



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

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Governor

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Commissioner

May 14, 2012

Mr. John Weatherwax  
L-3 KEO  
50 Prince Street  
Northampton, MA 01060

Re: **NORTHAMPTON**  
Regulation 310 CMR 7.02(13)  
Administrative Amendment  
**Paint Spray Booth**  
Application # 1-P-10-033  
Trans. # X250323

### **Final Approval (Administrative Amendment)**

Dear Mr. Weatherwax:

The Department of Environmental Protection, Western Regional Office ("MassDEP") received on February 15, 2012, a request to administratively amend the existing Limited Plan Approval #1-P10-033 for L-3 KEO Corporation, Northampton, Massachusetts. The requested amendment is notification of the facility name change to L3-KEO division of L-3 Communications Corporation ("L-3 KEO").

MassDEP has determined that this change can be incorporated into the Final Approval #1-P-10-033 since there is no increase in facility emissions, that this change is in conformance with current air pollution control engineering practices and is in compliance with the administrative amendment regulations contained in 310 CMR 7.02(13). Accordingly, MassDEP issues this Final Approval (Administrative Amendment) incorporating the requested change into the existing Final Approval #1-P-10-033, dated November 19, 2010.

***This Final Approval (Administrative Amendment) replaces the Final Approval 1-P-10-033, dated November 19, 2010, in its entirety.***

This LPA Approval is in accordance with 310 CMR 7.02(2) of the Air Pollution Control Regulations ("Regulations"), 310 CMR 7.00, as adopted pursuant to M.G.L. c.111, sections 142A-142O.

Included as part of the LPA Approval are the following:

- 1) Special Conditions (if any)
- 2) General Conditions for Non-Fuel Emission LPAs, and
- 3) 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, altered and/or operated in compliance with the Regulations.

The MassDEP has determined that the filing of an Environmental Notification Form ("ENF") with the Secretary of Environmental Affairs, for air quality purposes, was not required prior to this action by the MassDEP. 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 Final Approval, please contact Todd Wheeler at (413) 755-2297.

Sincerely,

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

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Marc Simpson  
Air Quality Permit Chief  
Bureau of Waste Prevention  
Western Region

MS/tw

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cc: WERO, AQ Plan File  
WERO, AQ approval file

ecc: Yi Tian, DEP Boston  
Peter Czapienski, DEP Western Region

## **Introduction**

L-3 KEO division of L-3 Communications Corporation “L-3 KEO” is a designer, developer, and manufacturer of integrated and stabilized high-performance optronic sensors, antenna, masts and weapon control systems for defense applications. L-3 KEO’s operations are located at 50 Prince Street in Northampton, Massachusetts, see Limited Plan Approval #1-P-04-040 (Trans. # W054325) dated December 8, 2004, for additional background information.

L-3 KEO has moved operations from its former King Street facility to a new facility located at 50 Prince Street in Northampton. They are requesting a permit for a paint spray booth, as well as for solvent emissions from the cleaning of periscope tubes and paint spray gun equipment. The coatings that are used by L-3 KEO are solvent-based and contain both Hazardous Air Pollutants (HAP) and Volatile Organic Compounds (VOC), as required by military specifications. As such, the coatings are not subject to a maximum VOC or HAP content limit. The new facility is also subject to 40 CFR Part 63 Subpart HHHHHH as an area source (Paint Stripping and Miscellaneous Surface Coating Operations).

The spray application process will remain essentially unchanged from the King Street to the Prince Street facilities but will involve new spray equipment including High Volume Low Pressure (HVLV) spray guns, booth, stack fans and filter materials. The method of operation at the new L-3 KEO facility will be substantially identical to the existing facility. The restrictions on emissions of VOC and HAP will remain identical to the permitted limits in place at the King Street facility.

L-3 KEO expects to operate one production shift at the new facility from 7:00 am to 3:30 pm, with approximately 325 full-time employees. Actual facility emissions at the King Street location for the previous 3 calendar years were as follows:

**Table 1**  
**Facility Actual Emissions**

<b>Reporting Year</b>	<b>VOC (lb/year)</b>	<b>PM (lb/year)</b>	<b>HAP (lb/year)</b>
2007	522	29	30
2008	491	24	25
2009	764	38	171

## **Equipment/Process Description**

### **Paint Spray Operations**

L-3 KEO proposes to install a Devillbis COM-G506 HVLP Gravity Feed Spray Gun and a Devillbis COM-PS506B HVLP Pressure Feed Spray Gun in a COL-MET paint spray booth. The HVLP pressure feed spray gun will be used with a Binks Model 80-600 pressure pot. Only one spray gun will be operated at a given time. The Devillbis COM-PS506B spray gun applies coatings at a maximum flow rate of twenty ounces per minute. The coatings are cut with a thinner at a 3 to 1 ratio.

### **Particulate Control**

The paint spray booth at L-3 KEO will be provided with a Columbus Industries air filtration system. The system will utilize the Supra II Mini-Mesh filters with a total thickness of at least two inches. It has been estimated that this system achieves particulate control efficiency of at least 98% by weight, compliant with 40 CFR Part 63 Subpart HHHHHH.

### **Equipment Cleaning**

The spray gun is cleaned inside a totally enclosed gun washer system and cleanup solution is stored and/or disposed of in a manner that minimizes evaporation to the atmosphere. A solvent compliant with 40 CFR Part 63 Subpart HHHHHH will be used for equipment cleaning.

### **Stack Information**

The paint spray booth has one galvanized steel stack with a 24-inch diameter exhaust. The proposed spray booth will be located the first floor of the L-3 KEO facility. The duct work associated with the spray booth travels horizontally for approximately ten feet before passing vertically through the second floor of the building to the roof. The stack terminates ten feet above the twenty eight foot roofline and is provided with a velocity increaser in order to maintain a minimum stack velocity of greater than 40 feet per second in accordance with 310 CMR 7.03(16). Spray booth ventilation will be provided by an Aerovent Model BTABD Tubeaxial Paint Spray Booth exhaust fan rated at 8,000 SCFM driven by a 2 horsepower motor.

A second exhaust stack services a small exhaust hood (the Mixing Table) where solvents are used for cleanup, part assembly preparation, and the application of solvent based paint using small spray cans. The mixing table is located in the same room as the spray booth. The galvanized steel exhaust stack has a 10-inch outlet and will utilize a Model 15-IPW blower.

### **Potential VOC Emissions**

The maximum application rate for the paint spray booth, using the "worst-case-coating", is 0.172 gallons per minute. The coating with the highest volatile content is Type I, Aliphatic Isocyanate, Trade name MIL-PRF-85285C (MIL-C-85285B) Product Code 03GY363CAT26270 at 5.76 pounds of VOC per gallon as applied. Potential VOC

emissions from the paint spray booth, operating at maximum capacity, are approximately 260 tons per year based on operating at 8,760 hours per year.

**Potential PM Emissions**

The coating with the highest solids content is Trade name Haze Gray, Formula 151, Type III, Product code MIL-P-24441/21(SH) at 5.57 pounds of solids per gallon of coating as applied. Potential particulate matter (PM) emissions from the paint spray booth, operating at maximum capacity, are 1.32 tons per year based on operating at 8,760 hours per year.

**Potential HAP Emissions**

The coating with the highest hazardous air pollutant (HAP) content is Trade name Haze Gray, Formula 151, Type III, Product code MIL-P-24441/21(SH) at 4.21 pounds HAP per gallon. Potential HAP emissions from the paint spray booth, operating at maximum capacity, are 190 tons per year based on operating at 8,760 hours per year.

**Special Conditions of Approval**

1. L-3 KEO shall not exceed the calendar month and yearly (12-month rolling total) emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAP) indicated in Table 2.

**Table 2**  
**L-3 KEO VOC/HAP Emission Limits**

Emission Units	VOC Emissions		Total HAP Emissions	
	tons/month <sup>(1)</sup>	Tons/year <sup>(2)</sup>	tons/month <sup>(1)</sup>	tons/year <sup>(2)</sup>
paint spray booth, spray gun wash, & cleanup	0.75	6.0	0.5	4.0
(1) Based on a calendar month total. (2) Based on a 12-month rolling total. Compliance with a 12 month rolling total is determined each month by adding the previous 12 months of VOC/HAP emissions comparing the total to the limit specified above.				

2. L-3 KEO shall track on a calendar month basis the use of all VOC containing materials, the VOC content of all paints and thinners used, and the emissions of VOCs and HAPs into the ambient air, such that compliance with provision 1 of this Final Approval can be determined.
3. L-3 KEO shall generate monthly reports in-house that document the compliance with provision 1 of this Final Approval. If any VOC/HAP emission limit is exceeded, L-3 KEO shall notify the MassDEP in writing no later than the 15th day of the following month.
4. L-3 KEO shall keep all emission related records on-site for five years from the date of record and shall make these records available to the MassDEP or EPA upon request.

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5. L-3 KEO shall employ all reasonable good housekeeping practices to minimize fugitive VOC emissions from the use of cleanup solutions and the handling of coatings and other VOC containing materials. L-3 KEO will keep tightly covered any containers containing VOC materials as much as practical during use and at all times when not being used.
6. L-3 KEO shall comply with any other applicable provisions contained in 40 CFR Part 63 Subpart HHHHHH not specifically listed herein.
7. L-3 KEO shall ensure that the paint spray booth stack top is a minimum of 10 feet above the nearest roofline and is configured to discharge the exhaust gases vertically upwards.
8. L-3 KEO shall ensure that the paint spray booth stacks shall not have rain protection of a type that restricts the vertical flow of the exhaust gases as they are emitted to the ambient air. "Shanty caps", "egg beaters" and the like are prohibited.
9. L-3 KEO shall allow authorized MassDEP representatives immediate access to the facility in order to take samples, view the process operation or examine records to verify compliance.
10. L-3 KEO shall perform any other testing deemed necessary, at the request of the MassDEP, to determine compliance with this Final Approval or any other Massachusetts "Regulation"

## **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.