

PERMIT FOR FUEL BURNING EQUIPMENT

**STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR MANAGEMENT**

The conditions on all pages of this permit and attached appendices shall be verified at all times except those noted as design specifications. Design specifications need not be verified on a continuous basis; however, if requested by the Commissioner, demonstration of compliance shall be shown.

PART I. OPERATIONAL CONDITIONS

A. Operating Limits

1. Fuel Type(s): Diesel
2. Fuel Sulfur Content (% by weight, dry basis): 0.05
3. Maximum Hours of Operation over any Consecutive twelve (12) Month Period: 500

B. Design Specifications

1. Maximum Fuel Firing Rate(s): 33.9 gal/hr
2. Maximum Gross Heat Input (MM BTU/hr): 4.7
3. Minimum Stack Height (ft): 10
4. Minimum Exhaust Gas Flow Rate (acfm): 4,305
5. Stack Exit Temperature (°F): 1,050
6. Minimum Distance from Stack to Property Line (ft): 400

PART II. CONTROL EQUIPMENT (Applicable if -X- Checked) (See Appendix E for Specifications)

A. Type

- | | |
|---|--|
| <input checked="" type="checkbox"/> None | <input type="checkbox"/> Selective Non-Catalytic Reduction |
| <input type="checkbox"/> Scrubber | <input type="checkbox"/> Selective Catalytic Reduction |
| <input type="checkbox"/> Electrostatic Precipitator | <input type="checkbox"/> Low NOx Burner |
| <input type="checkbox"/> Cyclone | <input type="checkbox"/> Fabric Filter |
| <input type="checkbox"/> Multi-Cyclone | <input type="checkbox"/> Particulate Trap |
| <input type="checkbox"/> Thermal DeNOx | <input type="checkbox"/> Other |

B. Minimum Efficiency

1. Capture Efficiency (%): _____
2. Removal Efficiency (%): _____
3. Overall Efficiency (%): _____

FIRM NAME: The University of Connecticut
 EQUIPMENT LOCATION: Sewage Treatment Plant
 EQUIPMENT DESCRIPTION (MODEL, I.D. #): Onan 500 DFFB emergency diesel generator

Town No: 098

Premise No: 15

Permit No: 0054

Stack No: 32

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**PART III. CONTINUOUS EMISSION MONITORING REQUIREMENTS AND
ASSOCIATED EMISSION LIMITS** (Applicable if -X- Checked)

CEM shall be required for the following pollutant/operational parameters and enforced on the following basis:

<u>Pollutant/Operational Parameter</u>	<u>Averaging Times</u>	<u>Emission Limit</u>	<u>Units</u>
<input checked="" type="checkbox"/> None			
<input type="checkbox"/> Opacity	six minute block		
<input type="checkbox"/> SO _x	3 hour rolling		
<input type="checkbox"/> NO _x	24 hour rolling		
<input type="checkbox"/> CO	1 hour block		
<input type="checkbox"/> CO ₂	1 hour block		
<input type="checkbox"/> O ₂	1 hour block		
<input type="checkbox"/> Temperature	continuous		

(See Appendix A for General Requirements)

PART IV. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

- A.** For an emergency engine, daily records of operating hours of such engine, identifying the operating hours of emergency and non-emergency use;
- B.** Records of all tune-ups, repairs, replacement of parts and other maintenance;
- C.** On or before April 15 of each year, the owner or operator of any source subject to Section 22a-174-22 shall submit a report on NO_x emissions from such source, on a form provided by the Commissioner.
- D.** The permittee shall monitor and keep records of annual operating hours. Annual operating hours shall be based on any twelve (12) consecutive month time period and shall be determined by adding the current month's operating hours to that of the previous eleven (11) months. The permittee shall make these calculations within thirty (30) days of the end of the previous month.
- E.** The permittee shall keep records of the fuel certification for each delivery of fuel 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.
- F.** The permittee shall keep records on premises indicating continual compliance with all above conditions at all times and shall make them available upon request by the Commissioner for the duration of this permit, or for the previous five (5) years, whichever is less.

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PART V. SPECIAL REQUIREMENTS FOR EMERGENCY ENGINES ONLY

- A.** An emergency engine is defined as a new or existing stationary reciprocating engine or turbine engine which is used as a means of providing mechanical or electrical power only during periods of routine testing and scheduled maintenance or during an emergency. Emergency engine does not include an engine with respect to which the permittee is party to an agreement to sell electrical power from such engine to an electrical utility, or receives any reduction in the cost of electrical power for agreeing to supply electrical power from such engine during periods of reduced voltage or reduced power availability.
- B.** This equipment must be dedicated solely to responding in emergency situations. "Emergency" means an unforeseeable occurrence or condition that is beyond the permittee's control, and that:
1. results in an interruption of electrical power from the supplying electrical utility to the subject premise;
 2. results in a deviation in the voltage to the subject premise of greater than three percent above or five percent below the standard nominal voltage specified by the supplying electrical utility in accordance with the Regulations of Connecticut State Agencies, Section 16-11-115(a);
 3. requires an interruption of electrical power from the supplying electrical utility to the subject premise to enable the permittee to perform emergency repairs; or
 4. requires operation of the subject emergency engine to minimize damage from fire, flood waters, or other conditions resulting from such emergency.
- C.** 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 moderate to unhealthy, unhealthy, or very unhealthy.
1. Forecast Information
Official ambient ozone information can be obtained by calling:
 - i. (860) 424-4167 Department's Bureau of Air Management Monitoring Section (Recorded Message Updated daily at 3:00 p.m.)
 - ii. (860) 424-3027 Department's Bureau of Air Management Monitoring Section (For additional air quality information)
 - iii. (800) 922-2263 American Lung Association (For health effects information)

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PART V. SPECIAL REQUIREMENTS FOR EMERGENCY ENGINES ONLY, continued:

2. Exemption

The permittee shall be exempt from subpart C of this section if all of the following conditions are met:

- i. the subject engine is unattended;
- ii. the schedule for routine testing or maintenance of such engine is automated and cannot be modified from a remote location; and
- iii. if a permittee operates more than one emergency engine at the subject premise, 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.

PART VI. ALLOWABLE EMISSION LIMITS

The Permittee shall not exceed the emission limits stated herein at any time.

<u>Criteria Pollutants</u>	<u>#/MMBTU</u>	<u>TPY</u>
TSP	0.10	0.12
PM-10	0.10	0.12
SOx	0.05	0.06
NOx	3.20	3.76
VOC	0.09	0.11
CO	0.85	1.00

<u>Non-Criteria Pollutants</u>	<u>MASC * (ug/m³)</u>
Sulfuric Acid	15,991

*Maximum allowable stack concentration, 8 hours Hazardous Limiting Value

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

1. Sulfuric acid: 2.45 (%Sulfur)lb/ 1,000 gal: CT DEP Memo 11/27/1987
2. TSP, PM-10, NOx, VOC, CO: Table 3.4-1, Section 3.4, AP-42 (10/96)
3. SOx: CT DEP, Memo 05/23/1991

The above statement shall not preclude the Commissioner from requiring other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

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PART VII. STACK EMISSION TEST REQUIREMENTS (Applicable if -X- Checked)

Stack emission testing shall be required for the following pollutant(s):

None at this time

TSP SOx NOx CO

VOC PM-10 Pb

Other (HAPS): _____, _____,

(See Appendix B for General Requirements)

PART VIII. APPLICABLE REGULATORY REFERENCES (The Regulations of Connecticut State Agencies, hereinafter referred to as the Regulations)

22a-174-3a; 22a-174-18; 22a-174-19; 22a-174-29(b); 22a-174-22

These references are not intended to be all inclusive - other sections of the Regulations may apply.

PART IX. SPECIAL REQUIREMENTS

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

B. *Noise (for non-emergency use)*

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 Sections 22a-69-1 through 22a-69-7.4 of the Regulations.

C. The Permittee shall comply with all applicable sections of the following New Source Performance Standard(s) at all times. (Applicable if -X- checked)

40 CFR Part 60, Subpart: Db Dc GG A None

PART X. 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.

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PART X. ADDITIONAL TERMS AND CONDITIONS, continued:

- B.** Any representative of the DEP 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 fifteen 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.

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PART X. ADDITIONAL TERMS AND CONDITIONS, continued:

- 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 Assistant Director; Compliance & Field Operations Division; Bureau of Air Management; Department of Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

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