ALLEGHENY COUNTY HEALTH DEPARTMENT
AIR QUALITY PROGRAM

May 13, 2026

SUBJECT: **Springdale Energy, LLC**
Butler Street Extension
Springdale, PA 15144

Title V Operating Permit File No. 0580-OP26
Major Source Operating Permit Renewal

TO: JoAnn Truchan, P.E.
Program Manager, Engineering

FROM: Bernadette Lipari
Air Quality Engineer

FACILITY DESCRIPTION:

The facility in Springdale Township is a commercial electrical power generation facility. The source is composed of two 48 MWe natural gas and No. 2 fuel oil fired simple cycle combustion turbines (Units 1 and 2) which operate as peaking units and two natural gas-fired, combustion turbines (Units 3 and 4) rated at a nominal 188 MWe (2,094 MMBtu/hr, maximum) each. Units 3 and 4 are operated in combined cycle mode through two heat recovery steam generators (HRSGs) without duct burners, one per unit, with an additional 186 MWe generated by an axial flow steam turbine which utilizes the steam produced by the HRSGs. The combined cycle combustion turbines fire natural gas exclusively and are equipped with dry low-NO_X burners and selective catalytic reduction (SCR) for control of NO_X emissions. The simple cycle combustion turbines fire natural gas and No. 2 fuel oil exclusively and are equipped with water injection for NO_X control and use low sulfur (0.0015% max.) fuel oil for SO_2 control. The steam turbine generator uses steam from the heat recovery steam generators and has no fuel supply and no emissions. Additional emission units consist of one 148,690 gallon-per-minute cooling tower, a 24,800-gallon aqueous ammonia storage tank, a 400,000 gallon No. 2 fuel storage tank, two 1,250 kW emergency generators, and an emergency fire pump.

The facility is a major source of particulate matter (PM) and particulate matter < 10 microns in diameter (PM_{10}), nitrogen oxides (NO_X), carbon monoxide (CO) and volatile organic compounds (VOC) and a minor source of sulfur dioxide (SO_2) and hazardous air pollutants (HAPs) as defined in section 2101.20 of Article XXI.

On April 17, 2017, the permittee submitted an application for transfer of ownership from Allegheny Energy Supply Company, LLC to Springdale Energy, LLC.

PERMIT APPLICATION COMPONENTS:

1. Major Source Operating Permit administrative amendment application package, dated January 13, 2022.
2. Installation Permit #0580-I001, issued September 30, 1999 (superseded by #0580-I005).
3. Installation Permit #0580-I002a, issued July 12, 2001, amended June 6, 2002 (superseded by #0580-I005).
4. RACT Installation Permit #0580-I003, issued October 13, 2016 (superseded by #0580-I005).
5. Installation Permit #0580-I004, issued June 24, 2020.
6. RACT Installation Permit #0580-I005, issued concurrently with this permit.
7. US EPA Region 3 Exemption Letter, dated May 13, 2025 (Request for Approval of Alternative Monitoring Requirement for a NSPS Subpart GG – Standards of Performance for Stationary Gas Turbines).

EMISSION SOURCES:

I.D.	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
AE1	General Electric LM6000PC Simple Cycle Combustion Turbine	Water Injection	424 MMBtu/Hr (nominal)	Natural gas #2 fuel oil	S001
AE2	General Electric LM6000PC Simple Cycle Combustion Turbine	Water Injection	424 MMBtu/Hr (nominal)	Natural gas #2 fuel oil	S002
AE3	Siemens Westinghouse Model 501F	Dry Low/NOx Burners /SCR	2,094 MMBtu/Hr	Natural Gas	S003
AE4	Siemens Westinghouse Model 501F	Dry Low/NOx Burners /SCR	2,094 MMBtu/Hr	Natural Gas	S003
AE5	Steam Turbine Electric Generator	None	186 MW	n/a	n/a
EG01	Caterpillar C32 Backup Emergency Generator	None	1,250 kW	Diesel	EG01
EG02	Caterpillar C32 Backup Emergency Generator	None	1,250 kW	Diesel	EG02
G02	Clarke JDFP-06WA Emergency Fire Pump	None	265 BHP	Diesel	n/a
T-2	Aqueous Ammonia	Vapor Balancing and Bottom Loading	24,800 gallons	Aqueous Ammonia	n/a
T-3	No. 2 Fuel Storage Tank	None Required	400,000 gallons No. 2 fuel oil	No. 2 Fuel Oil	n/a
CT-2	Cooling Tower	Mist eliminators	148,690 gallons/minute	n/a	S004

EMISSION CALCULATIONS:

Detailed emissions calculations can be found in Appendix A.

Unit Descriptions (each combustion turbine):

Unit:	Simple cycle combustion turbines
I.D(s):	Unit No. 1 & Unit No. 2
Make:	General Electric
Model	LM 6000 PC
Fuel(s):	Natural gas & No.2 fuel oil
Sulfur content:	0.0015% maximum by weight

Note: Article XXI, §2104.10.a.1 allows for use of any 0.05% sulfur fuel purchased by the facility before September 1, 2020, so PTE calculations are based on 0.05% sulfur. Any new purchases of fuel oil must be 0.0015% or less.

Rating:	48 MWe – 355 x 10^6 btu/hr normal, 424.4 x 10^6 btu/hr maximum at HHV
Controls:	Water injection for NO_X control, low sulfur (0.05% max.) fuel oil for SO_2 control
Instrumentation:	CEMS for NO_X, O_2 and fuel flow

Unit:	Combined cycle combustion turbine
I.D.(s):	Unit No. 3 & Unit No.4
Make:	Siemens-Westinghouse
Model	501F
Fuel(s):	Natural gas only
Rating:	209 MWe (net) - 1,884 x 10^6 btu/hr normal, 2,094 x 10^6 btu/hr maximum at HHV
Exhaust:	Heat recovery steam generator (without duct burners) each unit.
Controls:	Dry Low- NO_X burners with SCR
Instrumentation:	CEMs for fuel flow, exhaust gas flow, nitrogen oxides, oxygen and carbon monoxide

Unit:	Steam turbine generator (w/o duct burners)
I.D.(s):	Unit No.5
Fuel(s):	NA
Rating:	186 MWe due to steam from the two (2) heat recovery steam generators

Cooling tower

Process Description:	One multi-cell evaporative cooling tower
No. of cells:	Six with identical fan stacks
Facility ID:	CT-2
Coolant:	Water
Control Device(s):	Mist eliminators (limit drift to 0.0005% of circulating water flow)
Capacity:	148,690 gallon per minute
Max. TDS:	3,000 ppm

No.2 fuel oil tank

Process Description:	One 400,000 gallon storage tank
Facility ID:	T-3
Contents:	No.2 fuel oil
Control Device(s):	None

Ammonia tank

Process Description: One 24,800-gallon storage tank
Facility ID: T-2
Contents: Aqueous Ammonia (29.5%)
Control Device(s): Vapor Balancing and Bottom Loading

Emergency Generators EG01 & EG02

Process Description: Two (2) Caterpillar C32 Diesel Emergency Generators
Facility ID: EG01 & EG02
Capacity: 1,250 kW
Fuel(s): Diesel
Control Device(s): None; Tier 2 Compliant

Emergency Fire Pump Engine G02

Process Description: Clarke JDFP-06WA Diesel Fire Water Pump
Facility ID: G02
Capacity: 265 BHP
Fuel(s): Diesel
Control Device(s): None

ALLOWABLE EMISSION SUMMARY:

Simple Cycle Combustion Turbine (Unit 1 or Unit 2) - each:

Pollutant	Each Unit lbs/hr Natural gas	ppm $_{vd}$ Natural Gas	Each Unit lbs/hr Fuel oil	ppm $_{vd}$ Fuel oil	Combined tons/yr[1, 4]	Basis
PM	6.6		17.0		17	IP-0580-I005
PM_{10}	6.6		17.0		17	IP-0580-I005
NO_X	41.0	25	71.0	42	98	IP-0580-I005
CO	57.0		6.0		115	IP-0580-I005
SO_2	0.3		22.5		6	IP-0580-I005
VOC	5.0	2.8	1.0	0.6	10	IP-0580-I005
Formaldehyde	1.4				3.3	IP-0580-I005

[1] A year is defined as any consecutive 12-month period. Annual emissions include emissions during startup and shutdown.
[2] PPM limit @ 15% O_2.

Combined Cycle Combustion Turbine (Unit 3 and Unit 4) - each:

Pollutant	lbs/MMBtu	ppm $_{vd}$	Each Unit lbs/hr	Combined tons/yr[1]	Basis
PM	0.015		19.0	166	IP-0580-I005
PM_{10}	0.015		19.0	166	IP-0580-I005
NO_X		2.5[2]	20.0[3]	210[4]	IP-0580-I005
CO		10.0[2]	48.0	550	IP-0580-I005
SO_2	0.00286		5.7	53	IP-0580-I005
VOC		2.0[2]	3.8	48	IP-0580-I005
Formaldehyde			0.68	5.7	IP-0580-I005
Sulfuric Acid Mist			0.685	6.0	IP-0580-I005
Ammonia		10.0[2]	28.0	245	IP-0580-I005

[1] A year is defined as any consecutive 12-month period. Annual emissions include emissions during startup and shutdown.

[2] @15% O_2 during any 4-hour time period at or above 70% of full load for NO_X and any 1-hour time at or above 70% of full load for CO,VOC, and ammonia.

[3] Based on a rolling 4-hour average.

[4] The short-term limit of 20 lbs/hr effectively limits NO_X emissions to 87.6 tpy for each turbine, or 175.2 tpy total. See conditionV.B.1.j of Installation Permit #0580-I005. However, these restrictions do not take into account startup and shutdown emissions. All NO_X emissions are monitored by CEMs.

Emission Unit EG01 & EG02 Emission Limitations:

Pollutant	lb/hr per Generator	tons/year[1] per Generator	Combined tons/year[1]
$PM_{2.5}/PM/PM_{10}$	0.080	0.020	0.04
NO_X	24.89	6.223	12.45
SO_X	0.018	0.005	0.01
CO	0.843	0.211	0.42
VOC	0.401	0.100	0.20

[1] A year is defined as any consecutive 12-month period.

Cooling Tower:

Pollutant	tons/yr[1]	Basis
PM	4.9	IP-0580-I005
PM_{10}	4.9	IP-0580-I005

[1] A year is defined as any consecutive 12-month period.

Combined Facility Allowable Emissions:

Pollutant	lbs/hr	tons/yr[1]
PM	73.3	187.9
PM_{10}	73.3	187.9
NO_X	231.8	321.4
CO	211.7	665.5
SO_2	56.4	59.1
VOC	18.4	58.2
Formaldehyde	4.2	9

Pollutant	lbs/hr	tons/yr[1]
Sulfuric Acid Mist	1.4	6
Ammonia	56.1	246

[1] A year is defined as any consecutive 12-month period. Annual emissions include emissions during startup and shutdown.

EMISSION CONTROL:

The two simple cycle combustion turbine Units 1 & 2 are equipped with water injection for control of nitrogen oxides and fire natural gas or low sulfur no.2 fuel oil (0.0015% maximum sulfur) for control of sulfur oxide emissions. The two combined cycle combustion turbine Units 3 & 4 are equipped with dry low-NO_X burners and selective catalytic reduction for control of nitrogen oxides and they combust pipeline quality natural gas only. The cooling tower is equipped with mist eliminators for control of particulates and the ammonia tank uses vapor balance for emission control.

TESTING REQUIREMENTS:

NO_X emissions are monitored continuously with a CEM on each of the four (4) units. These CEMs must meet the requirements of §2108.03 and 40 CFR Part 75.

Units no.1 & no.2

Emission testing shall be performed for NO_X and CO emissions on each of the simple cycle turbines every two years in accordance with Article §2108.02.c. The NO_X emission testing requirements may be satisfied by the NO_X relative accuracy testing for CEMS systems conducted in accordance with the requirements of 40 CFR Part 75 and the performance test required under §60.8 or the CEMs requirements in 40 CFR Part 75. Testing for NO_X shall be performed at each of the following load conditions.

48 MW (100%);
36 MW (75%);
24 MW (50%);
14 MW (30%) or
At four points in the normal operating range of the gas turbine including the minimum point in the range and peak load.

Testing at the above load points may be waived by the Department if the installed NO_X CEMS is tested.

Method 20 or any other method acceptable to and approved by the Department shall be used to determine the nitrogen oxides, oxygen concentrations and sulfur dioxide concentration. The permittee shall determine compliance with the sulfur content of each fuel being fired using ASTM D 2880-71.

Units no.3 & no.4

Emissions testing shall be performed on the combined cycle turbines once every three years for volatile organic compounds, formaldehyde, particulate matter, PM_{10} and $PM_{2.5}$ and annually to demonstrate compliance with the ammonia emissions limitation of 10 ppm and the corresponding ammonia emission limits in lbs/hr and tons/yr in the permit. All testing shall be done in accordance with Article XXI, §2108.02.d. and e.

METHOD OF COMPLIANCE DETERMINATION:

Continuing compliance with the emission limitations of this permit will be reasonably assured by continuous fuel flow monitors on all units, CEMs for NO_X on all units, CEMS for CO on Units No.3 & No.4, the use of natural gas or low sulfur fuel oil in Units no.1 & no.2, the use of natural gas only in Units No.3 & No.4, and SCR system monitoring in Units No.3 & No.4, along with associated recordkeeping and reporting requirements. See Permit No. 0580-I005 for the specific conditions for determining compliance with the applicable requirements.

In addition to maintaining and operating Units no. 1 & no. 2 in accordance with the manufacturer's specifications and with good operating practices, NO_X CEMS will continuously monitor NO_X emissions during SU/SD/NERC events. VOC emissions shall also be limited to 1.32 lb/startup event for natural gas and to 7.59 lb/startup event for fuel oil during startup events. In addition to maintaining and operating Units 3 and 4 in accordance with the manufacturer's specifications and with good operating practices, NO_X CEMS will continuously monitor NO_X emissions during SU/SD/NERC events. VOC emissions shall also be limited to 293 lb/cold startup, 156 lb/warm startup, and 145 lb/hot startup for natural gas. Compliance with the emission standards for the emergency generators will be demonstrated by maintaining records of generator operation and fuel usage as well as supplier certification of sulfur content. See Permit No. 0580-I004 for the specific conditions for determining compliance with the applicable requirements.

REGULATORY APPLICABILITY:

1. **Article XXI Requirements for Issuance:**
   See Title V Operating Permit Application No. 0580, Section 5: Applicable Requirements. The requirements of Article XXI, Parts B and C for the issuance of major source operating permits have been met for this facility. Article XXI, Part D, Part E & Part H will have the necessary sections addressed individually.

2. **Testing Requirements:**

   Units No. 1 & No. 2

   Emissions testing shall be performed for NO_X and CO emissions for turbine Units No. 1 & No. 2 every two (2) years in accordance with Article XXI §2108.02.e. U.S. EPA Method 10 shall be used for CO testing. In order to demonstrate compliance with the CO emissions limitations, testing shall be performed while combusting each fuel (natural gas and No. 2 fuel oil) separately. Fuel oil shall be tested to determine the maximum fuel bound nitrogen content on each of the turbines every two years in accordance with Article §2108.02.c. Continuous fuel flow monitors shall be installed and maintained on each unit in accordance with 40 CFR Part 75 Appendix D Chapter 2.1.

   Emissions of NO_X may be determined by the CEMs required in §60.334(b) in lieu of a stack test to determine compliance with the emissions limitation of §2105.06.b.4. NO_X emission testing requirements may be satisfied by the NO_X relative accuracy testing for CEMS systems conducted in accordance with the requirements of 40 CFR Part 75 and the performance test required under §60.8 or the alternative manner described in 40 CFR §60.335(b)(7).

Units No. 3 & No. 4

Compliance with the nitrogen oxides and sulfur dioxide standards in §60.332 and §60.333(a) to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. U.S. EPA Method 20 will be used to determine nitrogen oxides. Continuous fuel flow monitors shall be installed and maintained on each unit in accordance with 40 CFR Part 75 Appendix D Chapter 2.1.

The permittee shall install, operate and maintain continuous emission monitors for nitrogen oxides, oxygen and carbon monoxide on Units 3 & 4. Such monitoring systems shall meet the requirements of §60.334 and 40 CFR Part 75.

The permittee shall perform particulate matter (PM), PM_{10} and $PM_{2.5}$ emissions testing once every three years. Such testing shall be conducted in accordance with U.S. EPA test methods 5, 201A, and 202 or other method as approved by the Department and Article XXI §2108.02. Particulate matter emissions testing shall be for filterable and condensable particulate matter. Compliance may be determined using the front-half catch of Method 5.

Emissions testing in accordance with Article XXI, §2108.02.d. and e. shall be performed once every three years for volatile organic compounds by EPA Methods 18 & 25 and for formaldehyde by EPA Method 323.

Emissions testing shall be performed annually to demonstrate compliance with the ammonia emissions limitation of 10 ppm and the corresponding ammonia emission limits in accordance with Article XXI, §2108.02.d. and e.

3. **40 CFR PART 64, "Compliance Assurance Monitoring":**
The requirements of 40 CFR Part 64, "Compliance Assurance Monitoring", were found not to be applicable to this facility. The applicability of acid rain regulations to these units makes them exempt from CAM under section 64.2(b)(iii) of the rule. In addition, the applicability of 40 CFR 60, Subpart GG, NO_X & SO_2 emission limits makes these units exempt from CAM under section 64.2(b)(i).

4. **New Source Performance Standards (NSPS):**
40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines:
This subpart is applicable to all four units due to each unit having a heat input greater than 10 MMBtu/hr and construction date after October 3, 1977. The TVOP conditions pertaining to the NSPS are not the same as those contained in the originally issued installation permits 0580-I001 (issued 9/30/99) and 0580-I002a (issued 6/6/02) so as to be consistent with revisions to the regulation. (Federal Register, July 8, 2004, pp.41359 – 41364). Those conditions (including those requiring a NO_X CEM) were not included.

In accordance with the NSPS, the units are required to comply with the following NO_X/SO_X emission limits of §60.332(a)(1) & SO_2 emission limits of §60.333(a).

Units no.1 & no.2 each	Units no.3 & no.4 each
NO_X = 115 ppm_{dv}	NO_X = 109 ppm_{dv}
SO_2 = 150 ppm_{dv}	SO_2 = 150 ppm_{dv}

However, the Installation Permit conditions require emissions that are significantly lower (i.e., 41.0 lb/hr (approximately equivalent to 25 ppm) NO_X for Units 1 & 2; 2.5 ppm NO_X for Units 3 & 4). Therefore, the IP governs the emissions of these units and the IP conditions have been incorporated into the TVOP.

Units no.1 & no.2 each must either continuously monitor the fuel flow rate and the ratio of water to fuel or operate in accordance with the revised NSPS (July 8, 2004) or the alternate monitoring plan approved by EPA Region III on September 11, 2002 (Units 1 & 2) and on June 20, 2003 (Units 3 & 4).

All units must report excess emissions of NO_X & SO_2.

In accordance with the NSPS, the NO_X emission testing requirements for Units No. 3 & No. 4 may be satisfied by the NO_X relative accuracy testing for CEMS systems conducted in accordance with the requirements of 40 CFR Part 75 and the performance test required under §60.8.

40 CFR 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines – CI RICE): This rule is not applicable to the emergency fire pump engine G-02 because the unit was installed before the applicability date of the regulation, July 11, 2005.

40 CFR 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines – CI RICE): This rule is applicable to the emergency generators because the generators commenced construction after July 11, 2005, after the applicability date of the NSPS and were manufactured after April 1, 2006. This includes, but is not limited to the following sections:

- 40 CFR §60.4207(b) – minimum fuel requirements for sulfur content and cetane index (as given in §80.510(b)).
- 40 CFR §60.4211(a) – minimum emissions standards (as given in §89.112).
- 40 CFR §60.4211(c) – engine certification.
- 40 CFR §60.4211(f) – operation limits for non-emergencies.
- 40 CFR §60.4214(b) – use of a non-resettable hour meter

5. **Continuous Emission Monitoring (40 CFR Part 75):**
The NO_X emission testing requirements may be satisfied by the NO_X relative accuracy testing for CEMS systems conducted in accordance with the requirements of 40 CFR Part 75 for all units. Continuous fuel flow monitors shall be installed and maintained on each unit in accordance with 40 CFR Part 75 Appendix D Chapter 2.1.

6. **NESHAP and MACT Standards:**
40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines: This rule is not applicable to the emergency fire pump engine G-02. The generators meet the operational requirements of "emergency stationary RICE" under §63.6640(f), and therefore are not subject to this subpart per §63.6585(f).

40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines: The emergency generators are subject to 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

7. **Risk Management Plan; CAA Section 112(r):**
The facility is subject to §112(r) of the Clean Air Act due to the storage of aqueous ammonia (29.5% concentration). There is a risk management plan in place at the facility.

8. **Greenhouse Gases (40 CFR Part 98):**.
   There are presently no Title V applicable requirements for greenhouse gases. Should the facility exceed 25,000 metric tons of CO_2e in any 12-month period, the facility would be required to submit reports in accordance with 40 CFR Part 98.

9. **Emissions Inventory:**
   This facility is required to provide annual Emission Inventory reports per §2108.01.e of Article XXI because this facility has the potential to emit a total of twenty-five (25) or more tons of PM_{10}, NO_X, CO, SO_X, and VOC.

10. **Acid Rain Program, 40 CFRs 72 Through 78:**
    Units no.1, no.2, no.3 and no.4 are affected units as per §72.6 of 40 CFR Part 72. These units are subject to all applicable conditions of parts 72 through 78 specifically monitoring, recordkeeping and reporting requirements. The units Phase II Acid Rain Permits are incorporated by reference into the Title V Operating Permit.

11. **Cross-State Air Pollution Rule (CSAPR) (40 CFR Part 97 Subparts AAAAA, CCCCC, and EEEEE):**
    The permittee shall comply with all requirements of 40 CFR PART 97 (relating to Cross-State Air Pollution Rule (CSAPR)NO_X Budget Trading and SO_2 Trading Programs). The permittee is subject to the standard requirements of 40 CFR §97.406, 40 CFR §97.606 and 40 CFR §97.806. This program has replaced the EPA's Clean Air Interstate Rule (CAIR) and the requirements of 25 PA Code §§145.203, 145.204, 145.205, 145.212, 145.213, 145.221, 145.222, and 145.223. Although Units 1 through 4 are subject to 40 CFR Part 97 GGGGG, the United States Supreme Court granted emergency applications on June 27, 2024 seeking a stay of the Good Neighbor Plan pending judicial review. The permittee will be subject to the requirements of 40 CFR Part 97 EEEEE pending judicial review. If the stay is lifted, the permittee will be subject to the requirements of 40 CFR Part 97 GGGGG.

12. **Reasonably Available Control Technology (RACT):**
    Installation Permit 0580-I005 is being issued concurrently with this permit (via case-by-case determination). Annual tune-ups are required in lieu of emissions limitations due to the existing NO_X and VOC limits being more restrictive than Pennsylvania RACT III limits.

RECOMMENDATIONS:

All applicable Federal, State, and County regulations have been addressed in the permit application. The facility is not subject to the restrictions of §2102.04.k of Article XXI because there have been no Notices of Violation issued for this facility during the last 18 months. The Title V Operating Permit renewal for Springdale Energy, LLC should be approved with the emission limitations, terms and conditions in Permit No. 0580-OP26.

APPENDIX A – EMISSIONS CALCULATIONS

APPENDIX B – ACID RAIN PERMIT

APPENDIX C – CITGO ANALYSIS

APPENDIX C – CITGO ANALYSIS

In reviewing the monitoring requirements, ACHD evaluated the petitioners' requests using the five factors outlined in the 2007 US EPA response to petition for CITGO Refining and Chemicals (Petition No. VI-2007-01) combined with the overall benefit to the public health in Allegheny County. The five-factor analysis used to review monitoring includes:

1) Variability of emissions;
2) Likelihood of violation;
3) Presence of add-on controls;
4) Type of monitoring, process, maintenance, or control equipment data available; and
5) Type and frequency of monitoring requirements for similar emission units at other facilities.

Five-Factor Monitoring Analysis

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
P001 Control Device	**Two 424 MMBtu/hr Simple Cycle Combustion Turbines – each unit Water Injection**		
PM	6.6 lbs/hr N.G/ 17 lbs/hr F.O. 17 tons/yr	No	There is variability in the process emissions. The emissions vary depending on the fuel types, heating content, the volume of gas combusted, and the number of startups and shutdowns. In practice, these units are only operating approximately 20% or less of the time during the year. The PM emissions are based on Article XXI standard, §2104.02. Springdale Units 1 and 2 primarily combust pipeline natural gas, a clean-burning fuel with inherently low particulate matter emissions. They may also use ultra-low-sulfur diesel, a clean liquid fuel as an alternative. The particulate emissions have potential to vary during periods of startup or shutdown; however, the units are designed for rapid starts to meet grid demand, minimizing the duration of startup and shutdown periods. Additionally, the permit sets time limits for startup and shutdown to minimize emissions from these periods. The likelihood of exceeding particulate matter emission limits is low due to the use of clean-burning fuels with inherently low particulate emissions. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. The reported emissions inventories for Unit 1 for 2021, 2022, and 2023 were 0.20 tons/yr, 0.19 tons/yr, and 014 tons/yr, respectively and for Unit 2 for 2021, 2022, and 2023 were 0.18 tons/yr, 0.20 tons/yr, and 0.16 tons/yr, respectively.

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			The facility is required to: ▪ The Department may require PM testing according to filterable emissions from stationary sources should be determined by the Methods 5 through 5F inclusive and Method 17 United States Environmental Protection Agency, 40 CFR 60 Appendix A and PM_{10} emissions from stationary sources should be determined by Method 201 or Method 201A United States Environmental Protection Agency, 40 CFR 51 Appendix M or other method as approved by the Department. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up. ▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Operate and maintain according to good engineering and air pollution control practices by performing regular maintenance, as proper operation and maintenance indicate lower emissions. ▪ Combust only pipeline quality natural gas or ultra-low sulfur (0.0015% sulfur by weight) No. 2 fuel oil in Units 1 and 2. ▪ Record monthly emissions. The only other simple cycle combustion turbine in the county is at Brunot Island Generating Station and there are no emission controls.
NO_X	41.0 lbs/hr N.G/ 71.0 lbs/hr F.O. 98 tons/yr	Yes	There is variability in the emissions. The emissions vary depending on the fuel types, heating content, the volume of gas combusted, and the number of startups and shutdowns. In practice, these units are only operating approximately 20% or less of the time during the year. The NO_X emission is based on manufacturer's data (RACT III standards) and fuel combusted. Springdale Units 1 and 2 primarily combust pipeline natural gas, a clean-burning fuel with ultra-low-sulfur diesel, a clean liquid fuel as an alternative. For both fuels, NOx emissions are controlled through water injection. Water injection cannot begin immediately at startup; however, the units are designed for rapid starts, minimizing the duration before

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			water injection can be initiated. Additionally, the permit sets time limits for startup and shutdown to minimize emissions from these periods. Springdale Units 1 and 2 are equipped with certified Part 75 NO_X Continuous Emissions Monitoring Systems (CEMS), which continuously monitor NOx emissions during all periods of operation. The likelihood of exceeding NOx emission limits is low due to the use of water injection for control along with NOx CEMS which monitor emissions during all periods of operation. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. The compliance test results from December 6 & 7, 2022, demonstrate compliance with the NO_X lbs/hr limits. The measured NO_X emissions during testing for Units 1 & 2 were 29.7 lb/hr & 30.15 lbs/hr. Additionally, the reported emissions inventories for Unit 1 for 2021, 2022, and 2023 were 30.2 tons/yr, 31.8 tons/yr, and 23.9 tons/yr respectively and for Unit 2 were 23.9 tons/yr, 29.2 tons/yr and 27.1 tons/yr, respectively. The facility is required to: ▪ Participate in the NO_X Annual Trading Program (40 CFR §97.406 – Standard Requirements) and the NO_X Ozone Season Group 2 Trading Program (40 CFR §97.806 – Standard Requirements). ▪ Record and report the type and amount of fuel combusted and monitor and record lower heating value of each fuel being fired. ▪ Install and operate NO_X CEMS to continuously measure the NO_X emission. ▪ Record all CEM data sufficient to demonstrate compliance with this permit. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up.

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Operate and maintain according to good engineering and air pollution control practices by performing regular maintenance, as proper operation and maintenance indicate lower emissions. ▪ Record monthly emissions. ▪ Participate in the Title IV Acid Rain Program. The only other simple cycle combustion turbine in the county is at Brunot Island Generating Station and there are no emission controls. Emissions testing for NO_X is performed at least once during the term of the permit.
SO_X	0.3 lbs/hr N.G/ 22.5 lbs/hr F.O. 6.0 tons/yr	Fuel Flow	There is variability in the process emissions because the emissions vary depending on the fuel type, heating content, and the volume of gas combusted. In practice, these units are only operating approximately 20% or less of the time during the year. The SO_X emission is based on AP-42. Springdale Units 1 and 2 primarily combust pipeline natural gas, a clean-burning fuel with inherently low sulfur content. They may also use ultra-low-sulfur diesel, a clean liquid fuel as an alternative. The units are subject to 40 CFR Part 75 and under those requirements to meet the definition of pipeline natural gas (40 CFR 72.2), the sulfur content must be less than 0.5 grains total sulfur per 100 standard cubic feet (approximately <8 ppm). Additionally, the ultra-low-sulfur diesel is required to be 0.0015% sulfur by weight (<15 ppm). Springdale conducts fuel sampling to confirm the fuels meet the sulfur content requirements. The likelihood of exceeding sulfur dioxide emission limits is minimal due to the low sulfur content of the fuels combusted in the units. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. The reported emissions inventories for Unit 1 for 2021, 2022, and 2023 were 0.3 tons/yr, 0.4 tons/yr, and 0.1 tons/yr, respectively and for Unit 2 for 2021, 2022, and 2023 were 0.2 tons/yr, 0.3 tons/yr, and 0.2 tons/yr, respectively.

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			The facility is required to: ▪ Participate in the TR SO_2 Group 1 Trading Program (40 CFR §97.606 – Standard Requirements). ▪ Only use pipeline quality natural gas or ultra-low sulfur (0.0015% sulfur by weight) No. 2 fuel oil to be combusted in Unit 1 and Unit 2. ▪ Monitor and record lower heating value and sulfur content of each fuel being fired. ▪ Monitor the total sulfur content of the fuel being fired in each turbine. ▪ Record any period during which sulfur content of the fuel being burned in the gas turbine exceeds 0.0015% shall be recorded. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up. ▪ Operate and maintain according to good engineering and air pollution control practices by performing regular maintenance, as proper operation and maintenance indicate lower emissions. ▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Record monthly emissions. ▪ Participate in the Title IV Acid Rain Program. The only other simple cycle combustion turbine in the county is at Brunot Island Generating Station and there are no emission controls. The permittee shall monitor the sulfur content of the fuel oil used in the unit each time the fuel oil is transferred into the storage tanks.
CO	57.0 lbs/hr N.G/ 6.0 lbs/hr F.O. 115.0 tons/yr	No	There is variability in the process emissions because the emissions vary depending on the fuel types, heating content, the volume of gas combusted, and the number of startups and shutdowns. In practice, these units are only operating approximately 20% or less of the time during the year. The CO emission is based on stack testing, manufacturer's data, and fuel consumption.

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			Springdale Units 1 and 2 primarily combust pipeline natural gas, a clean-burning fuel and may use ultra-low-sulfur diesel, a clean liquid fuel as an alternative. Carbon monoxide (CO) emissions have potential to vary during periods of startup or shutdown; however, the units are designed for rapid starts to meet grid demand, minimizing the duration of startup and shutdown periods. Additionally, the permit sets time limits for startup and shutdown to minimize emissions from these periods. Carbon monoxide emissions can result from incomplete combustion; therefore, proper operation and maintenance of the turbines are essential to ensuring compliance with emission limits. The facility is required to conduct annual tune-ups as well as maintain and operate the equipment in accordance with good air pollution control practices. Springdale conducts CO emissions tests every two (2) years to confirm compliance with limits. The likelihood of exceeding CO emission limits is very low due to the use of clean-burning fuels. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. Compliance is confirmed through periodic testing. The compliance test results from June 4 & 5, 2024, demonstrate compliance with the CO lbs/hr limits. The measured CO emissions during testing for Units 1 & 2 were 22.83 lb/hr & 37.01 lbs/hr. Additionally, the reported emissions inventories for Unit 1 for 2021, 2022, and 2023 were 34.85 tons/yr, 36.79 tons/yr, and 27.19 tons/yr respectively and for Unit 2 were 30.95 tons/yr, 39.61 tons/yr and 35.97 tons/yr, respectively. The facility is required to: ▪ Perform biennial stack testing to demonstrate compliance with the CO limit. ▪ Keep records and report the monthly fuel combusted. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up.

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			▪ Operate and maintain according to good engineering and air pollution control practices by performing regular maintenance, as proper operation and maintenance indicate lower emissions. ▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Record monthly emissions. The only other simple cycle combustion turbine in the county is at Brunot Island Generating Station and there are no emission controls.
VOC	5.0 lbs/hr N.G/ 1.0 lbs/hr F.O. 10.0 tons/yr	No	There is variability in the process emissions. The emissions vary depending on the fuel types, heating content, the volume of gas combusted, and the number of startups and shutdowns. In practice, these units are only operating approximately 20% or less of the time during the year. The VOC emission is based on stack testing, manufacturer's data (RACT III standards), and natural gas consumed. Springdale Units 1 and 2 primarily combust pipeline natural gas, a clean-burning fuel and have potential to use ultra-low-sulfur diesel, a clean liquid fuel as an alternative. VOC emissions have potential to vary during periods of startup or shutdown; however, the units are designed for rapid starts to meet grid demand, minimizing the duration of startup and shutdown periods. Additionally, the permit sets time limits for startup and shutdown to minimize emissions from these periods. VOC emissions can result from incomplete combustion; therefore, proper operation and maintenance of the turbines are essential to ensuring compliance with emission limits. The facility is required to conduct annual tune-ups as well as maintain and operate the equipment in accordance with good air pollution control practices. The likelihood of exceeding VOC emission limits is low due to the use of clean-burning fuels. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. The compliance test results from December 6 & 7, 2022, demonstrate compliance with the VOC lbs/hr limits. The

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			measured VOC emissions during testing for Units 1 & 2 were both less than 0.3 lb/hr. Additionally, the reported emissions inventories for Unit 1 for 2021, 2022, and 2023 were 0.92 tons/yr, 0.33 tons/yr, and 0.247 tons/yr respectively and for Unit 2 were 0.73 tons/yr, 0.35 tons/yr and 0.311 tons/yr, respectively. The facility is required to: ▪ Monitor and record the monthly and 12-month rolling totals of the amount of fuel combusted. ▪ Report the monthly and annual total of the calculated emissions. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up. ▪ Operate and maintain according to good engineering and air pollution control practices by performing regular maintenance, as proper operation and maintenance indicate lower emissions. ▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Record monthly emissions. The only other simple cycle combustion turbine in the county is at Brunot Island Generating Station and there are no emission controls.

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
P002 Control Device	**Units 3, 4, and 5 – Combined Cycle Units – each unit Dry Low NO_x Burners with SCR**		
PM	19 lbs/hr 166 tons/yr	No	There is variability in the process emissions. The emissions vary depending on the heating content, the volume of gas combusted, and the number of startups and shutdowns. In practice, these units operate more than 80% of the time during the year. The PM emissions are based on Article XXI standard, §2104.02, BACT, and stack testing. Springdale Units 3 and 4 combust only pipeline quality natural gas, a clean-burning fuel with inherently low

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			particulate matter emissions. The facility is required to conduct annual tune-ups as well as maintain and operate the equipment in accordance with good air pollution control practices. The particulate emissions have potential to vary during periods of startup or shutdown; however, the units comply with work practice standards including time limits on startups to minimize emissions from these periods. Springdale conducts PM emissions tests every three (3) years to confirm compliance with limits. The likelihood of exceeding particulate matter emission limits is low due to the use of only pipeline quality natural gas with inherently low particulate emissions. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. Compliance is confirmed through periodic testing. The compliance test results from September 21 & 22, 2021, and from December 11 & 12, 2024 demonstrate compliance with the PM lbs/hr limits. The measured PM emissions during testing for Units 3 & 4 were less than 16.4 lb/hr and less than 8.9 lb/hr, respectively, on September 21 & 22, 2021, and for Units 3 & 4 were less than 4.71 lb/hr and less than 4.22 lb/hr, respectively, on December 11 & 12, 2024. Additionally, the reported emissions inventories for Unit 3 for 2021, 2022, and 2023 were 11.82 tons/yr, 14.2 tons/yr, and 13.97 tons/yr, respectively and for Unit 4 for 2021, 2022, and 2023 were 14.91 tons/yr, 17.81 tons/yr, and 18.06 tons/yr, respectively. The facility is required to: ▪ Perform triennial stack testing to demonstrate compliance with the PM limits. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up.

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Operate and maintain according to good engineering and air pollution control practices by performing regular maintenance, as proper operation and maintenance indicate lower emissions. ▪ Record monthly emissions. The only other combined cycle combustion turbine units in the county are at Brunot Island Generating Station and they are equipped with selective catalytic reduction (SCR) and water injection for NO_X control.
NO_X	20 lbs/hr 210 tons/yr	Yes	There is variability in the emissions. The emissions vary depending on the heating content, the volume of gas combusted, and the number of startups and shutdowns. In practice, these units operate more than 80% of the time during the year. The NO_X emission is based on BACT/LAER standards and fuel combusted. Springdale Units 3 and 4 combust only pipeline quality natural gas, a clean-burning fuel. Both units are equipped with Selective Catalytic Reduction (SCR) systems to control NO_x emissions. The SCR catalyst must reach a specific temperature before it becomes effective. To minimize emissions during startup, the units are operated in accordance with work practice standards, including time limits on startup durations. Springdale Units 3 and 4 are equipped with certified Part 75 NOx Continuous Emissions Monitoring Systems (CEMS), which continuously monitor NOx emissions during all periods of operation. The likelihood of exceeding NOx emission limits is low due to the use of the SCR for control along with NOx CEMS to monitor emissions during all periods of operation. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. The reported emissions inventories for Unit 3 for 2021, 2022, and 2023 were 47.5 tons/yr, 56.6 tons/yr, and 56 tons/yr, respectively and for Unit 4 for 2021, 2022, and

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			2023 were 48.1 tons/yr, 56.7 tons/yr, and 57.8 tons/yr, respectively. The facility is required to: ▪ Participate in the NO_X Annual Trading Program (40 CFR §97.406 – Standard Requirements) and the NO_X Ozone Season Group 2 Trading Program (40 CFR §97.806 – Standard Requirements). ▪ Record and report the type and amount of fuel combusted and monitor and record lower heating value. ▪ Install and operate NO_X CEMS to continuously measure the NO_X emission. ▪ Record all CEM data sufficient to demonstrate compliance with this permit. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up. ▪ Operate and maintain according to good engineering and air pollution control practices by performing regular maintenance, as proper operation and maintenance indicate lower emissions. ▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Record monthly emissions. ▪ Participate in the Title IV Acid Rain Program. The only other combined cycle combustion turbine units in the county are at Brunot Island Generating Station and they are equipped with selective catalytic reduction (SCR) and water injection for NO_X control. NO_X emissions are monitored through a CEMS.
SO_X	5.7 lbs/hr 53 tons/yr	Fuel Flow	There is variability in the process emissions. The emissions vary depending on the heating content, and the volume of gas combusted. In practice, these units operate more than 80% of the time during the year. The SO_X emission is based on BACT standards and fuel combusted. Springdale Units 3 and 4 combust only pipeline natural gas, a clean-burning fuel with inherently low sulfur content. The

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			units are subject to 40 CFR Part 75 and under those requirements to meet the definition of pipeline quality natural gas (40 CFR 72.2), the sulfur content must be less than 0.5 grains total sulfur per 100 standard cubic feet (approximately <8 ppm). Springdale conducts fuel sampling to confirm the fuel meets the sulfur content requirements. The likelihood of exceeding sulfur dioxide emission limits is low due to the extremely low sulfur content of the fuel combusted in the units. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. The reported emissions inventories for Unit 3 for 2021, 2022, and 2023 were 3.5 tons/yr, 4.2 tons/yr, and 4.1 tons/yr, respectively and for Unit 4 for 2021, 2022, and 2023 were 3.5 tons/yr, 4.3 tons/yr, and 4.4 tons/yr, respectively. The facility is required to: ▪ Participate in the TR SO_2 Group 1 Trading Program (40 CFR §97.606 – Standard Requirements). ▪ Only use pipeline quality natural gas to be combusted in Unit 3 and Unit 4. ▪ Monitor and record lower heating value and sulfur content of the fuel being fired. ▪ Monitor continuous fuel flow on each unit in accordance with 40 CFR Part 75 Appendix D Chapter 2.1. ▪ Monitor the total sulfur content of the fuel being fired in each turbine. ▪ Record any period during which sulfur content of the fuel being burned in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up. ▪ Operate and maintain according to good engineering and air pollution control practices by performing

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			regular maintenance, as proper operation and maintenance indicate lower emissions. ▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Record monthly emissions. ▪ Participate in the Title IV Acid Rain Program. The only other combined cycle combustion turbine units in the county are at Brunot Island Generating Station and they are equipped with selective catalytic reduction (SCR) and water injection for NO_X control.
CO	48 lbs/hr 550 tons/yr	Yes	There is variability in the process emissions because the emissions vary depending on the heating content, the volume of gas combusted, and the number of startups and shutdowns. In practice, these units operate more than 80% of the time during the year. The CO emission is based on BACT standards and fuel combusted. Springdale Units 3 and 4 combust only pipeline natural gas, a clean-burning fuel. Carbon monoxide emissions can result from incomplete combustion; therefore, proper operation and maintenance of the turbines are essential to ensuring compliance with emission limits. The facility is required to conduct annual tune-ups as well as maintain and operate the equipment in accordance with good air pollution control practices. The CO emissions have potential to vary during periods of startup or shutdown; however, the units comply with work practice standards including time limits on startups to minimize emissions from these periods Springdale Units 3 and 4 are equipped with certified CO CEMS which continuously monitor CO emissions during all periods of operation. The likelihood of exceeding CO emission limits is low due to the use of clean-burning fuel. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. The reported emissions inventories for Unit 3 for 2021, 2022, and 2023 were 43.4 tons/yr, 39.82 tons/yr, and 54.88 tons/yr, respectively and for Unit 4 for 2021, 2022, and 2023

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			were 33.07 tons/yr, 21.49 tons/yr, and 33.81 tons/yr, respectively. The facility is required to: ▪ Keep records and report the monthly fuel combusted because the potential fuel combusted is used to estimate the CO limit. ▪ Install and operate CO CEMS to continuously measure the CO emission. ▪ Record all CEM data sufficient to demonstrate compliance with this permit. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up. ▪ Operate and maintain according to good engineering and air pollution control practices by performing regular maintenance, as proper operation and maintenance indicate lower emissions. ▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Record monthly emissions. The only other combined cycle combustion turbine units in the county are at Brunot Island Generating Station and they are equipped with selective catalytic reduction (SCR) and water injection for NO_X control. CO emissions are monitored through a CEMS.
VOC	3.8 lbs/hr 48 tons/yr	No	There is variability in the process emissions. The emissions vary depending on the heating content, the volume of gas combusted, and the number of startups and shutdowns. In practice, these units operate more than 80% of the time during the year. The VOC emission is based on stack testing, BACT standards, and natural gas consumed. Springdale Units 3 and 4 combust only pipeline natural gas, a clean-burning fuel. VOC emissions can result from incomplete combustion; therefore, proper operation and maintenance of the turbines are essential to ensuring compliance with emission limits. The facility is required to conduct annual tune-ups as well as maintain and operate the equipment in accordance with good air pollution

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			control practices. The VOC emissions have potential to vary during periods of startup or shutdown; however, the units comply with work practice standards including time limits on startups to minimize emissions from these periods. Springdale conducts VOC emission testing every three (3) years to confirm compliance with limits. The likelihood of exceeding VOC emission limits is low due to the use of clean-burning fuel. In addition, the facility is required to comply with work practice standards, including regular tune-ups, maintenance and operational practices to ensure the units are properly operated and maintained. Compliance is confirmed through periodic testing. The compliance test results from September 21 & 22, 2021, and from December 11 & 12, 2024 demonstrate compliance with the VOC lbs/hr limits. The measured VOC emissions during testing for Unit 3 & 4 were less than 1.9 lb/hr and less than 1.16 lb/hr, respectively on September 21 & 22, 2021, less than 1.25 lb/hr for Unit 3 on December 11, 2024 and 2.02 lb/hr for Unit 4 on December 12, 2024. Additionally, the reported emissions inventories for Unit 3 for 2021, 2022, and 2023 were 5.94 tons/yr, 6.16 tons/yr, and 5.47 tons/yr respectively and for Unit 4 were 5.08 tons/yr, 5.3 tons/yr and 5.07 tons/yr, respectively. The facility is required to: ▪ Perform triennial stack testing to demonstrate compliance with the VOC limits. ▪ Monitor and record the monthly and 12-month rolling totals of the amount of fuel combusted. ▪ Report the monthly and annual total of the calculated emissions. ▪ Submit Excess Emissions Reports (EERs) in accordance with §60.7(c). ▪ Report the specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. ▪ Maintain records of the annual tune-up. ▪ Operate and maintain according to good engineering and air pollution control practices by performing regular maintenance, as proper operation and maintenance indicate lower emissions.

Process/ Pollutant	Potential Limit	Require CEM	Monitoring Analysis
			▪ Comply with either emission limitations, or work practice standards, and operation and maintenance requirements at all times. ▪ Record monthly emissions. The only other combined cycle combustion turbine units in the county are at Brunot Island Generating Station and they are equipped with selective catalytic reduction (SCR) and water injection for NO_X control. Ammonia and volatile organic compounds emissions testing is required on each Unit within 6 months of the Unit operating 900 hours (not including startup and shutdown) or once every five (5) years, whichever is sooner, in order to demonstrate compliance with the emission limitations.