exceed 5,000 hours of operation per rolling 12-month period. [R307-401]

II.B.3.a.1	To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of operation shall be kept for all periods when the plant is in operation. An hour meter shall determine hours of operation. [R307-401]

PERMIT HISTORY

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

Supersedes	AO DAQE-AN108190009-24 dated May 8, 2024
Is Derived From	NOI dated August 28, 2024

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