

**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	Kimberly-Clark Corporation
Address	58 Pickett District Road, New Milford, CT 06776
Equipment Location	58 Pickett District Road, New Milford, CT 06776
Equipment Description	Solar Titan 130 Combustion Turbine #2
Town-Permit Numbers	130-0071
Premises Number	0006
Stack Number	0036
Modification Issue Date	August 25, 2026
Prior Permit Issue Dates	March 20, 2017 August 15, 2012 March 30, 2010 October 9, 2007
Expiration Date	None

for



Emma Cimino
Acting Commissioner

August 25, 2026

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

The equipment subject to this permit consists of a Solar Titan 130 Combustion Turbine. Control equipment includes low NO_x burners and oxidation catalyst. This equipment is part of the combined heat and power (CHP) project at the New Milford Mill.

B. Equipment Design Specifications

1. Turbine
 - a. Maximum Natural Gas Firing Rate¹ (Mcf/hr): 171.412
 - b. Maximum Gross Heat Input (MMBtu/hr)¹: 174.84
 - c. Nameplate Capacity (MW): 14.986

¹ at ISO conditions: 288 Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

C. Control Equipment Design Specifications

1. Low NO_x Burner
 - a. Make and Model: Solar Turbine Titan 130 Burners
 - b. Guaranteed NO_x Emission Rate (ppmvd @ 15% O₂): 15
2. Oxidation Catalyst
 - a. Make and Model: Catalytic Combustion Corporation, Modular Homogeneous Catalytic Oxidizer or equivalent
 - b. Guaranteed Emission Rates: CO – 2 ppmvd @ 15% O₂
Non-methane VOC – 2 ppmvd as methane @ 15% O₂

D. Stack Parameters

1. Minimum Stack Height (ft): 78 (main stack) and 85 (bypass stack)
2. Minimum Exhaust Gas Flow Rate at 100% load (acfm): 177,009
3. Minimum Stack Exit Temperature at 100% load (°F): 425
4. Minimum Distance from Stack to Property Line (ft): 394 (main stack) and 249 (bypass stack)

PART II. OPERATIONAL CONDITIONS

A. Equipment

1. Turbine
 - a. Fuel Type: Natural Gas
 - b. Maximum Natural Gas Consumption over any Consecutive 12 Month Period (MMcf): 1502

PART III. ALLOWABLE EMISSION LIMITS

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

A. Short Term Emission Limits

These short term emission limits do not apply during periods of startup and shutdown, unless otherwise noted.

1. Criteria Pollutants

a. Turbine

Pollutant	lb/hr	ppmvd @ 15% O ₂	lb/MMBtu
PM	1.44		0.0082
PM ₁₀	1.44		0.0082
PM _{2.5}	1.44		0.0082
SO ₂	0.245		0.0014
NO _x ¹	9.68	15.0	0.0554
VOC ¹	0.161		
CO ¹	0.982		

¹ - Except during periods of startup and shutdown, when the event based emission limits apply.

B. Startup and Shutdown Emission Limits

Pollutant	Startup (lb/event)	Shutdown (lb/event)
NO _x	2.1	2.4
VOC	1.68	1.80
CO	19.56	21.0

1. Startup: The period of time from initiation of combustion firing until the combustion turbines reaches steady-state operation and until the control equipment attains its normal operating temperature and steady-state operation. Duration of startup shall not exceed 20 minutes.
2. Shutdown: The period of time from the initiation of the shutdown process of the combustion turbine until the point at which the combustion process has stopped. Duration of shutdown shall not exceed 20 minutes.
3. The Permittee shall minimize emissions during periods of startup and shutdown by the following work practices and time constraints:
 - a. The oxidation catalyst shall not be bypassed during startup or shutdown; and
 - b. Emissions during these periods shall be counted towards the annual emission limits stated herein.

C. Annual Emission Limits

Pollutant	tons per 12 consecutive months
PM	6.31
PM ₁₀	6.31
PM _{2.5}	6.31
SO ₂	1.07
NO _x ¹	42.4
VOC ¹	0.705
CO ¹	4.30

¹ - Includes steady-state, startup and shutdown emissions.

D. 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]

E. Demonstration of compliance with the above emission limits may be met by calculating the emission rates using stack test data for this source or if none is available, emission factors from the following sources:

- NO_x, VOC and CO: Manufacturer's data
- PM, PM₁₀, PM_{2.5}, SO₂: Compilation of Air Pollutant Emission Factors, AP-42, fifth edition, Section 3.1, April 2000
- NO_x, VOC and CO (during startup/shutdown): Part III.B of this permit

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 use individual non-resettable totalizing fuel metering devices or billing meters to continuously monitor fuel feed to the turbine.
2. The Permittee shall continuously monitor and continuously record the oxidation catalyst inlet temperature (°F). The Permittee shall maintain this parameter within the range recommended by the manufacturer to achieve compliance with the emission limits in this permit.
3. The Permittee shall perform inspections of the oxidation catalyst as recommended by the manufacturer.
4. The Permittee may elect not to monitor the total sulfur content of the natural gas, in accordance with 40 CFR §60.4365 Subpart KKKK, if the potential emissions do not exceed 0.060 lb SO₂/MMBtu. This demonstration may be made using the purchase contract specifying that the fuel sulfur content for the natural gas is less than or equal to

20 grains of sulfur/100 standard cubic feet and results in potential emissions not exceeding 0.060 lb SO₂/MMBtu. This determination shall be done on an annual basis pursuant to 40 CFR §60.4415 Subpart KKKK.

B. Record Keeping

1. The Permittee shall keep records of monthly and consecutive 12 month fuel consumption of the turbine. The consecutive 12 month fuel consumption shall be determined by adding 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 calculate and record the monthly and consecutive 12 month PM, 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.

Emissions during startup and shutdown shall be counted towards the annual emission limitation in Part III.C of this permit.

3. The Permittee shall keep records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the turbine or any malfunction of the air pollution control equipment. [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); and
 - e. total NO_x, VOC and CO emissions emitted (lb) during the event.
4. The Permittee shall keep records of the inspection and maintenance of the turbine and oxidation catalyst. The records shall include:
 - a. the name of the person;
 - b. the date;
 - c. the results or actions; and
 - d. the date any parts or catalyst is replaced.
 5. 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 turbine or the air pollution control equipment. 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 submit all reports to the commissioner as required pursuant to RCSA §22a-174-22(l) and 40 CFR §60.4375(a).

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.

B. Stack emissions testing shall be required for the following pollutant(s):

☐ PM ☐ PM₁₀ ☐ PM_{2.5} ☐ SO₂ ☒ NO_x ☒ CO
☒ VOC ☐ Opacity ☐ Other (HAPs):

1. During stack emissions testing, the manufacturer's performance data curve may be used to determine the Maximum Heat Input as follows:

$$\text{MMBtu/hr} = 191.75875 - 0.4843899T - 0.0022815(T-53.5)^2 + 0.0001127(T-53.5)^3$$

where T = ambient temperature (°F)

- C.** The Permittee shall submit test results within 60 days after completion of testing.
- D.** NO_x performance testing shall be performed in accordance with 40 CFR §60.4400 Subpart KKKK. Performance testing is required annually. If the NO_x emission result from the current performance test is less than or equal to 18.75 ppm @ 15% O₂, subsequent performance test frequency may be reduced to every two years.
- D.** Recurrent stack testing for CO and VOC shall be conducted within five years from the date of the previous stack test to demonstrate compliance with their respective limits.
- E.** Stack test results for all pollutants shall be reported units of lb/hr. NO_x emissions shall also be reported in units of ppmvd @ 15% O₂ and lb/MMBtu.

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.

The Permittee shall properly operate the control equipment at all times that this equipment is in operation and emitting air pollutants.

PART VII. SPECIAL REQUIREMENTS

- A.** The Permittee shall comply with all applicable sections of the following New Source Performance Standard at all times.

Title 40 CFR Part 60, Subparts KKKK and A.

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

- B.** In the event that a malfunction causing either an emission exceedance or a parameter monitored out of recommended range is not corrected within three hours, the Permittee shall immediately institute shutdown of the turbine.
- C.** For this CHP Project, the Permittee utilized internal offsets to net out of major NSR requirements. These internal offsets were the result of the decommissioning of seven diaper machines (in 2004), decommissioning of Boiler #1 (Registration No. 130-0017) and Boiler #2 (Registration No. 130-0018), as well as modifications to Tissue Machine Hood Burner #1 (Permit No. 130-0026) and Tissue Machine Hood Burner #2 (Permit No. 130-0014). The diaper machines #1-#4 were registered sources (Registration Nos. 130-0062, -0063, -0064, -0065) and #5-#7 were exempt units. The following is a list of the scheduled milestones and dates completed.

1. Combustion Turbine #2 (Permit No. 130-0071), startup - **April 15, 2008**
2. Combustion Turbine #1 (Permit No. 130-0070), startup - **June 25, 2008**
3. Tissue Hood Burner #1 (Permit No. 130-0026), hood and burner upgrade – **June 14, 2008**
4. Tissue Hood Burner #2 (Permit No. 130-0014), hood and burner upgrade – **July 31, 2008**
5. Boiler #2, decommissioned – **April 15, 2008**
6. Boiler #1, decommissioned – **October 14, 2008**

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.