

OSHA Regulations and Guidance Applicable to Laboratories: What's Current and What's In Development?

Thomas A. Nerad, MPH, PhD
Director, Office of Biological Hazards
OSHA Directorate of Standards & Guidance
Nerad.thomas@dol.gov
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Relevant OSHA Standards

- ❑ **OSHA Bloodborne Pathogens standard (1910.1030) promulgated in 1991.**
 - ❖ **Needlestick Prevention Act (2000).**
- ❑ **OSHA TB proposal (1997) / withdrawal (2003).**
 - ❖ **TB directive CPL 02-02-078 (06/30/2015) - Enforcement Procedures and Scheduling for Occupational Exposure to Tuberculosis**
- ❑ **1910 Subpart I - Personal Protective Equipment**
 - ❖ **1910.132 - General Requirements**
 - ❖ **1910.133 - Eye and Face Protection**
 - ❖ **1910.134 - Respiratory Protection**
 - ❖ **1910.138 - Hand Protection**

Other Relevant OSHA Standards

- ❑ 1910.145 - Accident Prevention Signs & Tags
- ❑ 1910.1000 - Air contaminants
- ❑ 1910.1200 - Hazard Communication
- ❑ 1910.1450 - Occupational Exposure to Hazardous Chemicals in Laboratories (Lab standard)
- ❑ OSH Act - Section 5(a)(1) the General Duty Clause.
- ❖ Requires that all employers provide a work environment “free from recognized hazards that are causing or are likely to cause death or serious physical harm.”

OSHA Laboratories Safety and Health Topics Page



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Overview

More than 500,000 workers are employed in laboratories in the U.S. The laboratory environment can be a hazardous place to work. Laboratory workers are exposed to numerous potential hazards including chemical, biological, physical and radioactive hazards, as well as musculoskeletal stresses. Laboratory safety is governed by numerous local, state and federal regulations. Over the years, OSHA has promulgated rules and published guidance to make laboratories increasingly safe for personnel.

OSHA has developed this webpage to provide workers and employers useful, up-to-date information on laboratory safety. For other valuable worker protection information, such as Workers' Rights, Employer Responsibilities and other services OSHA offers, read [OSHA's Workers](#) page.

In addition to information on OSHA standards and guidance that deal with laboratory hazards, other links are provided with information from other governmental and non-governmental agencies that deal with various aspects of laboratory safety.

Although the OSHA standards referenced on this web page deal specifically with laboratories within the jurisdiction of Federal OSHA, there are twenty-eight OSHA-approved state plans, operating state-wide occupational safety and health programs. State Plans are required to have standard and enforcement programs that are at least as effective as OSHA's and may have different or more stringent requirements. Contact your local or state OSHA office for further information. Additional information is on available on the [OSHA-approved state plans](#) page.

In Focus: Ebola



Frederick A. Murphy/CDC

OSHA's [Ebola webpage](#) provides a comprehensive source of information for protecting workers from exposure to the Ebola virus.

<https://www.osha.gov/SLTC/laboratories/index.html>

OSHA Recordkeeping Requirements

29 CFR 1910.39

Employers with 10 or less employees and those within certain NAICS codes are not required to keep OSHA injury and illness records. Examples of NAICS codes exempted:

NAICS 5417 - Scientific Research and Development Services

NAICS 6113 - Colleges, Universities, and Professional Schools

NAICS 6215 - Medical and Diagnostic Laboratories

As of January 1, 2015, however, all employers must report:

- 1. All work-related fatalities within 8 hours.**
- 2. All work-related in-patient hospitalizations, all amputations and all losses of an eye within 24 hours.**

OSHA Standards Most Cited for Violations in Labs

01/01/2011 – 06/14/2017

- ☐ **29 CFR 1910.1030 - Bloodborne Pathogens**
- ☐ **29 CFR 1910.1200 - Hazard Communication**
- ☐ **29 CFR 1910.1450 - Occupational Exposure to Hazardous Chemicals in Laboratories (Lab Standard)**
- ☐ **29 CFR 1910.1048 - Formaldehyde**
- ☐ **29 CFR 1910.132 - PPE - General Requirements**
- ☐ **29 CFR 1910.134 - PPE - Respiratory Protection**
- ☐ **29 CFR 1910.133 - PPE - Eye and Face Protection**
- ☐ **29 CFR 1910.338 - PPE - Hand Protection**

OSHA Guidance for Laboratory Safety

❑ 2011 OSHA Guidance Document

(<https://www.osha.gov/Publications/laboratory/OSHA3404laboratory-safety-guidance.pdf>) includes information on:

- Chemical Hazards
- Biological Hazards
- Physical Hazards
- General Safety Hazards

NIH Grants Policy Statement

4.1.12 Health and Safety Regulations and Guidelines

“Recipients are responsible for establishing and implementing necessary measures to minimize their employees’ risk of injury or illness in activities related to NIH grants. In addition to applicable Federal, State, and local laws and regulations, the following regulations must be followed when developing and implementing health and safety operating procedures and practices for both personnel and facilities:”

- ☐ **29 CFR 1910.1030, Bloodborne Pathogens;**
- ☐ **29 CFR 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories; and**
- ☐ **Other applicable OSHA Occupational and Health Standards included in 29 CFR 1910.**

Regulations available at

[http://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1910.](http://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1910)

Standard Terms and Conditions for Federal Research Grants

A NSF Final Notice of Research Terms and Conditions ([82 FR 13660](#)), published on March 14, 2017 defines standard terms and conditions for federal research grants across many federal funding agencies including:

NIH; NSF; USDA National Institute of Food and Agriculture (USDA/NIFA); EPA; NASA; DOE; and Department of Homeland Security (DHS).

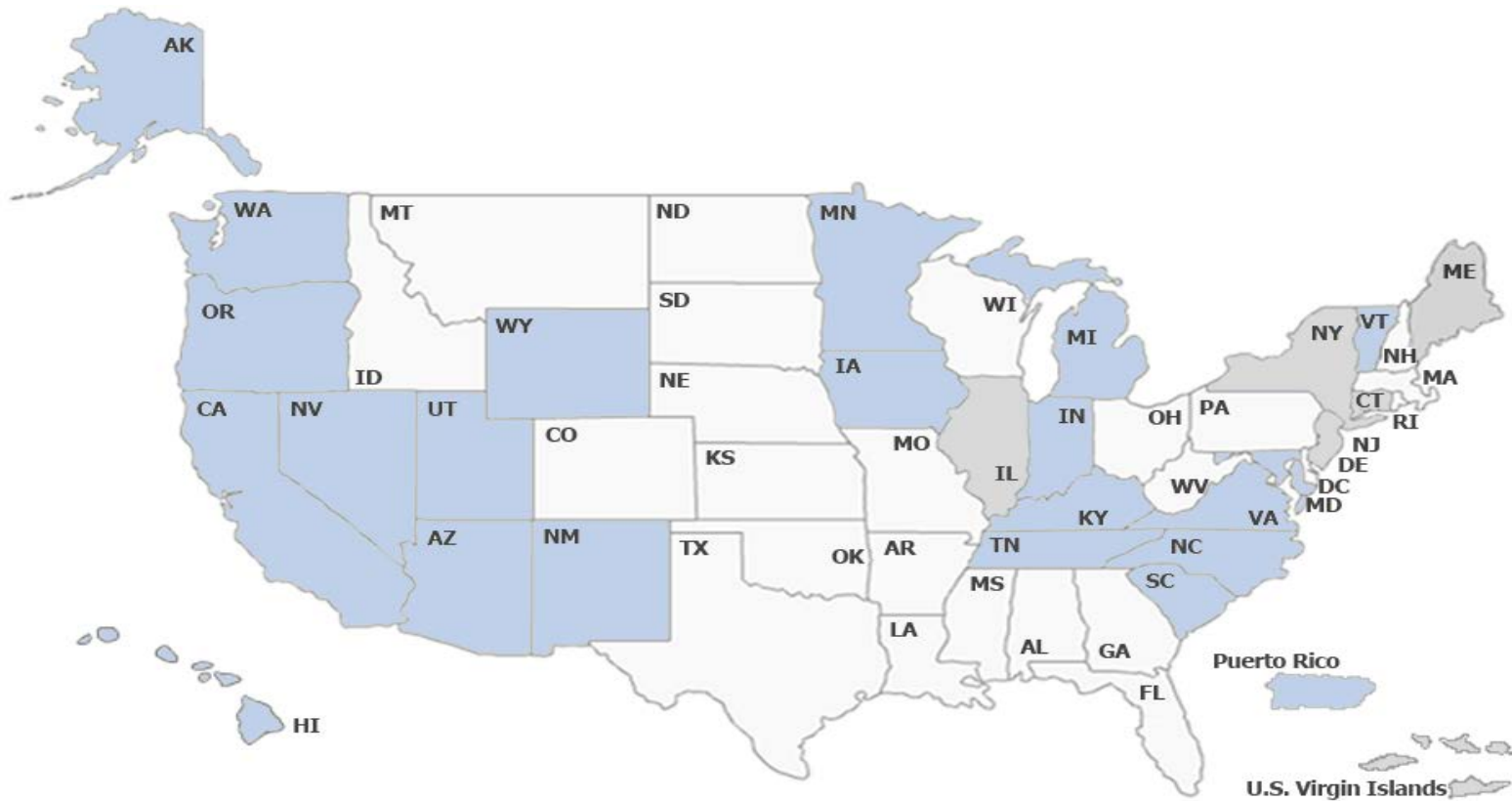
Core requirements in the updated National Policy Requirements Matrix ([Appendix C](#)) specifically cites compliance with OSHA regulations as a core government-wide requirement for receiving federal research funds.

Standard Terms and Conditions for Federal Research Grants

One of the core requirements in the updated National Policy Requirements Matrix ([Appendix C](#)) of the new NSF rule

Statutory/Regulation/and Executive Based Requirements	Used For:			Requirement(s) that should be noted by the recipient
	Type of Award	Type of Recipient	Specific Situation	
d) Health & Safety Guidelines				
By signing the agreement or accepting funds under this agreement, the recipient assures it will comply with the following				
1. Applicable OSHA Standards in Laboratories	All	All	Research involving use of hazardous chemicals or bloodborne pathogens	29 CFR 1910.1030 Bloodborne Pathogens 29 CFR 1910.1450 Occupational Exposure to Hazardous Chemicals in Laboratories

OSHA-Approved State Plans



- ❑ Twenty-six states, Puerto Rico, and the Virgin Islands have OSHA-approved State Plans.
- ❑ Twenty-two State Plans (21 states and Puerto Rico) cover both private and state and local government workplaces (including laboratories). **Blue**
- ❑ The remaining six State Plans (five states and the Virgin Islands) cover state and local government workplaces (including laboratories) only. **Grey**

OSH Act Laboratory Protections

- ❑ **Federal laboratories** not within the jurisdiction of other federal agencies (e.g., DOE and/or NRC) fall under federal OSHA in all States and Territories.
- ❑ **State and local government laboratories** do not have OSH Act protections except if they have OSHA-approved state plans (i.e., 21 states and 1 territory).
- ❑ **All state and local government laboratories** must comply with state and local regulations that are applicable to laboratories.
- ❑ **Private laboratories** have OSH Act protections in all states.
 - ❖ 21 States and Puerto Rico with state plans.
 - ❖ 24 States and several Territories without state plans, as well as 5 states (CT, IL, ME, NJ, NY) and the Virgin Islands that have state plans are under Federal OSHA jurisdiction.

Enforcement of Grant Requirements that Specify OSHA Compliance

- ❑ Compliance with OSHA regulations is a core government-wide requirement for receiving federal research funds.**
- ❑ This requirement is a funding, not a regulatory requirement.**
- ❑ Institutions and grantees have the responsibility to ensure that OSHA standards are being followed by grantees in order to receive federal research funds.**

Gaps in OSH Act Protections in Regards to Laboratories

- ❑ State and local laboratories or those in U.S. territories that are not do have state plans do not have OSHA Act protections.
 - ❖ In part, NIH funding requirements fill this gap.
- ❑ No federal OSHA regulations that specifically address worker protection from contact-, droplet- and airborne-transmissible infectious agents.
 - ❖ The Cal-OSHA Aerosol Transmissible Diseases standard covers droplet- and airborne-transmissible agents but not contact-transmissible agents.

Infectious Diseases (ID) Rulemaking: Background Information

- ☐ **Performance (vs. Specification) Standard**
- ☐ **Vertical (vs. Horizontal) Standard**
- ☐ **ID Standard would be a performance and vertical standard**
- ☐ **ID Standard requirements would include:**
 - **Infectious agent hazard evaluation**
 - **Exposure determination**
 - **Written worker infection control plan (WICP - institution specific)**
–with relevant SOPs to protect workers from exposure to contact-, droplet- and airborne-transmissible agents
 - **Implementation of WICP/Biosafety Plan: Methods of compliance**
 - **Hierarchy of Controls (Engineering, Administrative, and Work Practice Controls, and PPE).**

Federal Expert Security Advisory Panel (FESAP) Recommendation 2.8

- ☐ **FESAP Recommendation 2.8: Support OSHA Infectious Diseases Rulemaking**
- ☐ **FESAP 2.8 Implementation Working Group (Interagency – DHHS (ASPR), USDA, DOL, DOD)**
- ☐ **Expanded awareness-raising efforts:**
 - **Existing OSHA regulations and guidance pertaining to laboratories**
 - **Key information on federal research funding requirements related to OSHA compliance**

ID Rulemaking Page



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Infectious Diseases Rulemaking

Introduction

The healthcare and social assistance sector is among the largest of the industrial sectors in the U.S. As of 2013, there were 18.6 million employees in this sector, 11.7 million of those are classified as healthcare workers (HCWs). HCWs work in a great variety of settings. A large proportion of these HCWs provide direct patient care (i.e., they provide healthcare services with face-to-face or hands-on contact with patients) and have occupational exposure to infectious agents during the performance of their duties. Depending on the workplace setting and the job tasks, workers performing ancillary tasks (e.g., laboratorians, medical examiners, medical waste handlers) also have occupational exposure to infectious agents.

Employees in health care and other high-risk environments face long-standing infectious disease hazards such as TB, influenza and MRSA, as well as new and emerging infectious disease threats. OSHA is considering the need for a standard to ensure that employers establish a comprehensive infection control program and control measures to protect employees from exposures to infectious agents that can cause significant disease. Although the [Bloodborne Pathogens standard](#) has been very effective in protecting workers, it does not address infectious diseases transmitted by other routes (e.g., contact, droplet and airborne). In addition, OSHA believes that a standard is needed because transmission-based infection control guidelines, though readily available, are not consistently followed.

The Agency has thus far published an Infectious Diseases Request for Information (RFI), held stakeholder meetings, conducted site visits, and completed the SBREFA process. Feedback from these sources helped the Agency to further refine its development of a Notice of Proposed Rulemaking regarding an Infectious Diseases standard that is scheduled for publication in October, 2017.

Infectious Diseases Background Resources

- Regulatory agenda item (Fall, 2016) which explains more about OSHA's Infectious Diseases efforts at: <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201610&RIN=1218-AC46>
- Infectious Diseases RFI [\[PDF\]](#) and comments to the RFI can be accessed at: www.regulations.gov (Docket #OSHA-2010-0003).
- Infectious Diseases Stakeholder Summary Report [\[PDF\]](#) can be accessed at: www.regulations.gov (Docket #OSHA-2010-0003).
- Small Entity Representative Background Document [\[PDF\]](#).
- Small Business Advocacy Review Panel (SBAR Panel) Final Report [\[PDF\]](#) and associated materials can be accessed at: www.regulations.gov (Docket #OSHA-2010-0003).

OSHA's Involvement in Protecting Workers from Infectious Diseases

- OSHA promulgated the [Bloodborne Pathogens standard](#) (29 CFR 1910.1030) to protect workers from occupational exposure to bloodborne pathogens (e.g., Hepatitis B, HIV)
- The Bloodborne Pathogens standard was revised in response to the Needlestick Safety and Prevention Act, [Pub. L. 106-430](#).
- TB compliance directive, "Enforcement Procedures and Scheduling for Occupational Exposure to Tuberculosis" ([CPL 02-02-078](#)).

<https://www.osha.gov/dsg/id/index.html>

Questions?



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