

**PERMIT FOR FUEL BURNING EQUIPMENT**

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

1. Legal Firm Name: Electric Boat Corporation
2. Address: 75 Eastern Point Road, Groton, CT 06340-1047
3. Equipment Location: 75 Eastern Point Road, Groton, CT 06340-1047
4. Equipment Description (Model, I.D. #): Magne Tek Model 250 RD  
Generator, EMU-1247

PERMIT TO:

- Construct       Operate       Modify

FEDERAL REQUIREMENTS:

- NSPS (40 CFR Part 60) Subpart: \_\_\_\_\_
- NESHAPS (40 CFR Part 61) Subpart: \_\_\_\_\_
- MACT (40 CFR Part 63) Subpart: \_\_\_\_\_

OZONE NON-ATTAINMENT STATUS:

- severe (Major source if VOC or NOx > 25 TPY)
- serious (Major source if VOC or NOx > 50 TPY)

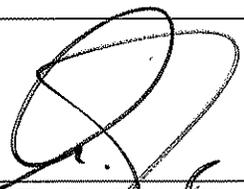
INTERNAL COMBUSTION ENGINES ONLY:

- Emergency use only
- Non-emergency use, including self generation

|             |             |
|-------------|-------------|
| Date Issued | Exp. Date   |
| 5/29/01     |             |
| Town No.    | Premise No. |
| 070         | 05          |
| Permit No.  | Stack No.   |
| 0258        | 52          |
| Permit Fee  |             |
| \$2,000.00  |             |

TYPE OF POLLUTANT FOR WHICH THIS PREMISE IS A "MAJOR SOURCE":

|                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                          |                                     |                          |                          |                          |      |       |                          |                                     |                                     |                          |                                     |                          |                          |                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|------|-------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <p>EPA SOURCE CLASS:</p> <p>New Source    <input checked="" type="checkbox"/></p> <p>Major Mod     <input type="checkbox"/></p> <p>Minor Mod     <input type="checkbox"/></p> | <table border="0"> <tr> <td>TSP</td> <td>SOx</td> <td>NOx</td> <td>CO</td> <td>VOC</td> <td>PM-10</td> <td>LEAD</td> <td>OTHER</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> | TSP                                 | SOx                      | NOx                                 | CO                       | VOC                      | PM-10                    | LEAD | OTHER | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| TSP                                                                                                                                                                           | SOx                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NOx                                 | CO                       | VOC                                 | PM-10                    | LEAD                     | OTHER                    |      |       |                          |                                     |                                     |                          |                                     |                          |                          |                          |
| <input type="checkbox"/>                                                                                                                                                      | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |      |       |                          |                                     |                                     |                          |                                     |                          |                          |                          |



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ARTHUR J. ROCQUE, JR.  
COMMISSIONER, DEPARTMENT OF  
ENVIRONMENTAL PROTECTION  
OR DESIGNATED AGENT

ORIGINAL

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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**

1. Fuel Type(s): Diesel
2. Maximum Fuel Consumption over any Consecutive Twelve (12) Month Period: 4,650 gallons
3. Fuel Sulfur Content (% by weight, dry basis): 0.05
4. Maximum Hours of Operation: Daily 24; Over any Consecutive Twelve (12) Month Period: 250

*Design Specifications*

1. Maximum Fuel Firing Rate(s): 18.6 gallons/hr
2. Maximum Gross Heat Input (MM BTU/hr): 2.6
3. Minimum Stack Height (ft): 8.8
4. Minimum Exhaust Gas Flow Rate (acfm): 2,246
5. Stack Exit Temperature (°F): 915
6. Minimum Distance from Stack to Property Line (ft): 33

**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: Electric Boat Corporation  
 EQUIPMENT LOCATION: 75 Eastern Point Road, Groton, CT 06340-4989  
 EQUIPMENT DESCRIPTION (MODEL, I.D. #): Magne Tek Model 250 RD Diesel Engine EMU-1248

Town No: 070

Premise No: 05

Permit No: 0259

Stack No: 53

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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:

| Pollutant/Operational<br>Parameter       | Averaging<br>Times | Emission<br>Limit | Units |
|------------------------------------------|--------------------|-------------------|-------|
| <input checked="" type="checkbox"/> None |                    |                   |       |
| <input type="checkbox"/> Opacity         | six minute block   |                   |       |
| <input type="checkbox"/> SOx             | 3 hour rolling     |                   |       |
| <input type="checkbox"/> NOx             | 24 hour rolling    |                   |       |
| <input type="checkbox"/> CO              | 1 hour block       |                   |       |
| <input type="checkbox"/> CO <sub>2</sub> | 1 hour block       |                   |       |
| <input type="checkbox"/> O <sub>2</sub>  | 1 hour block       |                   |       |
| <input type="checkbox"/> Temperature     | continuous         |                   |       |

(See Appendix A for General Requirements)

### PART IV. MONITORING, REPORTING AND RECORD KEEPING REQUIREMENTS

- The permittee shall keep records of annual operating hours and fuel consumption. Annual operating hours and fuel consumption shall be based on any consecutive twelve (12) month time period and shall be determined by adding (for each fuel) the current month's fuel usage and operating hours to that of the previous eleven (11) months. The Permittee shall make these calculations monthly.

During the initial year of operation, the monthly emission limit shall not exceed the annual limitation divided by four (4). Emergency diesel generators are exempt from this requirement and are subject to Part V of this permit.

- When more than one fuel supply tank is to service this source or when multiple sources are supplied by one fuel tank, the Permittee shall use a fuel metering device to continuously monitor fuel feed to this permitted source.
- Each oil fuel shipment for this equipment shall include a shipping receipt from the fuel supplier and a certification from the fuel supplier certifying the type of fuel in the shipment and the weight percent of sulfur in the fuel. The shipping receipt and/or certification shall include the name of the oil supplier, the sulfur content of the oil and the method used to determine the sulfur content of the oil. The Permittee shall maintain records of each shipping receipt and certification.
- The Permittee shall keep records on premise 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**

1. 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.
2. 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:
  - a. results in an interruption of electrical power from the supplying electrical utility to the subject premise;
  - b. 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);
  - c. requires an interruption of electrical power from the supplying electrical utility to the subject premise to enable the permittee to perform emergency repairs; or
  - d. requires operation of the subject emergency engine to minimize damage from fire, flood waters, or other conditions resulting from such emergency.
3. 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.
  - a. Forecast Information  
Official ambient ozone information can be obtained by calling:
    - i. (860) 424-3027 Department's Bureau of Air Management  
Monitoring Section
    - ii. (860) 424-4167 Department's Bureau of Air Management  
Monitoring Section (Recorded Message Updated  
daily at 2:00 p.m.)
    - iii. (860) 289-5401 American Lung Association

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

b. Exemption

The permittee shall be exempt from subpart 3 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.
4. At the premise where the authorized activity takes place, or at such other place as the Commissioner approves in writing, the permittee shall maintain the date and type of emergency during which the subject engine is operated.

### PART VI. ALLOWABLE EMISSION LIMITS

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

| Criteria<br>Pollutants | #/hr | #/MM BTU | TPY  |
|------------------------|------|----------|------|
| TSP                    | 0.08 | 0.03     | 0.01 |
| PM-10                  | 0.08 | 0.03     | 0.01 |
| SOx                    | 0.76 | 0.29     | 0.09 |
| NOx                    | 4.41 | 1.70     | 0.55 |
| VOC                    | 0.33 | 0.13     | 0.04 |
| CO                     | 0.67 | 0.26     | 0.08 |
| Pb                     | 0.00 | 0.00     | 0.00 |

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**PART VI. ALLOWABLE EMISSION LIMITS, continued:**

| <u>Non-Criteria<br/>Pollutants</u> | <u>MASC *<br/>(ug/m<sup>3</sup>)</u> |
|------------------------------------|--------------------------------------|
| Sulfuric Acid                      | 631.9                                |
| Formaldehyde                       | 379.2                                |
| Acrolein                           | 158.0                                |
| Benzene                            | 4,739.5                              |
| Naphthalene                        | 31,596.9                             |
| Toluene                            | 236,967.4                            |

\*Maximum allowable stack concentration

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

1. Manufacturer's Data
2. The Fact Information Retrieval (FIRE) data system version 6.2 (4/99) for Internal Combustion Engines by source classification code (SCC) 2-03-001-01.

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.

**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-174-3(a), (b), (f); 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.

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**PART IX. SPECIAL REQUIREMENTS**

1. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.
2. *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.

3. 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

(See Appendix C for Detailed Requirements)

**PART X. ADDITIONAL TERMS AND CONDITIONS**

1. 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.
2. 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.
3. This permit may be revoked, suspended, modified or transferred in accordance with applicable law.
4. 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.

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**PART X. ADDITIONAL TERMS AND CONDITIONS, continued:**

5. 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 the documents and all attachments and 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, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense." Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense in accordance with Connecticut General Statutes §22a-6, under §53a-157 of the Connecticut General Statutes.
6. 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.
7. 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.
8. 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.
9. 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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