Ventilation, Assessment of

**BRIEF**

**Policy Summary**

The Berkeley Lab Ventilation Program protects workers and the environment by:

- Reducing airborne concentrations of contaminants
- Ensuring hoods, HEPA filters, and exhaust ventilation systems meet requirements
- Establishing minimum performance requirements for hoods, HEPA filters, and exhaust ventilation systems
- Performing periodic surveillance of hoods, HEPA filters, and exhaust ventilation systems

**Who Should Read This Policy**

Berkeley Lab employees, visitors, affiliates, and subcontractors who work with hazardous substances

**To Read the Full Policy, Go To:**

The POLICY tab on this wiki page

**To Read the EH&S Program Details, Go To:**

http://www.lbl.gov/ehs/pub3000/CH04.html#46

**Contact Information**

EH&S Subject Matter Expert for Ventilation
Laurel Davis
(510) 495.2324
LADavis@lbl.gov
A. Purpose

The Ventilation Program at Lawrence Berkeley National Laboratory (Berkeley Lab) protects workers and the environment by:

- Reducing airborne concentrations of contaminants
- Ensuring hoods, HEPA filters, and exhaust ventilation systems meet requirements
- Establishing minimum performance requirements for hoods, HEPA filters, and exhaust ventilation systems
- Performing periodic surveillance of hoods, HEPA filters, and exhaust ventilation systems

The Ventilation Program includes laboratory fume hoods, inert and negative-pressure glove boxes, biological safety cabinets, HEPA-filtered vacuum cleaners, in-place HEPA filters used for contaminant control, and other local exhaust ventilation systems, such as extractor arms, exhausted enclosures, ventilated tanks, back-draft benches, and canopy hoods.

B. Persons Affected

Berkeley Lab employees, visitors, affiliates, and subcontractors who work with hazardous substances

C. Exceptions

None

D. Policy Statement

The Environment, Health & Safety (EH&S) Division must be notified of the purchase of hoods, glove boxes, filtering equipment, emissions-collection equipment, and other relevant ventilation items. EH&S may review the use of such ventilation systems with the requestor. EH&S must be consulted to determine applicable design, construction, and performance standards for new ventilation systems used for contamination control. Responsibility to ensure the systems meet applicable requirements resides with the Project Manager for Facilities Division projects and with the activity line manager for all other projects.

1. New and relocated ventilation systems may not be used for contamination control until installation and performance has been evaluated and "tagged" by EH&S and verified to meet application standards.
2. Line management must ensure that ventilation systems that do not meet performance standards (i.e., are deficient) are repaired, and are used within safety limits (if allowed) until repaired.
3. Performance of ventilation systems, including HEPA-filtered units, must be periodically evaluated.

E. Roles and Responsibilities

See PUB-3000, Chapter 4, Section 4.6, for roles and responsibilities related to the execution of this policy's implementation.

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities Division</td>
<td>Ensures that newly installed or refurbished ventilation systems are designed,</td>
</tr>
<tr>
<td></td>
<td>installed, commissioned, and function-tested in accordance with applicable</td>
</tr>
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<td></td>
<td>codes and guidance provided by the EH&amp;S Division</td>
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<td></td>
<td>Maintains a proactive preventive-maintenance program to ensure that ventilation</td>
</tr>
<tr>
<td></td>
<td>systems are in proper operating condition in accordance with applicable codes</td>
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<td>and guidance that it has provided</td>
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<tr>
<td>Industrial Hygiene Subject</td>
<td>Ensures that performance standards are identified for ventilation systems and</td>
</tr>
<tr>
<td>Matter Expert (SME)</td>
<td>that periodic surveillance is performed</td>
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<tr>
<td></td>
<td>Ensures the development, approval, revision, and administration of this policy</td>
</tr>
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<td></td>
<td>and its implementing documents</td>
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<tr>
<td>Line Managers</td>
<td>Ensure that persons within their areas of responsibility comply with this policy</td>
</tr>
<tr>
<td></td>
<td>and its implementing documents</td>
</tr>
</tbody>
</table>
Supervisors and Work Leads

Ensure that persons within their areas of responsibility comply with this policy and its implementing documents, and have completed any required training prior to beginning work.

Ventilation System Users

Follow all guidance provided in training and this policy and its implementing documents.

F. Definitions/Acronyms

See PUB-3000 Chapter 4, Section 4.6 for technical terms related to the details of this policy and its implementation.

G. Recordkeeping Requirements

- The results of all calibration, certification, and other checks are recorded in the Berkeley Lab Ventilation Database and maintained by the EH&S Division.
- Ventilation systems are marked with stickers that indicate when the last surveillance check was performed.

H. Implementing Documents

<table>
<thead>
<tr>
<th>Document Number</th>
<th>Other Reference</th>
<th>Title</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.07.030.001</td>
<td>PUB-3000, Chapter 4, Section 4.6</td>
<td>Ventilation, Hoods, and HEPA Filters</td>
<td>Program</td>
</tr>
<tr>
<td>07.07.005.001</td>
<td>PUB-5341</td>
<td>Chemical Hygiene and Safety Plan, &quot;Hazard Controls&quot; section</td>
<td>Program</td>
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<td>PUB-3435E</td>
<td>Biosafety Manual, Section 5.6.4, &quot;Ventilation and Hoods&quot;</td>
<td>Program</td>
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<td>11.01.019.003</td>
<td>Procurement and Property Management Web site</td>
<td>Restricted Items List</td>
<td>Form</td>
</tr>
<tr>
<td>tbd</td>
<td></td>
<td>In-Place HEPA Filter Leak Testing Procedure</td>
<td>Procedure</td>
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I. Contact Information

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J. Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>By whom</th>
<th>Revision Description</th>
<th>Section(s) affected</th>
<th>Change Type</th>
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<tbody>
<tr>
<td>1/2/2012</td>
<td>1</td>
<td>L. Davis</td>
<td>Rewrite for wiki</td>
<td>All</td>
<td>Minor</td>
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<tr>
<td>8/7/2014</td>
<td>1</td>
<td>L. Young</td>
<td>Adjust Next Review from Pub date</td>
<td>Doc Info</td>
<td>Editorial</td>
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</table>

Document Information

DOCUMENT INFORMATION

Title: Ventilation, Assessment of
Document number: 07.07.030.000
Revision number: 1
Publication date: 1/12/2012
Effective date: 12/9/2010
Next review date: 1/12/2015
Policy Area: Industrial Hygiene and Safety
RPM Section (home): ESH
RPM Section (cross-reference): none
Functional Division: EH&S
Prior reference information (optional): PUB-3000, Chapter 4, Section 4.6

**Source Requirements Documents**

- 10 CFR 851, *Worker Safety and Health Program*
- 29 CFR 1910.94, *Ventilation*
- 29 CFR 1910.106, *Flammable and combustible liquids*
- 29 CFR 1910.107, *Spray finishing using flammable and combustible liquids*
- 29 CFR 1910.124, *General requirements for dipping and coating operations*
- 29 CFR 1910.126, *Additional requirements for dipping and coating operations*
- 29 CFR 1910.252, *Welding, Cutting and Brazing*
- 29 CFR 1910.1450, *Occupational exposure to hazardous chemicals in labs*
- ACGIH Ventilation Manual, relevant sections

**Related Berkeley Lab Policies**

- Obtaining Goods and Services, #12.01.002.000

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