State of Utah

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Governor

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Lieutenant Governor

Department of
Environmental Quality

Tim Davis
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-AN108230009-25

June 26, 2025

Shawn Black
Payson City Corporation
439 West Utah Avenue
Payson, UT 84651
shawnb@paysonutah.gov

Dear Mr. Black:

Re: Approval Order: Minor Modification of Approval Order DAQE-AN108230007-17 to Update Equipment
Project Number: N108230009

The attached Approval Order (AO) is issued pursuant to the Notice of Intent (NOI) received on January 14, 2025. Payson City Corporation must comply with the requirements of this AO, all applicable state requirements (R307), and Federal Standards.

The project engineer for this action is **Stockton Antczak**, who can be contacted at (385) 306-6724 or santczak@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:SA:jg

cc: Utah County Health Department
EPA Region 8

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

APPROVAL ORDER
DAQE-AN108230009-25
Minor Modification of Approval Order DAQE-AN108230007-17 to Update Equipment

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

Issued to
Payson City Corporation - Payson City Power

Issued On
June 26, 2025

Issued By

Bryce C. Bird
Director
Division of Air Quality

TABLE OF CONTENTS

GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
Payson City Corporation

Source Name
Payson City Corporation - Payson City Power

Mailing Address
439 West Utah Avenue
Payson, UT 84651

Physical Address
1100 North 100 East
Payson, UT 84651

Source Contact
Name: Shawn Black
Phone: (801) 420-1607
Email: shawnb@paysonutah.gov

UTM Coordinates
437,060 m Easting
4,432,650 m Northing
Datum NAD83
UTM Zone 12

SIC code 4911 (Electric Services)

SOURCE INFORMATION

General Description
Payson City Corporation operates the Payson Power Plant located in Utah County. The site consists of various power generation engines, an emergency engine, and other smaller units. The site is considered a minor source.

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
This project includes the removal of Enterprise engines #3 and #4. These engines will be replaced by six (6) new Caterpillar G3520H 4-stroke natural gas engines equipped with both selective catalytic reduction (SCR) and oxidation catalyst (OC). The project will result in decreases in particulate matter and SO_2 emissions, and increases in NO_x, CO, VOC, and HAPs emissions. This project also incorporates the removal of several other pieces of equipment that are no longer on site. These pieces of equipment include the emergency engine, boiler, and other miscellaneous equipment.

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	63413.20	68332.00
Carbon Monoxide	4.54	18.54
Nitrogen Dioxide	0.15	65.15
Particulate Matter - PM_{10}	-2.67	5.13
Particulate Matter - $PM_{2.5}$	-2.67	5.13
Sulfur Dioxide	-1.61	0.29
Volatile Organic Compounds	7.83	23.83

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Formaldehyde (CAS #50000)		19120
Generic HAPs (CAS #GHAPS)		8920
	Change (TPY)	**Total (TPY)**
Total HAPs	12.12	14.02

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	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]

I.6	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]
I.7	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]
I.8	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]

SECTION II: PERMITTED EQUIPMENT

II.A THE APPROVED EQUIPMENT

II.A.1	**Payson City Power**
II.A.2	**Dual Fuel Internal Combustion Engine (Unit 1)** Unit Description: 2,650 kW with automatic air/fuel ratio controller and OC NSPS/MACT Applicability: 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ
II.A.3	**Dual Fuel Internal Combustion Engine (Unit 2)** Unit Description: 2,650 kW with automatic air/fuel ratio controller and OC NSPS/MACT Applicability: 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ
II.A.4	**CAT 4-Stroke Natural Gas Engine (Unit 3)** Unit Description: 3,417 hp (2550 kW) equipped with both SCR and OC NSPS/MACT Applicability: 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ
II.A.5	**CAT 4-Stroke Natural Gas Engine (Unit 4)** Unit Description: 3,417 hp (2550 kW) equipped with both SCR and OC NSPS/MACT Applicability: 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ
II.A.6	**CAT 4-Stroke Natural Gas Engine (Unit 5)** Unit Description: 3,417 hp (2550 kW) equipped with both SCR and OC NSPS/MACT Applicability: 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ
II.A.7	**CAT 4-Stroke Natural Gas Engine (Unit 6)** Unit Description: 3,417 hp (2550 kW) equipped with both SCR and OC NSPS/MACT Applicability: 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ

II.A.8	**CAT 4-Stroke Natural Gas Engine (Unit 7)** Unit Description: 3,417 hp (2550 kW) equipped with both SCR and OC NSPS/MACT Applicability: 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ
II.A.9	**CAT 4-Stroke Natural Gas Engine (Unit 8)** Unit Description: 3,417 hp (2550 kW) equipped with both SCR and OC NSPS/MACT Applicability: 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ
II.A.10	**Emergency flare (Unit 11)** Unit Description: Pre-1969 unit. No unit-specific applicable requirements.
II.A.11	**Miscellaneous Emission Units 1 (Misc. 1)** Unit Description: includes following units: Thirteen (13) Natural Gas Space Heaters (less than 0.5 MMBtu/hr each), Natural Gas Water Heater (1 MMBtu/hr). No unit-specific applicable requirements.
II.A.12	**Miscellaneous Emission Units 1 (Misc. 2)** Unit Description: includes following units: One (1) Above Ground Storage Tank, One (1) Diesel Day Tank. No unit-specific applicable requirements.
II.A.13	**Miscellaneous Emission Units 1 (Misc. 3)** Unit Description: includes following units: One (1) mobile diesel steam Cleaner, One (1) Cooling Tower, Oil/Water Separator. No unit-specific applicable requirements.

SECTION II: SPECIAL PROVISIONS

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	**Site-wide Requirements**
II.B.1.a	The owner/operator shall use natural gas as the primary fuel in all of the dual-fuel engines. Diesel fuel may be used only during a 15-minute start-up and shut-down period; as backup fuel during periods of natural gas curtailment; for maintenance firings; for break-in firing; system electrical power outages; and as pilot fuel. Natural gas curtailment is defined as a period when the natural gas provider/supplier imposes a curtailment or interruption of service, and the curtailment is involuntary and beyond the control of the permittee. An operation log shall be used to record the engine running time during start-up, shut-down, natural gas curtailment, maintenance firing, break-in firing, system electrical power outages, and normal operation. [R307-401-8]
II.B.1.b	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.1.b.1	The owner/operator can demonstrate compliance with the fuel sulfur requirements for any diesel fuel purchased by maintenance of fuel purchase invoices and certification by the fuel supplier that the fuel meets the ULSD definition of 15 ppm sulfur. [R307-203-1]
II.B.2	**Stack Testing Requirements**
II.B.2.a	**The owner/operator shall conduct any stack testing required by this AO according to the following conditions**. [R307-401-8]

II.B.2.a.1	**Notification** At least 30 days prior to conducting a stack test, the owner/operator shall submit a source test protocol to the Director. The source test protocol shall include the items contained in R307-165-3. If directed by the Director, the owner/operator shall attend a pretest conference. [R307-165-3, R307-401-8]
II.B.2.a.2	**Testing & Test Conditions** The owner/operator shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4. [R307-165-4, R307-401-8]
II.B.2.a.3	**Access** The owner/operator shall provide Occupational Safety and Health Administration (OSHA)- or Mine Safety and Health Administration (MSHA)-approved access to the test location. [R307-401-8]
II.B.2.a.4	**Reporting** No later than 60 days after completing a stack test, the owner/operator shall submit a written report of the results from the stack testing to the Director. The report shall include validated results and supporting information. [R307-165-5, R307-401-8]
II.B.2.a.5	**Test Methods** When performing stack testing, the owner/operator shall use the appropriate EPA-approved test methods as acceptable to the Director. Acceptable test methods for pollutants are listed below. [R307-401-8]
II.B.2.b	**Standard Conditions** A. Temperature - 68 degrees Fahrenheit (293 K) B. Pressure - 29.92 in Hg (101.3 kPa) C. Averaging Time - As specified in the applicable test method. [40 CFR 60 Subpart A, 40 CFR 63 Subpart A, R307-401-8]
II.B.2.b.1	**NO_x** 40 CFR 60, Appendix A, Method 7; Method 7E; or other EPA-approved testing method as acceptable to the Director. [R307-401-8]
II.B.2.b.2	**CO** 40 CFR 60, Appendix A, Method 10, or other EPA-approved testing method as acceptable to the Director. [R307-401-8]
II.B.3	**Conditions on Dual Fuel Internal Combustion Engines (Units 1 and 2)**
II.B.3.a	Emissions of CO for each individual engine shall be no greater than 0.1 g/kW-hr. Emissions of NO_x for each individual engine shall be no greater than 4.96 g/kW-hr. [R307-401-8]

II.B.3.b	Emissions of CO shall be no greater than 1.17 tons per rolling 12-month period for units 1 and 2 combined. Emissions of NO_x shall be no greater than 52.62 tons per rolling 12-month period for units 1 and 2 combined. Compliance with the emission limitations shall be determined by the following equation: Emissions (tons/rolling 12-month period) = (Emission factor in g/kW-hr) x (engine rating in kW) x (hours of operation) Emissions for each pollutant shall be the sum of emissions from each engine. Within the first ten (10) days of each month, a new 12-month total shall be calculated using data from the previous 12 months. The emission factor shall be derived from the most recent emission test results. The source shall be tested every three (3) years based on the date of the last stack test. [R307-401-8]
II.B.3.c	Visible emissions shall be no greater than 10 percent opacity except for 15 minutes at start-up and shutdown. When straight diesel fuel is used, visible emissions shall be no greater than 20 percent opacity except for 15 minutes at start-up and shutdown. [R307-401-8]
II.B.3.d	Total hours of operation shall not exceed 4,000 hours per rolling 12-month period for units 1 and 2 combined. An hour meter shall be used to continuously monitor the hours of operation. Readings shall be taken monthly to determine the total operating hours for that month. Compliance with the limitation shall be determined on a rolling 12-month total. Each month, a new 12-month total shall be calculated using data from the previous 12 months. [R307-401-8]
II.B.4	**Conditions on Natural Gas Engines (Units 3-8)**
II.B.4.a	Emissions of CO from any individual engine shall be no greater than 0.108 g/hp-hr. Emissions of NO_x from any individual engine shall be no greater than 0.07 g/hp-hr. [R307-401-8]
II.B.4.b	Emissions of CO shall be no greater than 17.05 tons per rolling 12-month period for Units 3-8 combined. Emissions of NO_x shall be no greater than 11.1 tons per rolling 12-month period for Units 3-8 combined. Compliance with the emission limitations shall be determined by the following equation: Emissions (tons/rolling 12-month period) = (Controlled emission factor in g/hp-hr) x (3,417 hp) x (total operational hours for the rolling 12-month period) Emissions for each pollutant shall be the sum of emissions from each engine. Within the first ten (10) days of each month, a new 12-month total shall be calculated using data from the previous 12 months. The emission factor shall be derived from the most recent emission test results. The source shall be tested every three (3) years based on the date of the last stack test. [R307-401-8]
II.B.4.c	Visible emissions shall be no greater than 10 percent opacity except for 15 minutes at start-up and shutdown. [R307-401-8]

II.B.4.d	Total hours of operation shall not exceed 42,000 hours per rolling 12-month period for all Unit Engines combined. An hour meter shall be used to continuously monitor the hours of operation. Readings shall be taken monthly to determine the total operating hours for that month. Compliance with the limitation shall be determined on a rolling 12-month total. Each month, a new 12-month total shall be calculated using data from the previous 12 months. [R307-401-8]

PERMIT HISTORY

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

Supersedes	AO DAQE-AN108230007-17 dated November 28, 2017
Is Derived From	NOI dated January 14, 2025
Incorporates	Additional Information dated March 31, 2025

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