



**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 06340-1047
Equipment Location:	same
Equipment Description:	Abrasive Blast Room, Building 1

Town-Permit Numbers:	070-0280
Town-Premises Numbers:	070-0005
Permit Issue Date:	December 17, 2010
Expiration Date:	None

/s/ Amey Marrella  
Amey Marrella  
Commissioner

12/17/2010  
Date

## PERMIT FOR PROCESS EQUIPMENT

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

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 Abrasive Blast Room in Building 1 is manufactured by Abrasive Blast Systems LLC. The primary purpose of the source will be the surface preparation of submarine valves using compressed air, a blast pot pressure vessel, hose and venture nozzle. The blast media will be aluminum oxide abrasive grit. Emission control equipment is a Donaldson Torit ADFT 4-16 cartridge pulse jet dust collector with a Donaldson Torit Ultra-Web cartridge filter.

##### B. Abrasive Blast System Design Specifications

1. Blast Media Usage Rate - 5,880 lb/h maximum
2. Valve Processing - approx. 4 valves/h and 700 valves/year.

##### C. Control Equipment Design Specifications

Donaldson Torit ADFT 4-16 cartridge pulse jet dust collector with Ultra-Web Cartridge filter

1. Nominal Exhaust Gas Flow Rate - 8300 scfm
2. Design Pressure Drop Across Control Equipment - 10 in. H<sub>2</sub>O
3. Control Efficiency - 99.999%
4. Capture Efficiency - 100% (total enclosure)

##### D. Stack Parameters

1. Height - 24 ft
2. Diameter - 1.6 ft
3. Exhaust Flow Rate - 8,300 acfm
4. Distance to Property Line - 408 ft
5. Exhaust Temperature - Ambient
6. Exit Direction - Horizontal
7. Rain Hat Installed
8. Metal Stack Lining

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**PART II. OPERATING REQUIREMENTS**

**A. Abrasive Blast System**

1. Type of Abrasive - Aluminum oxide abrasive grit
2. Maximum Annual Blast Media Usage - 5,880 tons

**B. Controls**

1. The Permittee shall maintain this abrasive blast room at negative pressure.
2. The control equipment shall be operated at all times during the use of the abrasive blast equipment.

**PART III. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

**A. Monitoring**

1. The Permittee shall monitor the pressure drop across the control device and insure this it is within the manufacturer's recommended limits.

**B. Material Usage Records**

1. The Permittee shall calculate the quantity of abrasive used during any consecutive 12 month time period by adding each month's abrasive use to that of the previous 11 months. The Permittee shall make this calculation monthly.
2. The Permittee shall record the date and details of all repairs and maintenance to the abrasive blast system and control equipment.
3. The Permittee shall keep all records require by this permit for a period of five years and shall submit such records to the commissioner upon request.

**PART IV. OPERATION AND MAINTENANCE REQUIREMENTS**

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

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

**PART V. ALLOWABLE EMISSION LIMITS**

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

**A. Criteria Pollutants**

<u>Pollutant</u>	<u>lb/hr</u>	<u>tpy</u>
PM-10	0.00008	0.00033
PM-2.5	0.00001	0.00003

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, 13.2.6 Abrasive Blasting, 9/1997.
2. Manufacturer's data.

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.

**B. Hazardous Air Pollutants (HAPs) - (State Only Requirement)**

<u>Pollutant</u>	<u>ASC<sup>1</sup> (µg/m<sup>3</sup>)</u>
Aluminum Oxide	4.92
Titanium Dioxide	0.14

<sup>1</sup>- Actual Stack Concentration. These values are deemed representative of actual operating conditions and may vary up to the Maximum Allowable Stack Concentration (MASC) for the pollutant in question.

Blasting media used by this source now or in the future, either for production or on a trial basis, which contains hazardous air pollutants (HAPs) that are regulated under RCSA §22a-174-29 are allowed provided that:

1. The Permittee demonstrates that the HAPs ASC does not exceed the MASC using the equation in RCSA §22a-174-29(c). The Permittee shall be allowed to use the adjustment factor in RCSA §22a-174-29(i).

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**PART V. ALLOWABLE EMISSION LIMITS, continued**

- 2. The Permittee keeps records of all blasting media used, MSDSs or the manufacturer's technical data sheets.

NOTE: The emissions from any blasting media used, for production or trial runs, shall be counted toward any applicable emission limit in this permit.

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

Stack testing is not required at this time.

**PART VII. SPECIAL REQUIREMENTS**

- A. STATE ONLY REQUIREMENT: The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor beyond the property boundary of the premises that constitutes a nuisance as set forth in RCSA Section 22a-174-23.
- B. STATE ONLY REQUIREMENT: The Permittee shall operate this source and all accompanying equipment at all times in a manner so as not to violate or significantly contribute to the violation of any applicable state noise control regulations, as set forth in RCSA Sections 22a-69-1 through 22a-69-7.4.

**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 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.

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**PART VIII. ADDITIONAL TERMS AND CONDITIONS, continued**

- 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 of 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.

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**PART VIII. 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 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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