

# Successes and Challenges of a Ventilation Program at a Large Research Facility

**Dina M. Sassone, CIH, CSP**  
**Los Alamos National Laboratory**  
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# Laboratory Ventilation Program at Los Alamos National Laboratory

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## Los Alamos National Laboratory

### Our Mission(s):

- national security
  - strategic science
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# Laboratory Ventilation Program at Los Alamos National Laboratory

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## Los Alamos National Laboratory

- National security

- help ensure the safety and reliability of the nuclear weapons in our country's stockpile
  - prevent the spread of weapons of mass destruction and to protect our homeland from terrorist attack
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## Los Alamos National Laboratory

- Strategic science

- Center for Space Science and Exploration (CSSE)
  - The Institute of Geophysics and Planetary Physics (IGPP)
  - Quantum Institute
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# Laboratory Ventilation Program at Los Alamos National Laboratory

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## Program Overview:

- **Types of Laboratory Ventilation Systems:**
  - Fume Hoods, Open Port Glove boxes, Entry boxes
  - Other Local Exhaust Ventilation (LEV) Units (Snorkel, Canopy, Slots, etc.)
  - Class II Biosafety Cabinets

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## Program Overview:

- **Procurement and Commissioning of Ventilation Systems:**
    - Systems designed per Industry Standards (ASHRAE, ASME, ACGIH) and incorporated into LANL Engineering Standards
    - Formal design review process managed by ENG-DECS with input from LANL SMEs
    - HSR-5 reviews and approves procurement requests for laboratory ventilation systems
    - HSR-5 performs initial certification of system during building commissioning process
    - Supply air, face/capture velocity, smoke test, performance monitor, ID tags, exhaust air discharge
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- **Computer Tracking System for Ventilation Systems:**
  - Hood Information System Database
  - LEV Tracking Database
- **Annual Certification of Laboratory Ventilation Systems:**
  - Formality of Operations for annual certifications accomplished through LANL LIHSM and LANL Biosafety Manual
  - LIHSHM developed from industry standards (ACGIH, ANSI/AIHA Z9.5, ASHRAE 110, NFPA 45, **NSF STD 49-BSC**)

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- In-House certification for hoods and LEVs
  - HSR-5 transmits system status to Facility Management and local IH
  - LANL sub-contracts with outside company for BSC certification
  - Facility Management controls configuration of ventilation system
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## Questions?

Victor A. Martinez (505) 667-4373 [vam@lanl.gov](mailto:vam@lanl.gov)

Dina M. Sassone (505) 665-2977 [dinas@lanl.gov](mailto:dinas@lanl.gov)

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