



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

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Governor

TIMOTHY P. MURRAY  
Lieutenant Governor

RICHARD K. SULLIVAN JR.  
Secretary

KENNETH L. KIMMELL  
Commissioner

**Date Stamped December 7, 2011**

Mr. William Longley  
Raytheon Company  
350 Lowell Street  
Andover, MA 01810

RE: Final Approval of LPA for  
Non-Fuel Emissions at  
Raytheon Company  
350 Lowell Street  
Andover, MA 01810  
Transmittal No. X239774  
Application No. MBR-11-IND-022

Dear Mr. Longley:

The Metropolitan Boston/Northeast Regional Office of the Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Waste Prevention, has determined that the referenced Limited Plan Application ("LPA") is administratively complete and in conformance with current air pollution control engineering practices. MassDEP approves this LPA to specify federally enforceable volatile organic compounds (VOC) and hazardous air pollutants (HAP) emission limitations resulting from spray painting and cleaning operations associated with renovations to an existing indoor paint spray booth area, called the Indoor Paint Shop, at Raytheon Company located at 350 Lowell Street in Andover, Massachusetts ("the Facility").

The Indoor Paint Shop is currently approved under Approval No. MBR-99-IND-022. Emissions from the Indoor Paint Shop along with emissions from another spray booth area in an adjacent building, called the Outdoor Paint Shop, are currently restricted under Restricted Emissions Status Approval No. MBR-96-RES-003, which limits combined VOC emissions to 9.9 tons per rolling 12-month period. The production rates and types of products processed in the Indoor Paint Shop will not change after renovation. VOC emissions from the remodeled Indoor Paint Shop will increase from 3.5 to 6.0 tons per rolling 12-month period, but combined VOC emissions from the Inside and Outside Paint Shop will continue to comply with the VOC emissions limit of 9.9 tons per rolling 12-month period. In addition, monthly emissions limits for VOC and HAP from the Indoor and Outdoor Paint Shops have been established herein.

The remodeled Indoor Paint Shop will be equipped with the following new equipment: one large spray booth with a semi down draft; an automated cleaning unit, using a predominantly aqueous cleaner; a parts washer, using a predominantly aqueous cleaner with a blow off and masking area; and a curing room.

This LPA Approval is in accordance with 310 CMR 7.02(1), (3) and (4) of the Air Pollution Control Regulations ("Regulations"), 310 CMR 7.00, as adopted pursuant to M. G. L. c. 111, Sections 142A-142K.

Included as part of the LPA Approval are the following:

Stamped approved **BWP AQ 01-B** Application form,  
General Conditions for Non-Fuel Emission LPAs,

Special Conditions, and  
Appeal Rights.

Please review the entire LPA Approval carefully as it stipulates the particular conditions to which the facility owner/operator must adhere for the facility to be constructed/reconstructed/alterd and operated in compliance with the Regulations.

MassDEP has determined that the filing of an Environmental Notification Form ("ENF") with the Secretary of Energy & Environmental Affairs, for air quality purposes, was not required prior to this action by the Department. Notwithstanding this determination, the Massachusetts Environmental Policy Act and Regulation 301 CMR 11.00, section 11.04, provide certain "Fail-Safe Provisions" which allow the Secretary to require the filing of an ENF and/or Environmental Impact Report at a later time.

Should you have any questions concerning this Approval, please contact Mr. Dhiraj Desai at (978) 694-3282 or at MassDEP, 205B Lowell Street, Wilmington, MA 01887.

Very truly yours,

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Dhiraj B. Desai  
Environmental Engineer  
Bureau of Waste Prevention

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James E. Belsky  
Permit Chief  
Bureau of Waste Prevention

Copy: Board of Health, 36 Bartlet Street, Andover, MA 01810-3813  
Fire Department, 32 North Main Street, Andover, MA 01810-3513  
MassDEP/NERO: M. Altobelli, M. Persky, D. Desai

E-Copy: MassDEP: Y. Tian, M. Altobelli, D. Desai

Attachment: BWP AQ 01-B LPA



GENERAL CONDITIONS FOR NON-FUEL EMISSION LPAs

1. Operation - No person shall operate a facility constructed, substantially reconstructed, or altered pursuant to 310 CMR 7.02 except in conformance with the requirements established therein and in conformance with the specific written plan approval requirements.
2. Record keeping - The facility owner/operator shall establish and continue an on-site recording system. All records shall be maintained up-to-date such that year-to-date information is readily available for MassDEP examination. Record keeping shall, at a minimum, include:
  - a) The initiation and completion dates for the proposed construction /reconstruction/ alteration.
  - b) Maintenance. A record of routine maintenance activities including, at a minimum, a description of the maintenance performed and the date and time the work was completed.
  - c) Malfunctions. A record of all malfunctions including, at a minimum: the date and time the malfunction occurred; a description of the malfunction and the corrective action taken; the date and time corrective actions were initiated; and the date and time corrective actions were completed and the facility returned to compliance.
  - d) Records shall be maintained documenting the air contaminant emission analysis supporting the response to BWP AQ 01-B Section-C.
  - e) All records shall be kept on site for five (5) years from date of record and shall be made available to the MassDEP upon request.
3. Reporting - Any construction, substantial reconstruction or alteration, as described in 310 CMR 7.02(1), (3), and (4), at a facility subject to the reporting requirements of 310 CMR 7.12, shall be reported to the MassDEP on the next required source registration.
4. The Regional Bureau of Waste Prevention office must be notified by telephone or fax as soon as possible after the occurrence of any upsets or malfunctions to the facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air and a condition of air pollution.
5. The MassDEP must be notified in writing, when the subject equipment has been installed and has been deemed ready for continuous operation, within fourteen (14) days thereof.
6. The MassDEP may revoke, in accordance with 310 CMR 7.02(3)(k), any plan approval if the actual construction has not begun within two years from the date of issuance or if, during the construction, the construction is suspended for the period of one year or more.
7. This approval may be suspended, modified, or revoked by the MassDEP if, at any time, the MassDEP determines that the facility is violating any condition or part of this LPA Approval. The MassDEP shall be notified in writing prior to any modification of the facility such as a change in raw materials or an increase in production capacity, which may increase emissions.

8. Noise from the facility during construction, initial start-up and routine operation, including start-ups and shutdowns, shall not exceed the MassDEP noise guidelines and shall not cause a condition of air pollution as defined in 310 CMR 7.01 and 7.10.
9. The facility shall be constructed and operated in a manner to prevent the occurrence of dust or odor conditions, which may cause or contribute to a condition of air pollution as defined in 310 CMR 7.01 and 7.09.
10. Emission Testing – The MassDEP may, in accordance with Regulation 310 CMR 7.13, require source emission testing ("stack testing"). All emission testing shall be conducted in accordance with the MassDEP's Guideline for Source Emission Testing and with 310 CMR 7.13.
11. This Final Approval does not negate the responsibility of owner/ operator of the referenced facility to comply with this or any other applicable federal, state, or local regulations now or in the future.
12. Should asbestos remediation/removal be required as a result of the approved construction/reconstruction/or alteration of this facility, such asbestos remediation/removal shall be done in accordance with Regulation 310 CMR 7.15 in its entirety and 310 CMR 4.00.
13. Opacity, exclusive of uncombined water, shall not exceed 10% at all times during all modes of operation, including startups and shutdowns. Visible emissions or opacity, which exceeds the limits set forth in this approval, shall be reported to the MassDEP in writing or by Fax within seven (7) days of occurrence.
14. The facility shall be constructed and operated in strict accordance with the application approved herein. Should there be any difference between the aforementioned application and this approval letter, this approval letter shall govern.

#### SPECIAL CONDITIONS

1. Raytheon Company shall take immediate steps to abate any nuisance condition(s), including but not limited to visible emissions, dust, noise, and odor, that may be generated by the operation of the subject facility.
2. Raytheon Company shall limit its volatile organic compounds (VOC) emissions from the subject Indoor Paint Shop to no more than 1.5 tons per month and 6.0 tons per rolling 12-month period and shall limit its total hazardous air pollutants (HAP) emissions to no more than 0.5 tons per month and 1.5 tons per rolling 12-month period.
3. Raytheon Company shall ensure that the combined VOC emissions from the Indoor and Outdoor Paint Shops shall continue to comply with the VOC emissions limit of 9.9 tons per rolling 12-month period, in accordance with Approval No. MBR-96-RES-003, dated August 5, 1996, as well as all other applicable conditions contained therein. In addition, monthly VOC and HAP emissions from both Paint Shops shall be limited to 4.0 tons and 2.0 tons respectively.
4. Raytheon Company shall ensure that VOC and HAP emissions from the subject Indoor Paint Shop operations approved herein shall be included in the compilation of actual facility-wide VOC and HAP emissions; and shall continue to comply with the VOC emission limit of 48 tons per

rolling 12-month period and facility-wide HAP emission limit of 7.3 tons per rolling 12-month period, as approved under the facility-wide RES Approval No. MBR-00-RES-002B dated May 24, 2007 for the Integrated Air Defense Center-IADC located at 350 Lowell Street, Andover, Massachusetts.

5. Raytheon Company shall record the amount of coatings, adhesives, and solvents containing VOC and total HAP each month to calculate the resulting monthly and rolling 12-month emissions of VOC and total HAP from the subject Indoor Paint Shop. These records shall be maintained on-site for a minimum of five years and shall be made available for review by MassDEP personnel upon request. An electronic version of the MassDEP approved recordkeeping Form in Microsoft Excel format can be obtained at <http://www.mass.gov/dep/air/approvals/aqr2010.xls>.
6. Raytheon Company shall continue to use a high volume low pressure (HVLP) compliant spray gun, or MassDEP approved equivalent, for application of coatings with a minimum transfer efficiency of 65 percent by weight in the subject Indoor Paint Shop spray booth. The coating overspray shall be controlled by particulate filters with a minimum particulate collection efficiency of 98.0 percent by weight. The subject facility shall wash the spray gun and associated equipment in a gun washer unit. All VOC and/or HAP containing mixtures shall be covered when not in use to minimize VOC and/or HAP emissions to atmosphere, and hazardous waste shall be properly handled and disposed of off-site.
7. Raytheon Company shall design the Indoor Paint Shop spray booth so that the face velocity at the air filter shall be no greater than 200 feet per minute and the face velocity at the opening of the booth shall be greater than 100 feet per minute to ensure capture of the evaporative emissions.
8. Raytheon Company shall install a stack associated with the subject spray booth that vents emissions vertically upwards. It shall be equipped with a rain protection device that does not impede vertical exhaust flow. The stack height shall be a minimum of 10 feet above the roof level.
9. Raytheon Company may be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart HHHHHH, which is applicable to paint stripping and Miscellaneous Surface Coating Operations at area sources. Since the MassDEP has accepted delegation only for Title V Operating Permit Sources of NESHAP Subpart HHHHHH, you are advised to consult with EPA-New England-Region One, 5 Post Office Square, Suite 100, Mail Code OEP05-2, Boston, MA 02109-3912, Phone (617) 918-1657. There may be notification, monitoring, record keeping, and reporting requirements.
10. Raytheon Company shall maintain an Environmental Logbook, or equivalent record keeping system, which shall record actions associated with environmental issues and overall emission changes at the facility. The facility shall record information such as the results of federal, state, or local environmental inspections; and measures taken to lower overall emissions to the environment (air, solvent waste, etc.). This logbook, or equivalent, shall be made available to MassDEP personnel upon request.
11. A copy of this Approval letter shall be affixed adjacent to the subject equipment.

APPEAL OF APPROVAL

This Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Approval.

Under 310 CMR 1.01(6) (b), the request must state clearly and concisely the facts which are the grounds for the request, and the relief sought. Additionally, the request must state why the Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts  
Department of Environmental Protection  
P.O. Box 4062  
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

The filing fee is not required if the appellant is a city or town (or municipal agency) county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.