STATE OF CONNECTICUT
DEPARTMENT OF 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).

Owner/Operator:	Electric Boat Corporation
Address:	75 Eastern Point Road, Groton, CT 06340-4989
Equipment Location:	Barge #17, Eastern Point Road, Groton, CT 06340-4989
Equipment Description:	133.6 MMBtu/hr Babcock and Wilcox Type FM Integral Furnace Boiler s/n FM-2301

Town-Permit Numbers:	070/0263
Premises Number:	05
Original Permit Issue Date:	08/29/2001
Modification Issue Date:	01/17/08
Expiration Date:	

Anne Gobin for
Gina McCarthy
Commissioner

January 17, 2008
Date

PERMIT FOR FUEL BURNING EQUIPMENT

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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): #2 Fuel Oil
2. Maximum Fuel Consumption over any Consecutive 12 Month Period: 320,880 gal
3. Maximum Fuel Sulfur Content (% by weight, dry basis): 0.05

B. Design Specifications

1. Maximum Fuel Firing Rate(s): 955 gal/hr
2. Maximum Gross Heat Input (MMBTU/hr): 133.6

C. Stack Parameters

1. Minimum Stack Height (ft): 80
2. Minimum Exhaust Gas Flow Rate (acfm): 62,865
3. Stack Exit Temperature (°F): 766
4. Minimum Distance from Stack to Property Line (ft): 420

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

A. Type

- ☒ None
- ☐ Scrubber
- ☐ Electrostatic Precipitator
- ☐ Cyclone
- ☐ Multi-Cyclone
- ☐ Thermal DeNOx
- ☐ Selective Non-Catalytic Reduction
- ☐ Selective Catalytic Reduction
- ☐ Low NOx Burner
- ☐ Fabric Filter
- ☐ Particulate Trap
- ☐ Other

B. Minimum Efficiency

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

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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 Parameter	Averaging Times	Emission Limit	Units
☒ None			
☐ Opacity	six minute block		
☐ SOx	3 hour rolling		
☐ NOx	24 hour rolling		
☐ CO	1 hour block		
☐ CO_2	1 hour block		
☐ O_2	1 hour block		
☐ Temperature	continuous		

(See Appendix A for General Requirements)

PART IV. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

A. Monitoring

1. 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 non-resettable totalizing fuel metering device to continuously monitor fuel feed to this permitted source.

B. Record Keeping

1. The Permittee shall keep records of annual fuel consumption. Annual fuel consumption shall be based on any consecutive 12 month time period and shall be determined by adding (for each fuel) the current month's fuel usage 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.

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

3. 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.

PART V. ALLOWABLE EMISSION LIMITS

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

Criteria Pollutants	lb/hr	tpy
PM	1.91	0.32
PM-10	0.96	0.16
SO_x	7.05	1.18
NO_x	22.92	3.85
VOC	0.19	0.03
CO	4.78	0.80
Pb	0.00	0.00

Hazardous Air Pollutants	MASC* ($\mu g/m^3$)
Sulfuric Acid	$1.4x10^3$
Arsenic	3.5
Beryllium	0.71
Chromium	710
Nickel	350
Cadmium	28
Copper	$1.4x10^3$
Lead	212
Formaldehyde	850

*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. AP 42, Volume 1, Fifth Edition;
2. Arsenic, Beryllium, Lead and Formaldehyde: DEP memorandum from David LaRivere and Ernest Bouffard dated July 9, 1993, Toxic Emission Factors for Oil-Fired Boilers
3. Sulfuric Acid: DEP memorandum from David Nash dated November 27, 1987 on emission factor calculation for H_2SO_4 calculation.

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.

FIRM NAME: Electric Boat Corporation
EQUIPMENT LOCATION: Barge #17, 75 Eastern Point Road, Groton, CT
EQUIPMENT DESCRIPTION: 133.6 MMBtu/hr Babcock and Wilcox Type FM Integral Furnace Boiler; s/n FM-2301

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

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

☐ None at this time

☐ PM ☐ SOx ☒ NOx ☐ CO ☐ VOC ☐ Pb

☐ Other (HAPs): _____, _____,

(See Appendix B for General Requirements)

PART VII. APPLICABLE REGULATORY REFERENCES

RCSA §§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 VIII. SPECIAL 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 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.

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

(See Appendix C for Detailed Requirements)

D. The Permittee shall comply with all applicable sections of the following National Emission Standards for Hazardous Air Pollutants at all times. (Applicable if -X- checked)

40 CFR Part 63, Subpart: ☒ DDDDD ☐ A

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PART IX. 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 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."

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PART IX. ADDITIONAL TERMS AND CONDITIONS, continued:

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; Engineering & Enforcement Division; Bureau of Air Management; Department of Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

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Appendices attached (Applicable if -X- checked):

☐ A Continuous Emission Monitoring Requirements

☒ B Stack Emission Test Requirements

☐ C New Source Performance Standards

☐ E Control Equipment Design Specifications