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).

<table>
<thead>
<tr>
<th><strong>Owner/Operator</strong></th>
<th>Thames Shipyard &amp; Repair Company</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>50 Farnsworth Street, New London, CT 06320</td>
</tr>
<tr>
<td><strong>Equipment Location</strong></td>
<td>50 Farnsworth Street, New London, CT 06320</td>
</tr>
<tr>
<td><strong>Equipment Description</strong></td>
<td>Small Floating Dry Dock</td>
</tr>
<tr>
<td><strong>Town-Permit Numbers</strong></td>
<td>128-0063</td>
</tr>
<tr>
<td><strong>Premises Number</strong></td>
<td>66</td>
</tr>
<tr>
<td><strong>Stack Number</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Permit Issue Date</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Expiration Date</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

Robert E. Kaliszewski  
Deputy Commissioner

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 comply with the terms and conditions stated herein within 180 days from the Permit Issuance Date.

PART I. DESIGN SPECIFICATIONS

A. General Description

Thames Shipyard & Repair Company (Thames Shipyard) provides various industrial and commercial services. Most of the marine services and ship repair are performed on the facility’s land work areas, two floating dry docks, access structures and on floating ships that are moored pier side.

The primary activity involves the repair, refurbishment, and construction of ships, barges and ferries. Also included are repair and/or replacement of vessel power plants (usually large diesel engines), repair of vessel hulls and topsides, and abrasive blasting and painting of vessels. All of the vessel resurfacing work, including complete hull restoration projects, occurs on a variety of vessels but mainly ferries.

Bottom hull restoration involves the lifting of the vessel completely out of the water on one of the two floating dry docks. The floating dry docks can be raised and lowered under a vessel by transferring ballast water using powerful electric driven pumps to lift it completely out of the water. After the vessel is in the floating dry dock, the vessel's surface and vessel components are cleaned via abrasive blasting, pressure washing, hydroblasting or a combination of these techniques and repainted with primers and topcoats. Areas of the hull that have extensive wear or tear or corrosion are replaced with new steel.

Prior to painting, the vessel surfaces and vessel components may be cleaned via abrasive grit blasting, pressure washing (typically operating in the 3-10,000 psi range), or hydroblasting (typically operating in the 30-50,000 psi range), or through a combination of these techniques.

The surface coating operation consists of portable spray guns that are moved to different areas of the facility (i.e. on and off the floating dry docks). The surface coating operation is subject to the National Emission Standards for Shipbuilding and Ship Repair (Surface Coating) MACT, 40 Code of Federal Regulation (CFR) Part 63 Subpart II. It is exempt from the requirements of RCSA §22a-174-20(s) pursuant to RCSA §22a-174-20(s)(7)(A)(v) because it is subject to the Surface Coating MACT. Thames Shipyard is subject to the disposal and evaporation of solvent limit in RCSA §22a-174-20(j) and the spray application equipment cleaning requirements of RCSA §22a-174-20(jj).

B. Equipment Design Specifications

1. Abrasive Blasting Equipment
   a. Type: Portable Blasting Units with various Nozzle Orifice Diameters and nozzle pressure of 120 psi or less
   b. Type of Abrasive: Coal Slag or alternative abrasive media

2. Surface Coating Equipment
   a. Type of Spray Gun: Portable Airless Spray Guns
b. Manual application of coatings, including brushes, rollers or similar applicators

3. Particulate Matter (PM) Minimization Systems
   a. Hydroblasting
   b. Containment shrouds, which are located on both ends of the dry dock. The shrouds may have screened flaps or openings to lessen wind stress.
   c. Localized tarps and shrouds

PART II. OPERATIONAL CONDITIONS

A. Equipment

1. Abrasive Blasting Operation
   a. Type of Abrasive: Coal slag or alternative abrasive media
   b. Maximum Annual Abrasive Consumption for Permit Nos. 128-0062 and 128-0063 combined (tons/yr): 800 tons per year of abrasive media
   c. The Permittee shall use abrasive media that contain less than 10% (by weight) of fines that would pass through a No. 80 sieve.

2. PM Minimization Systems
   a. The Permittee shall use hydroblasting, when feasible and appropriate for the specific jobs on the dry dock.
   b. The Permittee shall use containment shrouds, which are located on both ends of the dry dock, or localized tarps, shrouds or similar containment methods while performing abrasive blasting operations on exterior vessel surfaces or surfaces that are not enclosed, to prevent particulate matter from becoming airborne in accordance with RCSA §22a-174-18(c)(1). The shrouds on the ends of the dry dock will extend: from the tops of the wing walls to the deck or upper side of the vessel, and/or from wing wall to wing wall on the eastern side of the dry dock and from wing wall to the dock ramp on the western side of the dry dock. The bottom of the shroud should hang sufficiently upon the dock floor or deck to allow it to be weighted down or fastened.
   c. For abrasive blasting conducted on exterior surfaces that are not enclosed above the height of dry dock wing walls, the Permittee shall utilize localized tarps or shrouds for containment of particulate matter, to prevent particulate matter from becoming airborne in accordance with RCSA §22a-174-18(c)(1).
PART III. ALLOWABLE EMISSION LIMITS

A. Dry Dock Limits

The Permittee shall not cause or allow the equipment listed in Permit Nos. 128-0062 and 128-0063 combined to exceed the emission limits stated herein at any time.

**Table III.A: Combined Dry Dock Limits**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>lb/ton abrasive media used</th>
<th>tpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM(_{10})</td>
<td>5.03</td>
<td>2.0</td>
</tr>
<tr>
<td>PM(_{2.5})</td>
<td>0.50</td>
<td>0.2</td>
</tr>
</tbody>
</table>

B. Compliance with the above emission limits in Table III.A may be demonstrated by calculating the emission rates using data from the following source:

C. Premises Wide Limits

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

**Table III.B: Premises Wide Limits**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Tons per consecutive 12 month period</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM(_{2.5})</td>
<td>50</td>
</tr>
<tr>
<td>PM(_{10})</td>
<td>50</td>
</tr>
<tr>
<td>CO</td>
<td>50</td>
</tr>
<tr>
<td>NO(_x)</td>
<td>25</td>
</tr>
<tr>
<td>VOC</td>
<td>40</td>
</tr>
<tr>
<td>Single HAP*</td>
<td>8</td>
</tr>
<tr>
<td>Aggregate HAP*</td>
<td>20</td>
</tr>
</tbody>
</table>

*Hazardous Air Pollutants listed by EPA under section 112(b) of the Clean Air Act, 42 U.S.C §7412(b)

1. To determine compliance with the emission limits in Table III.B, the Permittee shall use data from one or more of the following, unless the commissioner determines otherwise:

   a. Continuous monitoring system which has been certified by the commissioner;
   b. Stack testing data, provided such testing was conducted in accordance with protocols preapproved by the commissioner in writing and such test was observed by department staff;
   c. Material balances conducted by an individual with knowledge of the subject process;
   d. Data from the “Compilation of Air Pollutant Emission Factors (AP-42)” as
2. VOC: Based on consumption

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.

D. Visible Emission Standard

Opacity shall not exceed 20% 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. [RCSA §22a-174-18(b)(1)]

PART IV. OPERATION AND MAINTENANCE REQUIREMENTS

A. The Permittee shall operate and maintain abrasive blasting equipment and surface coating equipment in accordance with the manufacturer’s specifications and written recommendations.

B. The Permittee shall inspect the abrasive blasting equipment (e.g., pots, hoses, valves, etc.) for any leaks, on a daily basis when such equipment is operating.

C. The Permittee shall operate the abrasive blasting equipment aimed in a downward position when feasible to avoid excessive wind dispersal.

D. The Permittee shall operate this source and premises at all times in a manner so as not to violate or significantly contribute to the violation of any applicable state requirements for the control of fugitive dust emissions, as set forth in RCSA §22a-174-18(c). Reasonable precautions shall be in accordance with good industrial practice as determined by the commissioner. [RCSA §22a-174-18(c)]

E. The Permittee shall not cause or allow the emission of visible particulate matter beyond the legal boundary of the property on which such emission occurs that either:

[RCSA §22a-174-18(c)(2)]

1. Remains near ground level beyond such property boundary; or
2. Diminishes the health, safety or enjoyment of people using a building or structure located beyond the property boundary.

F. The Permittee shall not emit particulate matter into the ambient air in such a manner as to cause a nuisance. [RCSA §22a-174-18(c)(3)]

G. If visible fugitive emissions are detected in violation of RCSA §§22a-174-18(b) and -18(c)(2) and (3), the Permittee shall perform corrective actions until such visible fugitive emissions violations are eliminated, at which time the Permittee shall perform a follow-up inspection for visible fugitive emissions. Notwithstanding the above, the Commissioner may pursue enforcement action for any violation of RCSA §22a-174-18.
H. Prior to an abrasive blasting event that has the potential to generate grit near the end of
the dry dock, the containment shrouds, which are located on both ends of the dry dock are
released from their restrained locations along the wing walls and deployed. At the
conclusion of an abrasive blasting event and prior to submerging the dry dock, the shrouds
along the ends of the dry dock may be retracted and bunched up along the ends of the
wing walls.

I. The Permittee shall clean up grit from the deck of the dry dock following completion of
abrasive blasting.

J. The Permittee shall clean spray application equipment in accordance with the requirements
of one of the following: [RCSA §§22a-174-20(jj)(4)(A-E)]

1. Using an enclosed gun cleaner that is maintained and operated in accordance with the
manufacturer’s recommendations and the following practices:
   a. Operate using an automated cycle, if applicable,
   b. Inspect hoses regularly for leaks,
   c. If a leak is discovered, repair as soon as practicable but no later than 15 days
      after discovery, and
   d. Ensure the cover is properly closed;
2. Placing cleaning solvent in the pressure pot and forcing the solvent through the gun
with the atomizing cap in place, without the use of atomizing air. Used cleaning solvent
shall be directed into a vat, drum or other waste container that is closed when not in
use;
3. Disassembling the spray gun and cleaning the components and associated hoses and
pumps by hand in a vat, which shall remain closed at all times except when in use.
Components and associated hoses and pumps may be soaked in a vat with a capacity
no greater than 20 liters. Such a soaking vat shall remain closed during the soaking
period, except when inserting or removing items; or
4. Forcing cleaning solvent through the spray gun and directing the atomized solvent
spray into a waste container that is fitted with a device to capture the resulting
emissions.

K. The Permittee shall use the following work practices for spray application equipment
cleaning: [RCSA §§22a-174-20(jj)(5)(A-E)]

1. New and used cleaning solvent, including those mixed on the premises, shall be stored
in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all
times except when the container is being filled, emptied or is otherwise actively in use;
2. Spills and leaks of cleaning solvent shall be minimized. Any leaked or spilled cleaning
solvent shall be absorbed and removed immediately;
3. Absorbent applicators, such as cloth and paper that are moistened with cleaning
solvent shall be stored in a closed, nonabsorbent, non-leaking container for disposal or
recycling;
4. Cleaning solvent shall be conveyed from one location to another in a closed container
or pipe; and
5. Air pollution control equipment shall be operated and maintained in accordance with
the manufacturer’s recommendations.
PART V. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

A. Monitoring

1. The Permittee shall monitor the quantity of each coating, clean up solvent, and diluent used on a daily, monthly and consecutive 12-month aggregate basis from the entire premises.

2. The Permittee shall monitor the monthly and consecutive 12-month period abrasive media consumption at the dry docks and from the entire premises.

3. The Permittee shall monitor the aggregate monthly and aggregate consecutive 12-month period fuel consumption or purchases for all stationary sources at the premises.

B. Record Keeping

1. For paperwork reduction, the records required by this permit may be kept on computer files in electronic form, or where appropriate, access to such records may be allowed via internet on-demand.

2. The Permittee shall make and keep records of the dates that abrasive blasting is conducted on the dry dock. Such records shall indicate the time abrasive blasting is initially started and when it ended on each day that abrasive blasting on the dry dock occurs.

3. The Permittee shall keep records in tons of monthly and consecutive 12 month abrasive media consumption from the dry docks and from the entire premises. The consecutive 12 month abrasive media consumption from the dry docks shall be determined by adding (for each abrasive media) the current month’s abrasive media consumption to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. The Permittee shall make and keep these records for Permit Nos. 128-0062 and 128-0063 combined.

4. The Permittee shall make and keep records of the weight percent of fines in abrasive media as determined from the grit supplier as supplied.

5. The Permittee shall make and keep records of inspections performed on the abrasive blasting equipment (e.g., pots, hoses, valves, etc.) by recording the date of inspection and results including identifying leaking parts and any corrective actions taken.

6. The Permittee shall keep material safety data sheets (MSDS) or technical data sheets (TDS) or Safety Data Sheets (SDS) for each paint and solvent used. Such information shall include the quantity and type of each hazardous air pollutant contained in the paint or solvent.

7. The Permittee shall keep daily records for each coating and diluent used, such records shall include:
   a. Date coating used;
   b. Description of coating, including name and density (lb/gal);
   c. Volatile organic compound content by weight (lb VOC/gal);
d. Water and exempt VOC content by weight (lb/gal);

e. Quantity of coating used (gal); and

f. Quantity of diluent used for each coating (gallons).

8. The Permittee shall maintain daily records of all cleaning solvents used for spray application equipment cleaning, as follows: [RCSA §22a-174-20(jj)(6)(B)]

a. Name and description of each cleaning solvent,

b. VOC content of each cleaning solvent, as-applied, and the associated calculations,

c. VOC content of each cleaning solvent, as supplied,

d. The amount of each cleaning solvent,

e. A Material Safety Data Sheet for each cleaning solvent,

f. A description of the type of cleaning equipment and process,

g. Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner, and

h. Date and type of maintenance performed on air pollution control equipment, if applicable.

9. The Permittee shall calculate and record the monthly and consecutive 12 month coating, clean up solvents and diluents consumption and waste shipments for the entire premises. The consecutive 12 month coating consumption shall be determined by adding the current month’s coating clean up solvents and diluents consumption and waste shipments to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.

10. Monthly records shall clearly display, at a minimum, compliance with all materials usage and emissions limitations set forth in this permit.

11. The Permittee shall calculate and record the monthly and consecutive 12 month PM$_{10}$, PM$_{2.5}$ emissions in units of tons using the emission factors identified in Table III.A of this permit. 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. The Permittee shall make and keep these records for Permit Nos. 128-0062 and 128-0063 combined.

12. The Permittee shall make and keep records necessary to reliably calculate the actual emissions of regulated air pollutants from each stationary source on the premises. The records shall allow for such calculations for all regulated air pollutants. Such records shall include, but are not limited to the following:

a. A log of the maximum rated capacity of each stationary source and how stationary sources are grouped.

b. A log for each month that shall include:

i. The total amount of fuels, solvents coatings or raw materials used, as applicable for each stationary source or group of stationary sources, during each month in which the use results in the emission of a regulated air pollutant;

ii. An identification of the fuels, solvents, coatings or raw materials used, by
each stationary source if applicable, during each month;

iii. The actual operating hours of each stationary source during each month, as necessary to calculate emissions;

iv. Any other documentation the commissioner reasonably deems necessary to reliably calculate actual emissions of air pollutants; and

v. All purchase orders, invoices, or other documents necessary to verify information and calculations in the monthly log.

13. The Permittee shall calculate VOC emissions in accordance with Part III.C.2. of this permit.

14. The Permittee shall calculate and record the premise wide monthly and consecutive 12 month PM\(_{10}/PM\_{2.5}\), CO, NO\(_x\), and VOC emissions from all stationary sources operated at the premises during that period in units of tons. The consecutive 12 month PM\(_{10}/PM\_{2.5}\), CO, NO\(_x\), and VOC 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.

15. The Permittee shall calculate and record the premise wide monthly and consecutive 12 month single hazardous air pollutants listed by EPA under section 112(b) of the Clean Air Act, 42 U.S.C. § 7412(b), (“HAP”) emissions from all stationary sources operated at the premises during that period in units of tons. The consecutive 12 month emissions shall be determined by adding the current month’s emissions to that of the previous 11 months. Such records shall include a sample calculation. The Permittee shall make these calculations within 30 days of the end of the previous month.

16. The Permittee shall calculate and record the premise wide monthly and consecutive 12 month aggregate HAP emissions all stationary sources operated at the premises during that period in units of tons. The consecutive 12 month emissions shall be determined by adding the current month’s emissions to that of the previous 11 months. Such records shall include a sample calculation. The Permittee shall make these calculations within 30 days of the end of the previous month.

17. The Permittee shall maintain a full, legible copy of the applicable manufacturer’s specifications and written operations manual on-site at all times for abrasive blasting equipment and surface coating equipment. The Permittee shall provide a copy of the manufacturer’s specifications and written operations manual upon request of the commissioner or his agent.

18. 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 submit to the Department, reports of any exceedances of the material usage or emission limitations, set forth in this permit, in writing no later than 24 hours after an exceedance has commenced for any HAP and no later than 10 days after an exceedance for any other regulated air pollutant. Such report shall at a minimum include:
a. a description of the nature of the exceedance;
b. the duration and magnitude of the exceedance;
c. the steps taken to reestablish compliance;
d. the success of such steps; and
e. the steps taken to assure that compliance is maintained in the future.

PART VI. SPECIAL REQUIREMENTS

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


Copies of the CFR are available online at the U.S. Government Printing Office website.

B. 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 §22a-174-23. [STATE ONLY REQUIREMENT]

C. 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 §§22a-69-1 through 22a-69-7.4. [STATE ONLY REQUIREMENT]

PART VII. 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 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.

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 Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.