



Connecticut Department of

**ENERGY &  
ENVIRONMENTAL  
PROTECTION**

**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).

<b>Owner/Operator</b>	The Mattabasset District
<b>Address</b>	245 Main Street, Cromwell, CT 06416
<b>Equipment Location</b>	245 Main Street, Cromwell, CT 06416
<b>Equipment Description</b>	Cummins KTA50-G9 Non- Emergency Engine
<b>Town-Permit Numbers</b>	043-0037
<b>Premises Number</b>	0012
<b>Stack Number</b>	10
<b>Permit Issue Date</b>	September 9, 2020
<b>Expiration Date</b>	None

*Betsy Wingfield*  
Betsy Wingfield  
Deputy Commissioner

September 9, 2020  
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 source is a Cummins KTA50-G9, Tier 1 Certified engine which will be used for non-emergency use, including demand response. The engine was manufactured in September, 2006 and constructed in 2007.

### **B. Equipment Design Specifications**

1. Fuel Type: Ultra-Low Sulfur Distillate (ULSD)
2. Maximum Fuel Firing Rate: 103.6 gal/hr
3. Maximum Gross Heat Input: 14.297 MMBtu/hr

### **C. Stack Parameters**

1. Minimum Stack Height: 38.0 ft
2. Minimum Exhaust Gas Flow Rate: 4,700 acfm
3. Minimum Stack Exit Temperature: 735°F
4. Minimum Distance from Stack to Nearest Property Line: 130 ft

## **PART II. OPERATIONAL CONDITIONS**

### **A. Equipment**

1. Maximum Fuel Consumption over any Consecutive 12 Month Period: 31,080 gallons
2. Maximum Fuel Sulfur Content (by weight, dry basis): 0.0015%

**B.** The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.

### 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

Pollutant	lb/hr <sup>(b)</sup>	g/kW-hr
PM	0.54	0.15
PM <sub>10</sub>	0.54	
PM <sub>2.5</sub>	0.54	
SO <sub>2</sub>	0.027	
NO <sub>x</sub> <sup>(a)</sup>	26.29	7.2
CO	6.36	1.7
VOC	0.83	0.23

<sup>(a)</sup> If the actual daily NO<sub>x</sub> emissions from this equipment exceeds 274 pounds on any day from May 1 to September 30, the requirements of RCSA §22a-174-22e shall apply.

<sup>(b)</sup> Based on engine size of 1,656 kW

#### B. Annual Emission Limits

Pollutant	Tons per 12 Consecutive Months
PM	0.08
PM <sub>10</sub>	0.08
PM <sub>2.5</sub>	0.08
SO <sub>2</sub>	0.004
NO <sub>x</sub>	3.94
CO	0.95
VOC	0.12

#### 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 §22a-174-29. [STATE ONLY REQUIREMENT]

#### D. Opacity

Opacity resulting from operation of this engine shall not exceed 10% during any six-minute block average or 40% reduced to a one-minute block average; as measured by 40 CFR Part 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:

- *NO<sub>x</sub>: EPA Tier I Certification Test Data*
- *VOC, CO, PM/PM<sub>10</sub>, PM<sub>2.5</sub>: Manufacturer Specifications*
- *SO<sub>2</sub>: AP-42, Table 3.4-1*

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**

The Permittee shall continuously monitor fuel consumption using a non-resettable totalizing fuel meter.

### **B. Record Keeping**

1. The Permittee shall keep records of monthly and consecutive 12 month fuel consumption. 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 keep records of the fuel certification for each delivery of fuel oil from a bulk petroleum provider or a copy of the current contract with the fuel supplier supplying the fuel used by the equipment that includes the applicable sulfur content of the fuel as a condition of each shipment. The shipping receipt or contract shall include the date of delivery, the name of the fuel supplier, type of fuel delivered, the percentage of sulfur in such fuel, by weight, dry basis, and the method used to determine the sulfur content of such fuel.
3. The Permittee shall calculate and record the monthly and consecutive 12 month PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, 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 keep records of the inspection and maintenance. The records shall include:
  - a. The name of the person;
  - b. The date; and
  - c. The results or actions.
5. The Permittee shall make and keep the following records:
  - a. During the period from May 1 to September 30, inclusive, records sufficient to determine the NO<sub>x</sub> emissions (lb) per day;
  - b. A calculation of NO<sub>x</sub> emissions on each day of operation, performed no later than the last day of each month for every day of operation of the preceding month;
  - c. The method used to calculate daily NO<sub>x</sub> emissions and the information used to determine the NO<sub>x</sub> emissions rate, chosen from the options listed in RCSA §§22a-174-

- d. 22f(g)(2)(C)(i) – (v);
  - e. The date and work performed for repairs, replacements of parts and other maintenance;
  - f. The date on which the engines is tuned-up; the name, title and affiliation of the person performing the tune-up, and a description of work performed, and
  - f. Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22f.
6. 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 malfunction of the engine. 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 other dates of such actions and measures.
2. If the engine exceeds the daily NOx emissions thresholds pursuant to RCSA §22a-174-22f(e) (i.e. 274 lb NOx/day), the Permittee shall submit a notification to the Compliance Analysis and Coordination Unit, Bureau of Air Management, Department of Energy and Environmental Protection. Such notification shall be submitted no later than 60 days after the date on which the daily NOx emissions threshold was exceeded and shall include the information listed in RCSA §§22a-174-22f(h)(1)-(11). [RCSA §22a-174-22f(h)]

**PART V. 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 Subpart III and A

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

- B.** The Permittee shall comply with all applicable sections of the following National Emission Standards for Hazardous Air Pollutants at all times.

Title 40 CFR Part 63 Subpart: ZZZZ and A

Compliance with 40 CFR Part 63 Subpart ZZZZ shall be demonstrated through compliance with 40 CFR Part 60 Subpart III pursuant to 40 CFR §63.6590(c).

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

- C.** 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 engine.

**D. Routine Schedule Testing or Maintenance**

1. The Permittee shall not conduct routine scheduled testing or maintenance of the subject engine during days when ambient ozone is forecasted by the commissioner to be unhealthy for sensitive groups to very unhealthy anywhere in Connecticut.

Forecast Information

Official ambient ozone information can be obtained by calling:

- a. (860) 424-4167 Department's Bureau of Air Management Monitoring Section  
(Recorded Message Updated daily at 3:00 p.m.)
- b. (860) 424-3027 Department's Bureau of Air Management Monitoring Section  
(For additional air quality information)

2. Exemption

The Permittee shall be exempt from Part V.D.1 of this permit if all of the following conditions are met:

- a. the subject engine is unattended; and
- b. the schedule for routine testing or maintenance of such engine is automated and cannot be modified from a remote location; and
- c. if a Permittee operates more than one emergency engine at the subject premises, the schedule for routine testing or maintenance of all such emergency engines does not call for the routine testing or maintenance of more than one such engine on the same day.

**E. Premises Emissions Summary**

1. On January 1<sup>st</sup> of each calendar year, if the potential emissions of NO<sub>x</sub> and/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 NO<sub>x</sub> and/or VOC emissions, as applicable, from the premises for such calendar year.
  - b. Calculate and record annual NO<sub>x</sub> 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 1<sup>st</sup> of the following year with respect to the previous calendar year. Such records shall include a sample calculation(s).
  - c. If actual NO<sub>x</sub> 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 1<sup>st</sup> 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 with either of the following premises is exempt from Part V.E.1 requirements of this permit if, on January 1<sup>st</sup> of the subject year, the:
  - a. Premises is operating in accordance with a valid Title V permit issued pursuant to RCSA section 22a-174-33; or
  - b. Premises is operating in accordance with a valid Approval of Registration issued pursuant to the General Permit to Limit Potential to Emit from Major Stationary Sources of Air Pollution issued on November 9, 2015.

- F. 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 VI. 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.