

**BUREAU OF AIR MANAGEMENT
NEW SOURCE REVIEW PERMIT
TO CONSTRUCT AND OPERATE A STATIONARY SOURCE**

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-3a of the Regulations of Connecticut State Agencies (RCSA).

Owner/Operator	Devon Power LLC
Address	Naugatuck Avenue, Milford, CT 06460
Equipment Location	Naugatuck Avenue, Milford, CT 06460
Equipment Description	40 MW GE LM6000PA Combustion Turbine: Unit 11
Town-Permit Numbers	105-0040
Premises Number	014
Stack Number	11
Modification Issue Date	January 2, 2024
Prior Permit Issue Dates	07/01/1997: Original Permit 09/09/2005: Revision 02/23/2009: Minor Modification
Expiration Date	None

for


Katherine S. Dykes
Commissioner

January 2, 2024

Date

This permit specifies necessary terms and conditions for the operation of this equipment to comply with state and federal air quality standards. The Permittee shall at all times comply with the terms and conditions stated herein.

PART I. DESIGN SPECIFICATIONS

A. General Description

Devon Power, LLC operates four (4) identical General Electric LM6000PA peaking power combustion turbines at their Milford, CT generating plant. The four units are rated at a nominal output of 40 MW each.

B. Equipment Design Specifications

1. Turbine
 - a. Maximum Fuel Firing Rates: 400,000 scf/hr (gas); 2,920 gal/hr (ULSD)
 - b. Maximum Gross Heat Input (MMBTU/hr): 400 (both fuels)

C. Control Equipment Design Specifications

1. Water Injection to control NO_x

D. Stack Parameters

1. Minimum Stack Height (ft): 43
3. Minimum Exhaust Gas Flow Rate at 100% load (acfm): 284,742
4. Minimum Stack Exit Temperature at 100% load (°F): 841
5. Minimum Distance from Stack to Nearest Property Line (ft): 400

PART II. OPERATIONAL CONDITIONS

A. Equipment

1. Turbine
 - a. Fuel Types: Natural Gas; Ultra Low Sulfur Distillate (ULSD)
 - b. Maximum Fuel Consumption over any Consecutive 12 Month Period:
1,616.4 x 10⁶ scf (gas); 2,426.520 x 10³ gallons (ULSD)
 - c. Maximum ULSD Sulfur Content (% by weight, dry basis): 0.0015
 - d. The combination of fuels combusted in this unit shall not result in an exceedance of the emission limits defined in Part III of this permit.
 - e. This unit, together with Units 12, 13, and 14 (Permit Nos. 105-0041, 105-0042 and 105-0043) shall not operate more than a combined 72 hours per day when combusting ULSD nor shall this unit together with Units 12, 13, and 14 operate more than a combined 56 hours per day when combusting ULSD during the calendar month of July.

B. Control Equipment

1. The Permittee shall operate the water injection system in a manner to achieve the NO_x limits in Part III of this permit.

PART III. ALLOWABLE EMISSION LIMITS

The Permittee shall not cause or allow this equipment to exceed the emission limits stated herein at any time, as determined in accordance with the applicable averaging periods defined in Part III of this permit or as specified in an approved stack test protocol.

An exceedance of either (i) the emission limits in the tables below, or (ii) the emissions limits developed for this permit due to an emergency, malfunction, or cleaning shall not be deemed a "Federally Permitted Release," as that term is used in 42 U.S.C. 9601(10).

The Permittee shall not cause or allow this equipment to exceed the emission limits stated herein at any time.

A. Steady State

1. Criteria Pollutants

a. Turbine Operating on Natural Gas

Pollutant	lb/hr	ppmvd @ 15% O ₂	lb/MMBtu
PM ₁₀	5.2		0.013
PM _{2.5}	5.2		0.013
SO ₂	0.24		0.006
NO _x	36.0	25	0.090
VOC	4.0		0.010
CO	46.0		0.115

b. Turbine Operating on ULSD

Pollutant	lb/hr	ppmvd @ 15% O ₂	lb/MMBtu
PM ₁₀	11.6		0.029
PM _{2.5}	11.6		0.029
SO ₂	0.6		0.0015
NO _x	70.0	45	0.175
VOC	1.52		0.004
CO	19.2		0.048

B. Annual Emission Limits

1. Criteria Pollutants

Pollutant	tons per 12 consecutive months
PM ₁₀	21.0
PM _{2.5}	21.0
SO ₂	0.75
NO _x	145.5
VOC	16.2
CO	92.9

2. This unit, together with Units 12, 13, and 14 (Permit Nos. 105-0041, 105-0042, and 105-0043) shall not emit more than a combined 582 tons per year of NO_x.

C. Hazardous Air Pollutants

This equipment shall not cause an exceedance of the Maximum Allowable Stack Concentration (MASC) for any hazardous air pollutant (HAP) emitted and listed in RCSA Section 22a-174-29. [STATE ONLY REQUIREMENT]

D. Opacity

This equipment shall not exceed 10% opacity during any six minute block average as measured by 40 CFR 60, Appendix A, Reference Method 9.

E. Demonstration of compliance with the above emission limits may be met by calculating the emission rates using emission factors from the following sources:

- *Opacity, NO_x, and CO: Latest Stack Test Data*
- *SO₂ and VOC: AP-42, Fifth Edition, Volume I, Chapter 3, Table 3.1-2a (April 2000)*

The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

PART IV. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

A. Monitoring

1. The Permittee shall comply with the monitoring requirements as set forth in RCSA §22a-174-4a, RCSA §22a-174-22e, 40 CFR Part 60 Subpart GG and 40 CFR Parts 72-78, if applicable.
2. The Permittee shall use individual non-resettable totalizing fuel metering devices or billing meters to continuously monitor fuel feed to the turbine.
3. The Permittee shall continuously monitor the water-to-fuel ratio in accordance with 40 CFR Part 60 Subpart GG and 40 CFR Part 75 Appendix H.
4. The Permittee shall monitor all hours of operation for this unit, together with Units 12, 13, and 14 (Permit Nos. 105-0041, 105-0042 and 105-0043), while combusting ULSD.

B. Record Keeping

1. The Permittee shall keep records of monthly and consecutive 12 month fuel consumption (for each fuel). The consecutive 12 month fuel consumption shall be determined by adding (for each fuel) the current month's fuel consumption to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
2. The Permittee shall maintain records of the sulfur content of fuel oil combusted. A written certification or a written contract with a fuel supplier is sufficient to satisfy this requirement if the certification or contract identifies:
 - a. The name of the fuel seller;
 - b. The type of fuel purchased;
 - c. The sulfur content of the fuel purchased; and
 - d. The method used to determine the sulfur content of the fuel purchased.

3. The Permittee shall calculate and record the monthly and consecutive 12 month PM₁₀, PM_{2.5}, SO₂, NO_x, VOC, and CO emissions in units of tons. The consecutive 12 month emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.
4. The Permittee shall calculate and record the monthly and combined consecutive 12 month NO_x emissions for this unit, together with Units 12, 13, and 14 (Permit Nos. 105-0041, 105-0042, and 105-0043). The consecutive 12 month emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.
5. The Permittee shall keep records of all exceedances of any emissions limitation or operating parameter. Such records shall include:
 - a. the date and time of the exceedance;
 - b. a detailed description of the exceedance; and
 - c. the duration of the exceedance.
6. The Permittee shall keep records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the stationary gas turbine; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR §60.7(b)]

Such records shall contain the following information:

 - a. type of event (startup, shutdown, or malfunction);
 - b. equipment affected;
 - c. date of event;
 - d. duration of event (minutes);
 - e. fuel being used during event; and
 - f. total NO_x and CO emissions emitted (lb) during the event.
7. The Permittee shall keep hourly records of operation for this unit, together with Units 12, 13, and 14 (Permit Nos. 105-0041, 105-0042 and 105-0043), while combusting ULSD.
8. The Permittee shall keep all records required by this permit for a period of no less than five years and shall submit such records to the commissioner upon request.

C. Reporting

1. The Permittee shall notify the commissioner in writing of any exceedance of an emissions limitation or operating parameter, and shall identify the cause or likely cause of such exceedance, all corrective actions and preventive measures taken with respect thereto, and the dates of such actions and measures as follows:
 - a. For any hazardous air pollutant, no later than 24 hours after such exceedance commenced; and
 - b. For any other regulated air pollutant or operating parameter, no later than ten days after such exceedance commenced.
2. The Permittee shall notify the commissioner in writing of any malfunction of the stationary gas turbine, the air pollution control equipment or the continuous monitoring system. The Permittee shall submit such notification within ten days of the malfunction. The notification shall include the following:

- a. a description of the malfunction and a description of the circumstances surrounding the cause or likely cause of such malfunction; and
 - b. a description of all corrective actions and preventive measures taken and/or planned with respect to such malfunction and the dates of such actions and measures.
3. The Permittee shall notify the commissioner, in writing, of the following:
 - a. the date of completion of the proposed modification in Application No. 202303237

Any required written notifications above shall be submitted to DEEP.CACU@ct.gov, DEEP.SEM@ct.gov and DEEP.BAM.AirPermits@ct.gov no later than 30 days after the subject event.

PART V. STACK EMISSION TEST REQUIREMENTS

- A.** Stack emission testing shall be performed in accordance with the Emission Test Guidelines available on the DEEP website at www.ct.gov/deep/stacktesting.

☒ NO_x ☒ CO
☒ Opacity

- B.** Stack testing shall be performed on the following basis after issuance of this modified permit (SIMS No. 202303237).
1. Recurrent stack testing for all pollutants found in Part V.A of this permit shall be performed at the next required NO_x RACT test pursuant to RCSA §22a-174-22e(l), after the issuance of this modified permit (SIMS No. 202303237) and within every 63 calendar months following the date the previous emission test was conducted or the date the previous emission test was required to be conducted, whichever is earlier.
 2. Stack testing shall be conducted while firing both natural gas and ULSD.

Stack test results shall be reported as follows: all pollutants in units of lb/hr, lb/MMBtu, and NO_x in units of ppmvd at 15% O₂.

PART VI. OPERATION AND MAINTENANCE REQUIREMENTS

- A.** The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.
- B.** The Permittee shall operate and maintain this equipment, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
- C.** The Permittee shall properly operate the control equipment at all times that this equipment is in operation and emitting air pollutants.
- D.** The Permittee shall immediately institute shutdown of the turbine in the event a malfunction cannot be corrected within three hours.

PART VII. SPECIAL REQUIREMENTS

- A.** In order to maintain continual compliance with the emissions offsets requirements in RCSA Section 22a-174-3a(f), Devon Power LLC shall keep units 3-6 (Registration numbers R0105-0042, R0105-0044, R0105-0048, R0105-0052) permanently deactivated. This shall create 582 tons of RCSA Section 22a-174-22(e) adjusted NOx offsets equaling the NOx emissions allowed by this permit.
- B.** The Permittee shall comply with all applicable sections of the following New Source Performance Standard(s) at all times.

Title 40 CFR Part 60, Subpart: GG and A

Copies of the Code of Federal Regulations (CFR) are available online at the U.S. Government Printing Office website.

C. Premises Emissions Summary

- 1. On January 1st of each calendar year, if the potential emissions of NOx or VOC from the premises are equal to or greater than 25 tons per year per pollutant, then for such pollutant(s), the Permittee shall:
 - a. Monitor NOx and/or VOC emissions, as applicable, from the premises for such calendar year.
 - b. Calculate and record annual NOx and/or VOC emissions, as applicable, from the premises for such calendar year, in units of tons. The Permittee shall make these calculations on or before February 1st of the following year with respect to the previous calendar year. Such records shall include a sample calculation(s).
 - c. If actual NOx and/or VOC emissions, as applicable, from the premises are equal to or greater than 25 tons for such calendar year, the Permittee shall submit to the commissioner, on or before March 1st of the following year, an annual emissions summary with respect to the premises for the previous calendar year. Such summary shall be submitted on forms prescribed or provided by the commissioner.
 - 2. A Permittee is exempt from Part VII.C.1 requirements of this permit if, on January 1st of the subject year, the premises was operating in accordance with any of the following:
 - a. A valid Title V permit issued pursuant to RCSA section 22a-174-33;
 - b. RCSA section 22a-174-33a; or
 - c. RCSA section 22a-174-33b.
- D.** The Permittee shall comply with all applicable requirements of the Federal Acid Rain Program codified in Title 40 CFR Parts 72-78, inclusive, by the deadlines set forth within the aforementioned regulation.
 - E.** The Permittee shall operate this facility at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in RCSA Sections 22a-69-1 through 22a-69-7.4. [STATE ONLY REQUIREMENT]

PART VIII. ADDITIONAL TERMS AND CONDITIONS

- A.** This permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

- B.** Any representative of the DEEP may enter the Permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.
- C.** This permit may be revoked, suspended, modified or transferred in accordance with applicable law.
- D.** This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons or municipalities who are not parties to this permit.
- E.** Any document, including any notice, which is required to be submitted to the commissioner under this permit shall be signed by a duly authorized representative of the Permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under section 22a-175 of the Connecticut General Statutes, under section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute."
- F.** Nothing in this permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.
- G.** Within 15 days of the date the Permittee becomes aware of a change in any information submitted to the commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the correct or omitted information to the commissioner.
- H.** The date of submission to the commissioner of any document required by this permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.
- I.** Any document required to be submitted to the commissioner under this permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of Director; Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.