

INDIANA UNIVERSITY

Office of Environmental,
Health and Safety
Management



Regulatory Guide 2008

Office of the Vice President and Chief Administrative Officer

Prepared by the University Office of Environmental,
Health, & Safety Management,

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Preface

Indiana University (IU) is committed to the health and safety of the university community, its neighbors and visitors, and to the control of preventable environmental degradation. Environmental health and safety is a responsibility we all share, individually and collectively. Fundamental to the success of our efforts is knowledge of the numerous regulatory requirements; hence, the *Environmental Health and Safety Regulatory Guide*. The information in this guide is presented in a simple format intended to make it easy to use as a ready reference for all departments and operations at Indiana University.

Special thanks to Cathy Huss, a graduate student of the School of Public and Environmental Affairs, for her exhaustive research and compilation of information that served as the foundation of this project.

Mike Jenson
Acting Director of the University Office of
Environmental, Health, and Safety Management

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Introduction

Institutional environmental health and safety (EHS) is complex and requires a multifaceted approach for effective management. Institutions such as Indiana University are required by federal, state and local governmental agencies to comply with numerous EHS regulations, rules, and standards.

The primary purpose of this guide is to provide the user with a quick reference to EHS information, compliance responsibilities, and resource assistance for major regulatory requirements impacting IU. This guide can also be used to increase the overall environmental health and safety consciousness of IU administrators, faculty, and staff.

In the interest of brevity, this guide lists only the major *keys to compliance* and often does not provide details. For example, many regulations require training, and it will be appropriately noted. However, details concerning the requirements of the training program (e.g., topics, frequency, duration, etc.) will not be found in this guide. The reader is referred to other sources for further, detailed information.

This guide has been prepared in a three-ring binder format to facilitate updates. As regulations change, modified pages will be sent to each person possessing a copy of this guide.

Note: This informational guide is designed to be an overview and is not intended to provide an exhaustive treatment of the regulations. There is no guarantee or warranty, expressed or implied, that the use of this manual will satisfy all regulatory requirements since regulations and compliance policies may change. For assistance regarding environmental health and safety issues, the user should consult with the University Office of Environmental, Health, and Safety Management by calling us at (812) 855-6311, visit us online at www.ehs.indiana.edu or e-mail us at iehs@indiana.edu.

List of Acronyms

ACM	Asbestos-Containing Material
AHERA	Asbestos Hazard Emergency Response Act
AIHA	American Industrial Hygiene Association
ALARA	As Low As Reasonably Achievable
ANSI	American National Standards Institute
BBP	Bloodborne Pathogen
BSO	Biological Safety Officer
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CHO	Chemical Hygiene Officer
EHS	Environmental Health and Safety
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEC	Facility Emergency Coordinator
FESOP	Federally Enforceable State Operating Permit
HMIWI	Hospital/Medical/Infectious Wastes Incinerators
HW	Hazardous Waste
IAC	Indiana Administrative Code
IDEM	Indiana Department of Environmental Management
IOSHA	Indiana Occupational Safety and Health Administration
ISDH	Indiana State Department of Health
IUB	Indiana University Bloomington
IUNW	Indiana University Northwest
IUPUI	Indiana University Purdue University Indianapolis
LEPC	Local Emergency Planning Committee
LSA	Low Specific Activity
LSO	Lab Safety Officer
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NIH	National Institutes of Health
NIOSH	National Institutes of Occupational Safety and Health
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
PPM	Parts Per Million
RACM	Regulated Asbestos-Containing Material
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity
RSI	Repetitive Stress Injuries
RSO	Radiation Safety Officer
SARA	Superfund Amendments and Reauthorization Act
SPCC	Spill Prevention Control & Countermeasures
TWA	Time Weighted Average
UST	Underground Storage Tank

Occupational Safety and Health Regulations

See also

Research Safety Regulations (Section 2)

Flammable and Combustible Liquids

page 2-12

Fire Prevention Regulations (Section 4)

Employee Emergency Plans and Fire Prevention Plans

page 4-1

Indiana Fire Prevention Code

page 4-2

Portable Fire Extinguishers

page 4-3

Indiana Occupational Safety and Health Act

General Requirements

The Indiana Occupational Safety and Health Act governs occupational safety and health concerns in Indiana. An employer is required to provide conditions of work that are reasonably safe and healthful for its employees.

Regulations

29 CFR 1910 Standards for General Industry
29 CFR 1926 Standards for the Construction Industry
620 IAC 1

Keys to Compliance

- Comply with the General Duty Clause:
"Each employer shall establish and maintain conditions of work that are reasonably safe and healthful for employees, and free from recognized hazards that are causing or are likely to cause death or serious physical harm to employees."
- Post the Indiana Occupational Safety and Health Administration (IOSHA) poster.
- Satisfy specific IOSHA standards when applicable.
- Provide required employee training.
- Establish safe operating procedures.
- Provide and maintain safe tools, equipment, and personal protective equipment (PPE).
- Provide medical surveillance as required.
- Report fatal or serious accidents within 8 hours. (See page 1-27)
- Maintain exposure and medical records.
- Post IOSHA citations for three (3) working days or until abatement is completed, whichever occurs later.
- Keep IOSHA injury and illness log. (See page 1-27)
- Do not discriminate against employees exercising their rights under the Act.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Abatement Verification

General Requirements

This regulation provides a uniform system for documenting the correction of cited hazards. These requirements apply only to employers who receive a citation for a violation of the Indiana Occupational Safety and Health Act.

Regulation

29 CFR 1903.19

Keys to Compliance

- Tag any cited movable equipment with a warning tag or copy of the citation until the hazard is abated.
- Certify that the hazards or violations cited by the Indiana Occupational Safety and Health Administration (IOSHA) during an inspection have been abated. Abatement certification requires an employer to send an affidavit or signed statement to IOSHA.
- Provide abatement documentation, abatement plans and progress reports when required for some violations.
- Notify employees and their representatives of the abatement action the employer has taken.
- Allow employees to examine and copy abatement documents sent to IOSHA.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Access to Employee Exposure and Medical Records

General Requirements

The purpose of this section is to provide employees and their designated representatives a right of access to relevant exposure and medical records. In addition, representatives of the Indiana Occupational Safety and Health Administration (IOSHA) have a right of access to these records to fulfill responsibilities under the Indiana Occupational Safety and Health Act.

Regulation

29 CFR 1910.1020

Keys to Compliance

- Employee exposure and medical records must be preserved and maintained for at least thirty (30) years.
- When requested, records must be provided in a reasonable time, generally within fifteen (15) working days.
- Copies of records must be provided at no cost to the employee.
- When hired and at least annually thereafter, employees must be notified of the existence, location and availability of records, the person responsible for the records, and the employees' right of access to their own records.

Unusual Conditions

Records are available to worker representatives (e.g., union officers, attorneys, family representatives) if the employee waives confidentiality.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Asbestos

General Requirements

The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of the standard.

Regulations

29 CFR 1910.1001; 29 CFR 1926.58

See also **Occupational Safety and Health Regulations-Asbestos-Containing Materials in Schools**, page 1-6 and *Emission Standards for Asbestos*, page 1-8.

Keys to Compliance

- Presume that asbestos-containing materials (ACMs) exist in pre-1981 buildings in the form of thermal system insulation, asphalt and vinyl tile flooring and associated mastic, and surfacing materials that have been sprayed or troweled on.
- Use engineering and work practice controls to control exposure to airborne asbestos fibers during contact, disturbance, or removal of presumed ACMs.
- Provide appropriate personal protective equipment (PPE).
- Provide medical evaluation and surveillance for all employees who are or will be exposed to airborne concentrations at or above standard limits.
- Post warning signs and labels for ACMs.
- Provide required worker training.
- Maintain records of monitoring measurements.
- Adhere to special disposal requirements. See **Environmental Health Regulations-Solid Waste Land Disposal**, page 3-3.

Unusual Conditions

Asbestos work must be done under licensed supervision. See **Occupational Safety and Health Regulations-Asbestos Worker Licensing**, page 1-7.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Asbestos-Containing Materials in Schools

General Requirements

The Asbestos Hazard Emergency Response Act (AHERA) requires K-12 schools to develop asbestos inspection and management plans. Although universities are not covered by these regulations, AHERA can serve as a guideline for the development of an asbestos management plan.

Regulation

40 CFR 763 Subpart E

See also **Occupational Safety and Health Regulations-Asbestos**, page 1-5, *Asbestos Worker Licensing*, page 1-7, and *Emission Standards for Asbestos*, page 1-8.

Keys to Compliance

- Appoint a single asbestos coordinator.
- Identify friable and nonfriable asbestos-containing material (ACM) by visually inspecting, sampling, and analyzing samples.
- Use only licensed persons to conduct inspections, develop management plans or perform response actions.
- Develop and implement an asbestos management plan.
- Provide awareness training for those employees who may come in contact with asbestos in the course of their duties (e.g., maintenance and custodial staff).
- Maintain required records.
- Post warning labels immediately adjacent to ACM located in routine maintenance areas.
- Reinspect at least once every three (3) years after a management plan is in effect.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Asbestos Worker Licensing

General Requirements

This standard details the training and licensing process required for individuals who (1) inspect for asbestos-containing material (ACM), (2) develop asbestos management plans, (3) design asbestos removal projects, (4) supervise the implementation of asbestos removal projects, (5) implement asbestos removal projects, and (6) manage disposal of ACM at a landfill.

Regulation

326 IAC 18-1

See also **Occupational Safety and Health Regulations-Asbestos**, page 1-5, *Asbestos-Containing Materials in Schools*, page 1-6 and *Emission Standards for Asbestos*, page 1-8.

Keys to Compliance

- Individuals must meet the education and experiential requirements detailed in this standard.
- Attend an approved training course and receive passing scores on written exams.
- Apply for and receive an asbestos license from the Indiana Department of Environmental Management (IDEM) and pay fee.
- Keep asbestos licenses on the job site during all asbestos projects.
- Annual renewal of an asbestos license involves refresher training, application and fee submittal.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Emission Standards for Asbestos

General Requirements

These regulations apply to the handling of regulated asbestos-containing materials (RACM) during renovation and demolition in order to control asbestos emissions.

Regulations

326 IAC 14-10

326 IAC 14-2

40 CFR 61 Subpart M

See also **Occupational Safety and Health Regulations-Asbestos**, page 1-5, *Asbestos-Containing Materials in Schools*, page 1-6, *Asbestos Worker Licensing*, page 1-7, and **Environmental/Health Regulations-Solid Waste Land Disposal**, page 3-3.

Keys to Compliance

- Provide the Indiana Department of Environmental Management (IDEM) written notice of intent (NOI) to demolish or renovate when RACM is present or suspected to be present.
- Use engineering and work practice controls to prevent the release of asbestos fibers into the air. Controls may include wetting, local exhaust ventilation, glove bag, leak tight wrapping, etc.
- Conduct asbestos removal in the presence of at least one Indiana licensed asbestos project supervisor.
- Seal all waste in labeled, leak-tight containers.
- Deposit waste in an approved waste disposal site or RACM conversion site.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Bloodborne Pathogens

General Requirements

The bloodborne pathogens standard applies to all employers that have employees who can reasonably anticipate coming in contact with human blood or other potentially infectious materials as a result of performing their duties. Employers are required to minimize the risk of occupational exposure to potentially infectious material.

Regulation

29 CFR 1910.1030

Keys to Compliance

- Establish a written exposure control plan to eliminate or minimize employee exposure.
- Provide engineering and work practice controls to eliminate or minimize exposure.
- Provide appropriate personal protective equipment (PPE).
- Provide initial and annual training within 12 months of prior training.
- Provide medical treatment and surveillance when there has been an exposure or potential exposure.
- Maintain medical and training records.
- Provide Hepatitis B vaccination at no charge to all employees with occupational exposure and within 10 days of initial assignment.

Unusual Conditions

The standard requires that the opportunity to receive the hepatitis B vaccination be provided to employees, at no cost, within ten (10) working days of their assignment to a job with a potential occupational exposure or after a potential exposure (e.g., needle stick, etc.).

Assistance

See the *Indiana University Bloodborne Pathogen Exposure Control Plan, 2005*

IU Health Center Bloomington	812-855-4011
IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575
IUB Biological Safety Officer	812-856-3638

Ergonomics

General Requirements

Ergonomics is the science of fitting work place conditions and job demands to the capabilities of the worker. Repetitive stress injuries (RSI) can result when there is a mismatch between the physical requirements of the job and the physical capacity of the worker. Workers who repeat the same motion throughout the day, do their work in an awkward position, use a great deal of force to perform their job, repeatedly lift heavy objects or who face a combination of these risk factors are most likely to develop RSI.

Regulation

The Occupational Safety and Health Administration (OSHA) currently does not have a specific standard that addresses hazards due to ergonomic conditions. However, employers are responsible for providing a "safe and healthful" work place for employees under the General Duty Clause of the Occupational Safety and Health Act. (See page 1-1). Employers found to have ergonomic hazards that are presenting a risk to employees could be cited under this statutory provision.

Keys to Compliance

Often RSI can be prevented by simple and inexpensive changes in the work place. The Indiana University Office of Environmental Health and Safety is available to perform work station evaluations and can make recommendations for improvement.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Hazard Communication Standard

General Requirements

The purpose of this standard is to ensure that the hazards of all chemicals are evaluated and that information concerning these hazards is transmitted to employers and employees.

Regulations

29 CFR 1910.1200
29 CFR 1926.59

Keys to Compliance

- Identify and maintain a list of all hazardous chemicals found in the work place.
- Maintain material safety data sheets (MSDS) for each hazardous chemical.
- Label all chemical containers (hazardous & non-hazardous) accordingly.
- Ensure that each container of a hazardous chemical is properly labeled, including secondary containers.
- Ensure that MSDS are readily accessible to employees.
- Develop and maintain a written hazard communication program.
- Provide worker training.

Unusual Conditions

In the event of a chemical spill or release, provide MSDS to emergency responders.

Assistance

See the *Indiana University Hazard Communication Program, 2002*

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Inspections

General Requirements

Indiana University is subject to regulatory oversight by the Indiana Occupational Safety and Health Administration (IOSHA). IOSHA is authorized by law to inspect all IU facilities for health and safety standards. They are also authorized to issue citations and hazard abatement orders. The agency may assess penalties of up to several thousand dollars in connection with any citation issued, depending on the nature of the violation.

Regulation

29 CFR 1903
IU's IOSHA Inspection Protocol (p 1-13 to 1-15)

Unusual Conditions

Contact the University Office of Environmental, Health, and Safety Management (UOEHSM) **immediately** whenever:

- An IOSHA representative arrives at your facility to conduct an investigation. (IOSHA inspectors are required to begin their inspections with an opening conference. Please contact UOEHSM before beginning the opening conference.)
- You receive written or telephone communication from IOSHA.
- See **Occupational Safety and Health Regulations-IOSHA Inspection Protocol**, page 1-13.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

IOSHA Inspection Protocol

The IOSHA representative (inspector) arrives.

For all non-safety and non-supervisory personnel: When an inspector from IOSHA arrives on campus:

1. Ask the inspector to wait in a lobby or conference room.
2. Immediately call:
 - a. Your immediate supervisor and
 - b. The University Office of Environmental, Health, and Safety Management at 855-6311.

For all supervisory and/or safety personnel:

1. Request that the inspector show his or her credentials. This is a State of Indiana Department of Labor identification card, which has the inspector's:
 - a. Name
 - b. Office address
 - c. Phone number
 - d. Photograph
 - e. Identity number
2. Bring the inspector to a nearby available conference room or lobby. Ask him or her to briefly summarize the reason for the inspection. Make a note of any answers the inspector gives.
3. While the inspector waits, call:
 - a. Your immediate supervisor and
 - b. The University Office of Environmental, Health, and Safety Management (855-6311), if they have not already been called, and
 - c. The Office of University Counsel.
4. Meet with the inspector as soon as all of the above parties or their designees are present. If any of the above parties cannot be reached, ask the inspector if he or she would be willing to wait until these parties can be located before proceeding with the opening conference. He or she may wish to proceed without delay, in which case, do so.

The Opening Conference

1. The inspector will explain in greater detail the scope of the investigation. He or she may also inform you if a specific complaint was filed with IOSHA that triggered this inspection. Useful information you may request from the inspector includes:
 - a. What building or facility will be inspected,
 - b. What equipment or machinery will be inspected,
 - c. The expected duration of the inspection (you are not likely to get more than a vague estimate here, but try anyway),
 - d. Whether the inspection involves other employers on campus such as contractors,
 - e. Whether the inspector needs to interview any employees.
2. Documents – Give the inspector photocopies of any document he or she requests. Do not give the inspector any original documents or allow the inspector to use a copy machine in your office. Ask the inspector for a written list of all documents requested. Make a list of all documents requested by and provided to the inspector. Include the date of each document that was provided and if necessary, make the copies later and mail them to the IOSHA office.
3. Surveys and questionnaires – do not complete any surveys or questionnaires provided to you by the inspector without assistance from the University Office of Environmental, Health, and Safety Management (UOEHSM).

Walkthrough

1. A departmental supervisor or UOEHSM personnel or both must accompany the IOSHA inspector at all times during the walkthrough.
2. The IU representative(s) should take the inspector to the work area specified in the complaint or other scoping document used by the inspector. The inspector should not be taken anywhere else in the facility unless he or she asks to be taken there.
3. Take photos of all items photographed by the inspector.
4. Note any types of sampling or monitoring done by the inspector; UOEHSM will do parallel monitoring at the same time or as soon as possible after the inspection.
5. Note which facilities and operations the inspector visited and any verbal comments he or she made.
6. Do not admit any violations during any phase of the inspection.
7. If the inspector observes an apparent violation or other unsafe condition that is amenable to immediate correction, immediately correct it.

Closing Conference

1. The purpose of the closing conference is to allow the inspector to explain any violations or other follow-up actions to be taken by IOSHA. It is not a time to continue the current investigation or begin a new one. Do not provide additional documentation or answer questions about unrelated matters at the closing conference. Ask the inspector to submit any additional requests or questions in writing at some time after the current closing conference.

2. Note any violations discussed by the inspector. The inspector is required to discuss all violations or abatement orders which will be issued pursuant to the inspection.

Follow-up

1. Immediately correct any violations or unsafe conditions observed during the inspection, if they have not been already.
2. Immediately send one copy of the violations or Safety Orders to:
 - a. Senior departmental management
 - b. UOEHSM
 - c. University Counsel
3. Send UOEHSM a status update regarding all hazard abatement or correction work within 30 days of abating the hazard.
4. Send UOEHSM a copy of any documentation of abatement requested by IOSHA at the time such documentation is submitted to IOSHA.

Lead-Based Paint Program (Licensing and Work Practice Standards)

General Requirements

The purpose of this regulation is to ensure that a person conducting lead-based paint activities in target housing or child-occupied facilities do so in a manner that safeguards the environment and protects the health of the building's occupants, especially children under six years of age. Lead-based paint activities are the inspection, risk assessment, and abatement (as defined in the regulation) of lead-based paint hazards and licensing is required for (1) inspectors, (2) risk assessors, (3) project designers, (4) supervisors, (5) abatement workers, and (6) contractors. The rule contains the work practice standards for conducting lead-based paint activities. Any licensed person or company performing inspections, lead-hazard screening, risk assessments or abatement of lead-based paint hazards in target housing and child occupied facilities shall comply with these work practices.

Regulation

IDEM 326 IAC 23

Keys to Compliance

- The applicant must successfully complete an Indiana-approved lead-based paint course and meet or exceed the experience and education requirements detailed in the standard for the appropriate discipline and receive a certificate of training.
- Inspector, risk assessor and supervisor applicants must pass their-party examinations.
- Applicant must apply for and receive a lead-based paint activities license from the Indiana Department of Environmental Management (IDEM) and pay the fee.
- Annual renewal of a license involves refresher training, application and fee submittal.
- Only licensed personnel may conduct lead-based paint activities.
- Conduct inspections, lead hazard screenings, risk assessments and abatement activities following the requirements detailed in the standard.
- Notify the Indiana Department of Environmental Management (IDEM) prior to the commencement of lead-based abatement activities.
- Complete all reporting and record-keeping requirements.

Unusual Conditions

The Lead-Based Paint Program specifically addresses requirements for licensing and work practices for lead-based paint activities in target housing and child-occupied facilities. 29 CFR 1910.1045 General Industry Lead Standard covers all IU employees for any activity that may cause occupational lead exposure (see **Occupational Safety and Health Regulations-*Lead Exposure***, page 1-19).

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Lead-Based Paint Disclosure

General Requirements

Prior to obligation under any contract, a seller or lessor must disclose to the purchaser or lessee information concerning the presence of any known lead-based paint found in the housing.

Regulation

40 CFR 745

Keys to Compliance

- Provide an Environmental Protection Agency (EPA) approved lead hazard information pamphlet to the purchaser or lessee.
- Disclose the presence of any known lead-based paint and or lead-base paint hazards.
- Disclose the existence of records or reports pertaining to lead-base paint or associated hazards.
- Include in the contract the EPA *Lead Warning Statement* as specified in the regulation.
- Maintain records certifying that the information was disclosed to the purchaser or lessee.

Unusual Conditions

Nothing in this regulation implies a positive obligation on the seller or lessor to conduct any lead evaluation or reduction activities.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Lead Exposure

General Requirements

The employer shall ensure that no employee is exposed to an airborne concentration of lead in excess of the permissible exposure limit (PEL). Examples of possible lead exposures at Indiana University include lead-based paint or machining metals.

Regulations

29 CFR 1910.1025
29 CFR 1926.62

Keys to Compliance

- Conduct exposure assessments to determine if any employee is exposed to lead at or above the action level.
- Use engineering and work practice controls.
- Provide employee training.
- Provide appropriate personal protective equipment (PPE).
- Perform periodic monitoring and maintain records.
- Develop and implement a written compliance plan prior to starting a job where exposure to lead will be in excess of the PEL. Lead abatement and disposal procedures must be included.
- Institute a medical surveillance program for all employees who are or may be exposed above the action level for more than thirty (30) days per year.
- Complete all record-keeping requirements.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Lock Out/Tag Out

General Requirements

This standard applies to all employees servicing and maintaining machines and equipment in which the unexpected energization, start up, or release of stored energy could cause injury to the employee. Energy sources could be electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy. During servicing and maintenance, energy-isolating devices must be locked out or tagged out in accordance with written procedures.

Regulation

29 CFR 1910.147

Keys to Compliance

- Establish and implement written procedures for locking out or tagging out equipment and machines.
- Provide training to employees.
- Maintain training records.
- Review procedures once a year to ensure effectiveness.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Machine Guarding

General Requirements

Machine guarding is required to protect employees in the machine area from hazards such as those created by point of operation, in-going nip points, rotating parts, flying chips, and sparks. Examples of guarding methods include barrier guards, two-hand tripping devices, and electronic safety devices.

Regulation

29 CFR 1910.211 - .219

Keys to Compliance

- Provide one or more methods of machine guarding for each hazard.
- Point of operation guarding devices must prevent the operator from having any part of his body in the danger zone.
- Special hand tools for placing and removing material can be used, but not in the place of guarding.
- Conduct routine inspections to determine if guards are properly installed and used.
- Specific standards exist for wood-working machinery (1910.213), abrasive wheel machinery (1910.215), mechanical power presses (1910.217), mechanical power transmission apparatus (1910.219), and guarding of portable hand-held tools (1910.243)
- Do not remove manufacturers' safety devices.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Medical Services and First Aid

General Requirements

The employer shall ensure that medical personnel are readily available for advice and consultation on matters of occupational health.

Regulation

29 CFR 1910.151

Keys to Compliance

- Provide readily available first aid supplies
- Provide quick drench or flushing facilities for the eyes and body when exposure to corrosives may occur.
- In the absence of an infirmary, clinic, or hospital in near proximity to the workplace, which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid.
- In areas where accidents resulting in suffocation, severe bleeding, or other life-threatening or permanently disabling injury or illness are likely, a three to four minute response time, from time of injury to time of administering first aid, a person trained in first aid is required.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Noise Exposure

General Requirements

Prevention and protection against occupational noise exposure must be provided when the noise levels exceed those specified in the regulation.

Regulation

29 CFR 1910.95

29 CFR 1926.52

Keys to Compliance

- Determine whether and to what extent noise is present in the work place.
- Use feasible administrative and engineering controls to reduce noise to acceptable levels.
- If administrative and engineering controls fail to reduce noise to acceptable levels, provide personal protective equipment (PPE).
- If noise levels equal or exceed an 8-hour time-weighted average (TWA) of 85 decibels on the A scale (slow response), establish a hearing conservation program including:
 - Noise exposure monitoring.
 - Noise control measures.
 - Annual audiometric testing.
 - Hearing protection device usage.
 - Training.

Assistance

See the *Indiana University Hearing Conservation Program, 2003*

IUB Environmental Health and Safety 812-855-6311

IUPUI Environmental Health and Safety 317-274-2005

IUNW Environmental Health and Safety 219-981-4230

IUSB Environmental Health and Safety 574-520-4575

Permit-Required Confined Space Program

General Requirements

The standard establishes requirements for practices and procedures to protect employees who are required to enter a confined space that poses health or safety hazards. A confined space has (1) restricted entry or exit, (2) is large enough for an employee to enter and perform work, and (3) is not designed for continuous occupancy. A permit-required confined space is a confined space with one or more of the following characteristics: (1) contains or has the potential to contain a hazardous atmosphere, (2) contains material that may engulf an entrant, (3) has an internal configuration such that an entrant could be trapped or asphyxiated, or (4) contains any other recognized serious safety or health hazards.

Regulation

29 CFR 1910.146

Keys to Compliance

- Evaluate the work place to determine if permit-required confined spaces exist.
- If entry into confined spaces is not required, take measures to prevent employees from entering.
- If entry is required, develop and implement a written permit-required confined spaces program.
- Provide employee training.
- Establish and maintain records of training, confined space locations, testing of confined spaces, and entry permits.

Assistance

See the *Indiana University Confined Space Program*, September 2004

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Personal Protective Equipment (PPE)

General Requirements

Personal protective equipment (PPE) shall be provided, used and maintained in a sanitary and reliable condition where there is a hazard from processes or environments that may cause injury or illness to the employee. PPE includes covers for the eyes, face, head, and extremities, respiratory devices, and protective shields and barriers.

Regulations

29 CFR 1910.132 to 138

Keys to Compliance

- Assess the work place to determine if hazards are present that necessitate PPE and complete a written certification for the process.
- Provide appropriate and properly fitting PPE and require employees to use PPE.
- Ensure that employee owned PPE is adequate and properly maintained.
- Provide employee training and retrain when necessary.
- Eye and Face Protection (29 CFR 1910. 133) Protective eye and face devices purchased after July 5, 1994 must comply with ANSI Z87.1-1989.
- Head Protection (29 CFR 1910.135) Protective helmets purchased after July 5, 1994 must comply with ANSI Z89.1-1986.
- Foot Protection (29 CFR 1910.136) Protective footwear purchased after July 5, 1994 must comply with ANSI Z41-1991.
- Electrical Protective Devices (29 CFR 1910.137) Insulating blankets, matting, line hose, gloves, and sleeves made of rubber shall meet specific design requirements.
- Hand Protection (29 CFR 1920.138) Use of appropriate hand protection when exposed to hazards.
- Noise Exposure See page 1-23.
- Respiratory Protection See page 1-28.

Unusual Conditions

The employer must pay for PPE that is not personal and not used away from the work site.

Assistance

See the *Indiana University Safety Eyewear Policy*, December 2006

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Recording and Reporting Occupational Injuries and Illnesses

General Requirements

Employers are required to prepare and maintain records of work related injuries and illnesses. These records include the Occupational Safety and Health Administration (OSHA) Form No. 300 (effective January 1, 2002), *Log and Summary of Occupational Injuries and Illnesses*, and the OSHA Form No. 101, *Supplementary Record of Occupational Injuries and Illness*.

Regulation

29 CFR 1904
29 CFR 1960, Subpart I

Keys to Compliance

- Record all reportable occupational injuries and illness (Forms Nos. 101, 300, and 300-A).
- Post an annual summary of all recordable occupational injuries and illnesses from February 1st until March 1st.
- Retain OSHA Form No. 300 for five (5) calendar years.

Unusual Conditions

Indiana Employers are required to report all occupational incidents that result in one (1) or more employee deaths or in the hospitalization of three (3) or more employees. The report must be made to the Indiana Occupational Safety and Health Administration (IOSHA) within eight (8) hours of the accident (Ph: 317-232-2693).

Assistance

IUB Risk Management	812-855-9758
IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Respiratory Protection

General Requirements

This standard applies to the use of respiratory protection to control occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors. The primary objective is to prevent or reduce atmospheric contaminants in the work place by utilizing acceptable engineering control measures. However, when engineering controls are not feasible or effective, appropriate respirators will be provided by the employer to protect the health of the employee.

Regulation

29 CFR 1910.134

Keys to Compliance

- Evaluate the workplace to identify respiratory hazards including a reasonable estimate of employee exposure and determine the best control measures.
- Develop and implement a written respiratory protection program including work-site specific procedures and update the program as necessary to reflect changes in the workplace that affect respirator usage.
- Select and provide the appropriate respirator for the hazards present.
- Appoint a suitably trained program administrator to oversee the respiratory program.
- Provide appropriate employee training.
- All employees must be medically approved for respirator use.
- All employees using tight-fitting face-piece respirators must be fit tested prior to use and annually thereafter.
- Specific requirements for voluntary or non-required employee use of respirators are detailed in the standard and IU policy.
- Conduct evaluations of the workplace to ensure the provisions of the written program are effective, including consultations with affected employees. Regularly evaluate effectiveness of the respiratory protection program.
- Complete record-keeping requirements.

Assistance

See the *Indiana University Respiratory Protection Program*, April 2004

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Walking/Working Surfaces, General Requirements

General Requirements

This standard requires that all places of employment, passageways, storerooms, and service rooms be kept clean, orderly and in a sanitary condition.

Regulation

29 CFR 1910.22

Keys to Compliance

- Keep workroom floors clean and dry.
- Maintain drainage or use platforms or mats during wet processes.
- Ensure that permanent aisles and passageways are marked and kept clear.
- Use covers and guardrails to protect personnel from hazards of open pits, tanks, ditches, and working surfaces elevated over four (4) feet.
- Post approved floor-load limits.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Powered Industrial Trucks (Forklifts)

General Requirements

The purpose of this standard is to ensure the safe operation of all Powered Industrial Trucks. All affected personnel must be properly trained and evaluated on the safe operating procedures of their specific equipment prior to operation. This section applies to all fork trucks, tractors, platform lift trucks, motorized hand trucks, and all other specialized industrial trucks powered by electricity or internal combustion engines.

Regulation

29 CFR 1910.178

Keys to Compliance

- Ensure the powered industrial truck is approved for use in the area in which it is being utilized.
- Ensure all powered industrial trucks are labeled and marked appropriately.
- Ensure all powered industrial trucks utilize appropriate safety equipment (i.e. seat belts, safety guards).
- Identify all individuals who operate powered industrial trucks.
- By December 1, 1999 train all operators on the use of powered industrial trucks according to the requirements of 29CFR 1910.178 (1).
- Train all new employees hired after December 1, 1999 prior to operating a powered industrial truck.
- Certify that each operator has received training, been evaluated, and demonstrated competency in performance of their duties.
- Conduct an evaluation of each operator's performance at least once every three years.

Assistance

IUB Environmental Health and Safety 812-855-6311

Fall Protection

General Requirements

This standard requires each employee on a walking/working surface, horizontal or vertical, with an unprotected side or edge that is four feet or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems or personal fall arrest or restraint systems.

Regulation

29 CFR 1910.66
29 CFR 1926.501 - .503
ANSI Z359.1

Keys to Compliance

- Identify the need for fall protection and determine what type of protection is required.
- Prepare a site-specific written fall protection plan.
- Train personnel on use of fall protection equipment. A "competent person" must do this.
- A competent person shall perform inspections of protection equipment in accordance with manufacturer recommendations.
- Each individual shall inspect his/her fall protection equipment prior to each use.
- Each anchor point shall be capable of supporting 5000 lbs per person and supervised by a "qualified person".
- After January 1, 1998 – snap hooks shall have a self-locking/self-closing gate.
- The maximum free fall distance is two (2) feet for positioning device systems and six (6) feet for fall arrest systems.

Assistance

IUB Environmental Health and Safety 812-855-6311

Research Safety Regulations

See also

Occupational Safety and Health Regulations (Section 1)

Access to Employee Exposure and Medical Records	page 1-4
Bloodborne Pathogens	page 1-9
Hazard Communication Standard	page 1-11
Personal Protective Equipment (PPE)	page 1-25
Recording and Reporting Occupational Injuries and Illnesses	page 1-27

Fire Prevention Regulations (Section 4)

Employee Emergency Plans and Fire Prevention Plans	page 4-1
Indiana Fire Prevention Code	page 4-2
Portable Fire Extinguishers	page 4-3

Standards for Protection Against Radiation

General Requirements

The purpose of this regulation is to control the possession, use and disposal of licensed radioactive material so that the total dose to an individual does not exceed the limits specified in this standard.

Regulation

10 CFR 20

Keys to Compliance

- Develop, document and implement a radiation protection program that includes provisions for keeping doses as low as reasonably achievable (ALARA).
- Control occupational exposure to the dose limits specified in the standard.
- Conduct operations so that the dose to individual members of the public are below limits specified in the regulation.
- Conduct surveys to determine radiation levels and identify any potential radiological hazards.
- Monitor employees to measure individual exposure where necessary.
- Control access to high radiation areas.
- Use respiratory protection when engineering or process controls do not adequately protect workers from airborne radioactive materials.
- Post the international radiation warning signs in all radiation areas.
- Ensure that all containers of radioactive material are labeled as radioactive.
- Dispose of radioactive waste only by approved disposal methods as specified in the regulation.

- Maintain records of the radiation protection program, employee exposure, survey results, monitoring results, and waste disposal.
- Report theft or loss of licensed material, exposures exceeding the limits, or releases of material exceeding the limits specified.

Unusual Conditions

Radioactive materials that are naturally occurring or accelerator-produced are under the jurisdiction of the Indiana State Department of Health (ISDH). Similar radioactive protection standards for these materials are found in 410 IAC 5-4.

Assistance

See also *Indiana University Radiation Safety Manual, Revision 8, July 2007*

IUB Radiation Safety Officer (RSO)	812-855-3230
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-980-6556
IUSB Environmental Health and Safety	574-520-4575

Training for Workers in a Radioactive Materials Area

General Requirements

This standard specifies the minimum training required for any individual who works in or frequents any area where radioactive materials are used or stored.

Regulation

10 CFR 19.12

Keys to Compliance

Ensure that the following topics are addressed during worker training.

- Locations where radioactive materials are stored, transferred and used
- The health protection issues associated with exposure to radiation
- Precautions and procedures to minimize exposure
- The purpose and function of protective devices employed
- Worker responsibility to report any condition that may result in a violation of Nuclear Regulatory Commission (NRC) regulations and the reporting procedures to follow
- The appropriate response and notification procedure for a radioactive materials spill or other radiation emergency
- The permissible dose limits and availability and interpretation of exposure reports
- Applicable radiation protection policies and procedures

Unusual Conditions

Radioactive materials that are naturally occurring or accelerator-produced are under the jurisdiction of the Indiana State Department of Health (ISDH). Similar radiation training requirements for these materials are found in 410 IAC 5-4.

Assistance

See *Indiana University Radiation Safety Manual, Revision 8*, July 2007

IUB Radiation Safety Officer (RSO)	812-855-3230
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Licensing Requirements for Radioactive Material

General Requirements

The IU Bloomington and IUPUI campuses have “broad scope” licenses with the Nuclear Regulatory Commission (NRC). This type of license allows the University considerable flexibility in its use of radioactive materials in exchange for the establishment of an appropriate administrative structure for ensuring regulatory compliance.

Regulation

10 CFR 30
10 CFR 33

Keys to Compliance

- Appoint a qualified radiation safety officer (RSO) responsible for the administration and operation of the radiation safety plan.
- Establish a radiation safety committee to advise and assist the RSO.
- Establish policies and procedures for controlling the use of radioactive material on campus.
- Faculty wishing to use radioactive materials may do so only with the authorization of the RSO.

Unusual Conditions

Radioactive materials that are naturally occurring or accelerator-produced are under the jurisdiction of the Indiana State Department of Health (ISDH).

Assistance

See also *Indiana University Radiation Safety Manual, Revision 8, July 2007*
IUB Radiation Safety Officer (RSO) 812-855-3230
IUPUI Environmental Health and Safety 317-274-2005

Radiation Safety for Analytical X-Ray Equipment

General Requirements

This standard details special requirements for users of analytical x-ray equipment (e.g., x-ray diffraction and fluorescence analysis).

Regulation

410 IAC 5-8

Keys to Compliance

- Ensure that X-ray equipment has required safety devices, interlocks, warning devices, warning lights, and labels as detailed in the standard.
- Use engineering and process controls to limit exposure levels.
- Conduct radiation surveys of equipment upon installation, maintenance and following any changes in the arrangement, number or types of components.
- Post caution signs in areas containing analytical x-ray equipment.
- Ensure that written normal operating procedures are available to all analytical x-ray equipment workers.
- Ensure that no individual may bypass a safety device or interlock without written approval from the radiation safety officer (RSO).
- Provide radiation protection training for all analytical x-ray equipment workers.
- Provide dosimeters for analytical x-ray equipment workers.

Assistance

See also Indiana University Environmental Health and Safety document, *Radiation Safety Guide for Users of Analytical X-Ray Systems*

IUB Radiation Safety Officer (RSO)	812-855-3230
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-980-6556

Requirements for X-rays in the Healing Arts

General Requirements

These regulations detail requirements for the use of x-rays in the healing arts.

Regulations

410 IAC 5-6.1

410 IAC 5-11

Keys to Compliance

- Register x-ray equipment and facilities with the Indiana State Department of Health (ISDH).
- Display the radiation machine registration certificate in an area accessible to patients and visitors.
- Inspect x-ray equipment when installed, at the periodic time intervals specified in the standard, and after changes are made to the facility and equipment.
- Ensure that diagnostic imaging physicists, radiation oncology physicists, health physicists and x-ray machine inspectors are approved by ISDH.
- Ensure that diagnostic radiation machine operators are certified by ISDH.
- Provide worker training.
- Make written safety procedures and rules available to x-ray equipment operators.
- Utilize procedures, auxiliary equipment, and shielding to minimize patient and personnel exposure.
- Maintain records of x-ray machine surveys, calibrations, maintenance and modifications.
- Ensure that x-ray equipment functions in accordance with this standard.
- Provide personnel monitoring for machine operations.

Assistance

IUB Radiation Safety Officer (RSO)	812-855-3230
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-980-6556
IUSB Environmental Health and Safety	574-520-4575

Radiation Safety Requirements for Particle Accelerators

General Requirements

This standard establishes procedures for the registration and use of particle accelerators.

Regulation

410 IAC 5-9

Keys to Compliance

- Register the accelerator with the Indiana State Department of Health (ISDH).
- Appoint a radiation safety officer (RSO).
- Provide training for operators of the particle accelerator.
- Inspect controls, interlock devices, scram button, and warning devices every three (3) months.
- Maintain written operating and emergency procedures at the control panel.
- Continuously monitor radiation levels in high radiation areas.
- Conduct all area surveys in accordance with the written procedures established by the RSO.
- Maintain records of all radiation protection surveys.
- Provide ventilation to ensure that personnel are not exposed to airborne radioactive material in excess of allowable limits.

Assistance

IUB Radiation Safety Officer (RSO)

812-855-3230

Laser Safety

General Requirements

This standard is the fundamental guide to laser use in the United States. It describes criteria for evaluating hazard potentials and specific control measures for minimizing laser hazards.

Standard

ANSI Z.136.1
OSHA 29 CFR 1926.54

Keys to Compliance

- Conduct a hazard evaluation of the laser or laser system.
- Develop a laser hazard control plan.
- Develop written standard procedures for operation, service and maintenance of the laser.
- Devise control measures to reduce the possibility of human exposure to hazardous levels of laser radiation. These control measures may include engineering, administrative, and procedural controls or personal protective equipment (PPE).
- Provide laser safety training appropriate for the hazards present.
- Post warning signs and labels as detailed in the standard.
- Provide medical surveillance for personnel who work with Class 3b and 4 lasers.

Assistance

See the *Indiana University Laser Safety Manual*, July 2004

IUB Radiation Safety Officer (RSO)	812-855-3230
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-980-6556
IUSB Environmental Health and Safety	574-520-4575

Transportation of Radioactive Materials

General Requirements

These regulations include the requirements for the transportation of radioactive materials. The majority of radioactive materials transported on campus are low specific activity (LSA) materials, and the information below applies only to these materials.

Regulations

49 CFR 172

49 CFR 173

Keys to Compliance

- Describe the radioactive material or waste to be transported on the shipping paper according to Part 172 Subpart C.
- Mark the exterior of each package appropriately (e.g., Radioactive--LSA).
- Transport the LSA material in a strong, tight package that prevents leakage of the radioactive contents under normal transportation conditions.
- If packages are in excess of "limited quantities", ensure that each side and end of the transport vehicle is placarded
- Ensure that emergency response information and the hazardous waste manifest are immediately accessible to the driver of the vehicle transporting the radioactive material.
- Provide training to all personnel involved in shipping waste or receiving the radioisotopes.

Assistance

See also *Indiana University Radiation Safety Manual, Revision 8, July 2007*

IUB Radiation Safety Officer (RSO) 812-855-3230

IUPUI Environmental Health and Safety 317-274-2005

IUNW Environmental Health and Safety 219-980-6556

IUSB Environmental Health and Safety 574-520-4575

Laboratory Safety Standard

General Requirements

The purpose of this standard is to protect employees from health hazards associated with all hazardous chemicals in the laboratory.

Regulation

29 CFR 1910.1450

Keys to Compliance

- Designate a chemical hygiene officer.
- Develop and implement a written chemical hygiene plan.
- Conduct employee exposure monitoring and maintain monitoring records.
- Ensure that employee exposure does not exceed the permissible exposure limits (PEL) specified in 29 CFR 1910, subpart Z.
- Provide employee training.
- Maintain training records for at least five (5) years from date of training.
- Provide medical treatment and surveillance when there has been an exposure, potential exposure, or whenever an employee develops signs or symptoms associated with a hazardous chemical.
- Maintain material safety data sheets (MSDS) for all chemicals.
- Ensure that each container of chemicals is properly labeled.

Unusual Conditions

Except in specific instances, this standard generally supersedes provisions of other health standards.

Assistance

See the *Indiana University Laboratory Chemical Safety Plan*, Revised 2007

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Flammable and Combustible Liquids

General Requirements

This standard applies to the storage of flammable or combustible liquids in drums or containers not exceeding sixty (60) gallons individual capacity and portable tanks not exceeding six hundred-sixty (660) gallons individual capacity.

Regulation

29 CFR 1910.106

Keys to Compliance

- Store flammable liquids in approved, covered containers or tanks when not in use. The maximum allowable size of containers and portable tanks is specified in this standard.
- Use only approved storage cabinets when quantities exceed standard limits. The maximum capacity of storage cabinets is specified in the standard.

Assistance

See the *Indiana University Laboratory Chemical Safety Plan*, Revised 2007

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Recombinant DNA Guidelines

General Requirements

These guidelines specify practices for constructing and handling recombinant DNA molecules and organisms, and viruses containing recombinant DNA. The guidelines apply to all institutions that receive support from the National Institutes of Health (NIH).

Guidelines

NIH Guidelines for Research Involving Recombinant DNA Molecules

Keys to Compliance

- Establish and implement policies that provide for the safe conduct of recombinant DNA research and that ensure compliance with the NIH Guidelines.
- Establish an Institutional Biosafety Committee.
- Appoint a Biological Safety Officer if the institution conducts research at Biosafety Level 3 or 4, or engages in large scale research (greater than ten (10) liters).
- Establish and adhere to emergency plans for handling accidental spills and personnel contamination.
- Provide a health surveillance program of personnel when necessary.
- The principal investigator shall obtain approval from the appropriate authority (IUB Biological Safety Officer or the Institutional Biosafety Committee) before initiating or modifying recombinant DNA research.
- Report significant problems, violations, accidents and illnesses.
- Ensure appropriate training for Committee members, principal investigators and laboratory staff.

Unusual Conditions

Since the NIH Guidelines continue to evolve, and therefore, will never be complete or final, "it is the responsibility of the institution and those associated with it to adhere to the intent of the NIH Guidelines as well as to their specifics."

Assistance

IUB Biological Safety Officer	812-856-3638
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Guidelines for use of CDC Select Agents

General Requirements

The purchase, possession, and handling of biological materials identified as “select agents” by the Center for Disease Control (CDC) or U.S. Department of Agriculture (USDA) requires laboratory registration prior to obtaining and using these materials. The registration process requires development and maintenance of specific laboratory programs and written plans before a laboratory can be approved to possess and use these materials.

Guidelines

Title 42, Code of Federal Regulations, Part 73, Possession, Use, and Transfer of Select Agents and Toxins.

Title 7, code of Federal Regulations, Part 331, and Title 9, code of Federal Regulations, Part 121, Agricultural Bioterrorism Protection Act of 2002, Possession, Use and Transfer of Biological Select Agents and Toxins.

Keys to Compliance

- Develop and implement a written Biosafety Plan*.
- Develop and implement a written Emergency Response Plan*.
- Develop and implement a written Security Plan*.
- Assign a Responsible Official ** for the use of select agents.
- Obtain Department of Justice security clearance for the Responsible Official**.
- Provide, complete, and document training for individuals using of select agents or toxins*.
- The laboratory must be registered with the CDC for agents or toxins that pose a risk for humans and/or the USDA for agents or toxins that pose a risk to plants or animals prior to purchasing and using select agents or toxins*.
- Provide and document annual inspections of facilities*.
- Provide and maintain all CDC and/or USDA notifications for purchase, possession, use and transfer of agents or toxins as necessary*.

*Contact the Institutional biosafety committee for assistance in advance.

**For facility owner only.

Unusual Conditions

Unusual conditions such as theft, loss, or a release of a select agent require the implementation of the Emergency Response Plan, Security Plan, and Biosafety Plan as necessary. Immediate notification of the CDC and/or USDA by telephone, facsimile, or e-mail is required as directed in the Security Plan.

Assistance

IU Institutional Biosafety Committee	812-855-5714
IUB Biological Safety Officer	812-856-3638
IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Environmental/Health Regulations

Food Service Regulations

General Requirements

These regulations apply to all locations on campus that serve food. This includes but is not limited to campus housing units, dormitories, Greek units, concession stands, and special events. As a state university, food service at IU is regulated by the Indiana State Department of Health (ISDH) and is under jurisdictional control of the IU Office of Environmental, Health, and Safety Management (UOEHSM). The Environmental Health Specialist of the IUB UOEHSM conducts inspections on all IU campuses except for IUPUI, which is inspected by the Marion County Health Department in Indianapolis and Indiana University/Purdue University at Fort Wayne (IPFW) which is inspected by Purdue University.

Regulation

410 IAC 7-22
410 IAC 7-23
410 IAC 7-24
IC 16-41-22

Unusual Conditions

Due to the regulation of food service by ISDH and IUB EHS, county licenses for IU food service operations are not required.

Assistance

See *Indiana University Temporary Food Event Policy* online at www.ehs.indiana.edu

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUN Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575
IUS Campus Activities	812-941-2318
IUK Physical Plant	765-455-9231
IUE Physical Plant	765-973-8254
IUPUC Food Service	812-348-7224
ISDH Food Protection	317-233-1325
IPFW Occupational Health & Safety	260-481-5744

Indoor Air Quality

General Requirements

The University Office of Environmental, Health, and Safety Management (UOEHSM) in cooperation with the IUB Physical Plant, have forged a relationship to address inadequate indoor air quality.

Keys to Compliance

- Refer the following complaints to Physical Plant Operations or your building zone maintenance personnel.
 - * Temperature or humidity problems
 - * Draftiness
 - * Lack of air or “stuffy” air
 - * Dirt or particulates out of your venting system
 - * Visible mold growth

- Refer all other complaints to EHS. These include
 - * Unusual odors such as chemical smells and exhaust type odors
 - * Sickness associated with the occupancy of the building such as headache, nausea, drowsiness, dizziness, congestion, swelling, itching, dryness or irritation of eyes, nose or throat, cough, shortness of breath, fever, chills, and fatigue. Remember that colds and the flu can have some of these same symptoms but they will not go away when you leave the building.

- If the Physical Plant personnel cannot find an obvious cause for the problem such as the heating and ventilation system or other building activities, they will contact EHS to conduct a further investigation. The EPA, NIOSH, AIHA and OSHA guidelines are followed in assessing and resolving indoor air quality issues.

Assistance

IUB see www.ehs.indiana.edu/indoor_air.html

IUB Environmental Manager	812-855-3234
IUB Physical Plant	812-855-8728
IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Solid Waste Land Disposal

General Requirements

This regulation specifies requirements for the handling and disposal of solid wastes. (Hazardous wastes are regulated under 329 IAC 3.1. See **Environmental Health Regulations-Hazardous Waste Management**, page 3-12.)

Regulation

329 IAC 10

Keys to Compliance

- Dispose of solid waste only at a facility that possesses proper Indiana Department of Environmental Management (IDEM) permits. The following materials are not subject to the provisions of this regulation:
 - * Uncontaminated rocks, bricks, concrete, road demolition waste materials, or dirt
 - * Processing and disposal of uncontaminated and untreated natural growth solid waste including tree limbs, stumps, leaves and grass clippings
- Certify industrial wastes and dispose of them only at landfills designated for special wastes. *Note: Indiana University generates three industrial wastes: asbestos, coal ash waste, and petroleum contaminated solids.*
- Recycle lead-acid batteries.
- Indiana University recycles used oil. (Used oil that is not recycled or burned for energy recovery is regulated as a hazardous waste.)
- In Monroe County, vehicles that transport solid waste are required to have a refuse hauler's permit and decal from the Monroe County Health Department (Monroe County Code, Chapter 360).

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Swimming Pools

General Requirements

This regulation details the requirements for the safe operation and maintenance of swimming pools.

Regulation

410 IAC 6-2.1

Keys to Compliance

- Provide not less than one (1) unit of lifesaving equipment and standard first aid kit.
- Maintain free chlorine residuals of 1.0 mg/L.
- Collect and examine water samples for bacteria at least once per week.
- Maintain records of operation.
- Report serious injuries and drownings immediately to the Monroe County Health Department (812-349-2543) and within ten (10) days to the Indiana State Department of Health (ISDH).
- Provide qualified and trained lifeguards.

Assistance

IUB Environmental Health and Safety 812-855-6311

Air Conditioning and Refrigeration Equipment: Service, Repair and Disposal

General Requirements

The purpose of these regulations is to reduce emissions of ozone-depleting refrigerants during the service, repair and disposal of air conditioning and refrigeration equipment. This includes motor vehicle air conditioning systems, appliances, and commercial refrigeration equipment. *Note: IU recycles refrigerant.*

Regulation

40 CFR 82 Subparts B and F

Keys to Compliance

- Capture and recycle refrigerants containing ozone-depleting substances during servicing and repairs.
- No person may knowingly vent ozone-depleting substances to the atmosphere.
- Service personnel must be certified by an Environmental Protection Agency (EPA) approved technician certification program.
- Refrigerant recovery and recycling equipment must be EPA certified.
- Ensure that recycled refrigerants meet the purity requirements detailed in the regulations.
- Complete reporting and record keeping requirements.
- Prior to disposal of appliances, machines or equipment, remove and recycle ozone-depleting refrigerants contained "in bulk."
- Repair leaks in commercial refrigeration equipment within the time frame specified in the regulations.

Assistance

IUB Physical Plant

812-855-8295

Clean Fuel Fleet Vehicles

General Requirements

This regulation applies to covered fleets of ten (10) or more vehicles operated in Lake or Porter County. Beginning with the 1999 model year and each year thereafter, a specified percentage of new vehicle purchases must meet clean-fuel emission standards. The new vehicle percentages for each vehicle type are:

<u>Model Year</u>	<u>Light Duty Vehicles and Trucks</u>	<u>Heavy Duty Vehicles</u>
1999	30%	50%
2000	50%	50%
2001+	70%	50%

Regulation

326 IAC 19-3

Keys to Compliance

- Compliance with this rule may be achieved by converting existing vehicles to clean fuel vehicles, purchasing new clean fuel vehicles, or purchasing program emission credits.
- On or before July 1 of each year beginning in 1999, each covered fleet operator shall submit an annual report to the Indiana Department of Environmental Management (IDEM).

Assistance

IUB Environmental Health and Safety	812-855-6311
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Hospital/Medical/Infectious Wastes Incinerators (HMIWI)

General Requirements

These regulations contain standards of performance for hospital/medical/infectious wastes incinerators (HMIWI) in accordance with the Clean Air Act (CAA). Such incinerators only exist on the IUPUI campus at this time.

Regulation

40 CFR 60 Subparts Ce and Ec
326 IAC 11-6
329 IAC 11-20

Keys to Compliance

- Ensure that no gases are discharged into the atmosphere that contains stack emissions in excess of the limits detailed in the regulation.
- Ensure that HMIWI are operated by or under the supervision of a fully trained and qualified HMIWI operator.
- Develop and implement a waste management plan.
- Complete compliance and performance testing requirements.
- Monitor and record the temperature of the secondary chamber on a continuous basis.
- Install a device to automatically measure and record the date, time and weight of each charge fed into the HMIWI.
- Maintain records and submit required semi-annual and annual reports.

Unusual Conditions

The federal regulations went into effective 11/14/97. Due to the new stringent emission guidelines, the Environmental Protection Agency (EPA) expects that use of as many as fifty (50) to eighty (80) percent of the existing HMIWI will be discontinued.

Assistance

IU Health Center	812-855-4011
IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005

Title V Air Operating Permits

General Requirements

Under the Clean Air Act (CAA), the operation or modification of a facility may require an operating permit if the facility emits or has the potential to emit air pollutants above specified threshold rates. The Indiana University Bloomington Power Plant is classified as a “major source” and is required to comply with Title V permit requirements. The Indiana Department of Environmental Management (IDEM) administers the permit program.

Regulation

326 IAC 2-7

Keys to Compliance

- Operate and maintain all emission control equipment.
- Submit timely and complete permit renewal applications.
- Develop and implement maintenance and compliance plans.
- Monitor continuous emissions, fuel consumption, coal analyses and stack opacity.
- Report emission and malfunctioning information to IDEM. This includes
 - * annual emission statement
 - * quarterly central heating plant fuel consumption
 - * quarterly central heating plant coal analysis summary
 - * quarterly central heating plant opacity
 - * annual compliance certification
- Physical or operational modifications at the facility may be subject to permitting requirements if there is a potential increase in emissions associated with the change.
- Maintain records of all malfunctions that result in violations of emission limits.
- Report malfunctions that last an hour or more to IDEM within four (4) hours.

Unusual Conditions

A Federally Enforceable State Operating Permit (FESOP) is an option for those facilities that can reasonably limit their potential emissions below the major source thresholds of the Title V program. A FESOP has virtually the same terms and conditions as a Title V permit and is regulated under 326 IAC 2-8.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUB Physical Plant	812-855-8295
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

National Pollutant Discharge Elimination System (NPDES) Permits

General Requirements

The purpose of the National Pollutant Discharge Elimination System (NPDES) is to control the point source discharge of pollutants into the nation's waters. It is unlawful to discharge any pollutant from a point source into navigable waters unless a valid NPDES permit is obtained prior to discharge. The Indiana Department of Environmental Management (IDEM) administers the NPDES program in Indiana.

Regulation

327 IAC 5

See also *Storm Water Run-Off Associated with Construction Activity*, page 3-11.

Keys to Compliance

- Apply for, obtain and comply with the NPDES permit.
- Take all reasonable steps to mitigate or prevent any discharges in violation of the permit that have a reasonable likelihood of adversely affecting human health or the environment.
- Maintain in good working order and efficiently operate all facilities and systems necessary for achieving compliance with the terms and conditions of the permit.
- Provide information to IDEM to fulfill reporting requirements.
- Monitor discharges and submit discharge monitoring reports.

Unusual Conditions

The acceptability of wastewater discharges to local sewer systems is regulated by local ordinances.

Assistance

IUB Environmental Health and Safety

812-855-6311

Storm Water Phase II

General Requirements

The general purpose of the Storm Water Phase II Rule is to eliminate the potential for contaminated storm water runoff from construction activities, facilities maintenance, accidental spills and illegal dumping to impact nearby navigable waters. The rule requires public and private storm sewer owners to establish management plans, engineering practices and awareness programs to eliminate the risk of contaminated runoff from entering storm drains.

Regulation

327 IAC 13-15

Keys to Compliance

- Storm Water Quality Management Plan Part A
Notice of intent to comply with permit, estimated schedule and budget.
- Storm Water Quality Management Plan Part B
Receiving stream characterization, land use assessment.
- Storm Water Quality Management Plan Part C
Programmatic indicators and the following six minimum control measures:
 - Public education and outreach (brochures, public-service announcements, etc.).
 - Public involvement and participation (public hearings, volunteering, etc.)
 - Illicit discharge detection and elimination (outfall & storm sewer mapping, etc.).
 - Construction sites runoff control (erosion controls, plan reviews, etc).
 - Post construction storm water management (BMPs, long-term monitoring, etc.).
 - Pollution Prevention (oil recycling programs, employee training, etc).
- Annual progress reports

Unusual Conditions

Persons with construction sites greater than one (1) acre are to comply with this rule as well.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Hazardous Waste Management

General Requirements

These regulations establish a hazardous waste management program consistent with the requirements of the Resource Conservation and Recovery Act (RCRA). RCRA regulates on-going hazardous waste handling and disposal.

Regulations

329 IAC 3.1
40 CFR 260 - 270

Keys to Compliance

Compliance responsibilities are determined by generator classification. IUB is a large quantity generator because it generates more than 2,200 lbs of hazardous waste (HW) per month. Small quantity generators produce between 220 lbs and 2,200 lbs per month. Conditionally exempt small quantity generators produce less than 220 lbs per month. Generator type is not fixed and may change on a month-to-month basis depending on the amount of HW generated.

- Manifest hazardous waste from “cradle-to-grave” using permitted disposal facilities and registered hazardous waste haulers.
- Maintain an Environmental Protection Agency (EPA) hazardous-waste-generator identification number.
- Meet labeling, container management, and storage area requirements.
- Accumulate waste no longer than 90 days in central storage areas. (Small quantity generators may accumulate for 180 days.)
- If small quantity generators accumulate more than 13,200 lbs of HW on site at any given time, they are a large quantity generator.
- Practice waste minimization.
- Limit “satellite accumulation” up to 55 gallons of hazardous waste or one quart of an acutely hazardous waste. (Satellite accumulation is storage near the point of generation before removal to a central storage area.)
- Prepare a hazardous waste contingency plan and provide worker training.

- Submit a biennial report of off-site shipments of hazardous wastes to EPA. (A biennial report is not required for small quantity generators.)
- Submit a manifest report in odd years to the Indiana Department of Environmental Management (IDEM) (Ph: 317-233-7745).
- Report to IDEM and the National Response Center (Ph: 1-800-424-8802) in the event of fire, explosion or release of hazardous waste.

Unusual Conditions

Conditionally exempt small quantity generators must send any hazardous wastes to a licensed facility but are essentially exempt from all other requirements.

Assistance

For the Bloomington campus see the *Indiana University Hazardous Waste Management Guide, Bloomington, 2005*

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Transportation of Bio-Hazardous Materials

General Requirements

This standard outlines specific shipping guidelines for the shipment of biological materials that are hazardous to humans, plants or animals. A certified shipper must ensure the appropriate packaging in accordance with the International Air and Transportation Association (IATA) and the Department of Transportation (DOT)

Regulation

49 CFR Part 173

Keys to Compliance

- Designate an IATA certified shipper/receiver for hazardous biohazardous materials.
- Regulated materials must be offered for transport or received only by the designated certified shipper.
- Develop and implement a written shipping and receiving plan.
- Maintain documentation of current IATA training in the biological safety office.
- Training must be updated every two years and whenever the regulation is amended.
- Maintain records of biohazardous materials shipped and received.
- Prior to ordering of biohazardous materials, an approved Institutional Biosafety Reporting form must be on file with the biological safety office.

Assistance

IUB Biological Safety Officer

812-856-3638

Hazardous Waste Operation and Emergency Response (HAZWOPER)

General Requirements

Employers who have an emergency response team that respond to chemical spills must provide this Occupational Safety and Health Administration (OSHA) required training to all emergency response personnel.

Regulation

29 CFR 1910.120(e)

Keys to Compliance

Provide and certify employee training for emergency responders. This OSHA required training meshes significantly with the Resource Conservation and Recovery Act (RCRA) required hazardous waste spill response plan commonly referred to as the "contingency plan."

Unusual Conditions

Employers who evacuate employees and do not allow employees to respond to an emergency are exempt if they provide an emergency action plan in accordance with **Fire Prevention Regulations-*Employee Emergency Plans and Fire Prevention Plans*** (29 CFR 1910.38), page 4-1.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005

General Spill Reporting

General Requirements

Spill reporting requirements are included in many regulations. However, the requirements are similar and reports are made, in most cases, to the same agencies.

Regulations

Indiana Spill Rule - 327 IAC 2-6.1
CERCLA (See page 3-17)
EPCRA (See page 3-18)
NPDES (See page 3-10)
RCRA (See page 3-12)
Title V Air Operating Permits (See page 3-8)
Transportation of Hazardous Wastes (See page 3-22)
Underground Storage Tanks - 329 IAC 9 (See page 3-20)

Keys to Compliance

- When (1) an accidental release of a hazardous substance, hazardous waste, oil, or objectionable substance (as defined in the Indiana Spill Rule) occurs and (2) in excess of the reportable quantity, a spill report is required.
- In general, the agencies to be notified are
 - * Indiana Department of Environmental Management (IDEM) Office of Environmental Response (Ph: 317-233-7745)
 - * National Response Center (Ph: 1-800-424-8802)
 - * For IUB, Monroe County Health Department (Ph: 812-349-2542)
 - * Local Emergency Planning Committee
 - * Local Utilities for sewer discharges
- Reports must be made in a timely fashion. In some regulations, this means within minutes.

Unusual Conditions

The local county health department should always be contacted as a public courtesy and for possible assistance.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

General Requirements

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) establishes reporting requirements for unpermitted releases of hazardous substances. In addition, CERCLA establishes liability for cleanup of improperly disposed hazardous substances or releases of hazardous substances.

Regulation

40 CFR 302

See also **Environmental Health Regulations-*Emergency Planning and Community Right-to-know Act***, page 3-18.

Keys to Compliance

- A release of a CERCLA listed hazardous substance in excess of the reportable quantity (RQ) must be reported. Exemptions from this reporting requirement include releases from the application or handling of pesticides, federally permitted releases, releases subject to the Resource Conservation and Recovery Act (RCRA), and releases that are wholly contained within a building or structure.
- A CERCLA report must be made immediately to the Indiana Department of Environmental Management (IDEM) (Ph: 317-233-7745), the National Response Center (Ph: 1-800-424-8802) and the Local Emergency Planning Committee (LEPC) (Ph: 911).

Unusual Conditions

Under CERCLA, Indiana University is liable and financially responsible for hazardous wastes that are disposed of improperly. Therefore, it is essential that campus generators rely on the University Office of Environmental, Health, and Safety Management (UOEHSM) to ensure that wastes are properly packaged and shipped to licensed disposal facilities. See **Environmental Health Regulations-*Hazardous Waste Management***, page 3-12

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Emergency Planning and Community Right-to-know Act (EPCRA)

General Requirements

The Emergency Planning and Community Right-to-know Act (EPCRA), also known as SARA Title III (Superfund Amendments and Reauthorization Act), requires facilities that use extremely hazardous substances or hazardous chemicals to provide information to emergency planning committees. The intent of this regulation is to encourage and support community planning efforts at the state and local levels and to provide citizens and local governments with information concerning potential chemical hazards in the community.

Regulations

40 CFR 355 and 370

Keys to Compliance

- Notify the emergency planning committees when extremely hazardous substances are present at or in excess of threshold quantities.
- Designate a facility emergency coordinator (FEC) to participate in the Local Emergency Planning Committee (LEPC) planning process.
- Submit material safety data sheets (MSDS) or comparable information to the Indiana Department of Environmental Management (IDEM), LEPC and the fire department for each hazardous chemical present at or above threshold levels.
- Submit annual inventory information on all hazardous chemicals present at or above threshold levels to the Indiana Department of Environmental Management (IDEM) by March 1st.
- Notify IDEM (Ph: 317-233-7745) and LEPC (Ph: 911) when there is an off-site release of a reportable quantity (RQ) of any extremely hazardous substance or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substance. Releases of CERCLA hazardous substances also require notification of the National Response Center (Ph: 1-900-424-8802).

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

PCB Waste Management

General Requirements

These regulations establish prohibitions of and requirements for the disposal of polychlorinated biphenyls (PCBs) and PCB items.

Regulations

329 IAC 4
40 CFR 761

Keys to Compliance

- Store, transport and incinerate PCB transformers and capacitors as specified in the regulations.
- PCB items with PCB concentrations of 50 parts per million (ppm) or greater may be stored for up to one year.
- A facility storing at least 99.4 pounds of PCBs contained in a PCB container or one or more PCB transformer or 50 or more PCB large, high or low voltage capacitors must submit an annual report to IDEM by July 1st.
- Light ballasts and items containing less than 50 ppm of PCB may be disposed of in a permitted sanitary landfill. A person may dispose of up to 25 light ballasts per day.
Note: IU recycles light ballasts.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Underground Storage Tanks (UST)

General Requirements

This regulation establishes technical standards and corrective action requirements for owners and operators of underground storage tanks (UST). The Underground Storage Tank Branch of the Indiana Department of Environmental Management (IDEM) administers these regulations.

Regulation

329 IAC 9

Keys to Compliance

- Notify IDEM when installing, purchasing, upgrading, temporarily closing, permanently closing, or performing a change-in-service for a UST.
- Ensure that UST systems meet performance standards for tank fabrication, corrosion protection, spill and overfill prevention equipment, operation, and release detection equipment.
- Ensure that persons who install, test, upgrade, close, remove or perform a change-in-service of a tank system are certified by the Indiana Fire Marshal.
- Within 24 hours of a release,
 - report the release to IDEM (Ph: 317-233-7745)
 - take immediate action to prevent any further release
 - identify and mitigate fire, explosion and vapor hazards.
- Complete all abatement, site characterizations, and corrective actions after a release as required.
- Complete all requirements for closure and change-in-service.
- Provide assurance that financial resources are available for taking corrective actions in the event of a release.
- Maintain records.

Unusual Conditions

As of December 22, 1998, all USTs must be (1) upgraded to comply with performance standards specified in the regulations or (2) removed.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005

Transportation of Hazardous Wastes

General Requirements

These regulations specify the requirements for the transportation of hazardous materials. Indiana University ships hazardous materials and is subject to these regulations.

Regulations

49 CFR 171 - 180

Keys to Compliance

- Complete all shipping papers and hazardous waste manifests.
- Package all hazardous materials in authorized containers.
- Mark and label the package and placard the vehicle, if required, for the hazards associated with the material.
- Provide training for all persons involved in the preparation of hazardous materials for transportation and the transportation of hazardous materials.
- Use only approved hazardous waste transporters.
- Report releases of hazardous materials during transportation immediately to the Indiana Department of Environmental Management (IDEM) Ph: 317-233-7745.

Unusual Conditions

The National Response Center (Ph: 1-800-424-8802) must be notified immediately if a release of hazardous materials during transportation results in death, hospitalization, property damages in excess of \$50,000, an evacuation of the general public for over an hour, closure of a major transportation artery or facilities for more than an hour, or changes in flight patterns.

Assistance

IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Spill Prevention Control and Countermeasures (SPCC)

General Requirements

The general purpose of the SPCC rule is to identify and eliminate the unlikely potential for any oil spill to reach surface waters in and around the IUB campus.

Regulation

40 CFR part 112

Keys to Compliance

In order to comply with the rule, facilities storing more than 1,320 gallons of oil must prepare an SPCC plan. This plan pertains to all oil vessels greater than 55 gallons and includes storage tanks, emergency generators, electrical transformers and hydraulic elevators. The plan must also address the following key requirements:

- A facility diagram depicting all storage tank locations.
- An inventory of oil storage containers.
- Secondary containment measures.
- Spill predictions.
- Spill Controls.
- Routine oil storage inspections and record keeping.
- Loading and unloading procedures.
- Proper transfer procedures.
- Oil storage security measures.
- Five-year plan review.
- Engineer approval.
- Emergency response procedures.
- Periodic training.

Assistance

IUB Environmental Health and Safety

812-855-6311

Fire Prevention Regulations

Employee Emergency Plans and Fire Prevention Plans

General Requirements

This standard applies when a particular Occupational Safety and Health Administration (OSHA) standard requires an emergency action plan and/or fire prevention plan.

Regulation

29 CFR 1910.38
29 CFR 1926.35

Keys to Compliance

- Implement a written emergency action plan that details the actions of employers and employees during evacuations due to fire and other emergencies.
- Include in the plan procedures to account for all employees.
- Post plan and evacuation routes.
- Provide employee training.
- Review the plan with each employee upon initial assignment, when responsibilities change, and whenever the plan changes.

Assistance

IUB Risk Management	812-855-9758
IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Indiana Fire Prevention Code

General Requirements

The intent of this code is to prescribe maintenance and operational rules for the safeguarding (to a reasonable degree) of life and property from the hazards of fire or explosion arising from the storage, handling and use of substances, materials and devices.

Regulations

Indiana Fire Code, 2003 Edition
675 IAC 22-2.3

Keys to Compliance

The Indiana Fire Prevention Code is an extensive set of regulations that addresses various aspects of fire prevention. Some topics particularly applicable to the IU community include exits, storage, extension cord usage, compressed gases, flammable and combustible liquids, and electrical hazards. Following are four of the many regulatory requirements that IU employees may face on a regular basis.

- Keep exits, corridors and fire escapes clear and unobstructed at all times.
- Maintain all fire detection systems, alarm systems, and fire extinguishing systems in working order at all times.
- Fire assemblies (such as fire doors into stairways) shall not be obstructed or otherwise impaired from their proper operation at any time.
- Ensure that exit signs are illuminated at all times and that emergency lighting is functioning properly.

For further information on the Fire Code and compliance assistance, contact the following offices.

Assistance

IUB Risk Management	812-855-9758
IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Portable Fire Extinguishers

General Requirements

These standards apply to the placement, use, maintenance, and testing of portable fire extinguishers when provided for employee use.

Regulation

29 CFR 1910.157
National Fire Protection Association (NFPA) 10

Keys to Compliance

- Locate, mount, and identify fire extinguishers so they are readily accessible to employees without subjecting the employees to possible injury.
- Assure that portable fire extinguishers are maintained in a fully charged and operable condition and kept in their designated places at all times except during use.
- Provide employee training at time of initial employment and annually thereafter.
- Provide annual maintenance and maintain written maintenance records for extinguishers.

Assistance

IUB Risk Management	812-855-9758
IUB Environmental Health and Safety	812-855-6311
IUPUI Environmental Health and Safety	317-274-2005
IUNW Environmental Health and Safety	219-981-4230
IUSB Environmental Health and Safety	574-520-4575

Appendix A: Important Phone Numbers - IU Bloomington

IUB Office of Environmental, Health, and Safety Management (UOEHSM)	(812) 855-6311
IU Police Department (IUPD)	9-911 or (812) 855-4111
Bloomington Township Fire Department	9-911 or (812) 339-1115
Bloomington Police Department	9-911 or (812) 349-4477
Bloomington Hospital Ambulance Service	9-911 or (812) 336-9229
Indiana State Department of Health (ISDH)	(317) 233-1325
Monroe County Health Department	(812) 349-2543
Promptcare East	(812) 353-6888
Bloomington Hospital Emergency Room	(812) 336-9313
IUB Risk Management	(812) 855-9758
IUB Office of the Vice President for Research Compliance	(812) 855-7865
IUB Physical Plant	(812) 855-8295
Bloomington Water and Wastewater Utilities	(812) 339-1444
Indiana Department of Environmental Management (IDEM)	(317) 232-8603 (800) 451-6027
IDEM Office of Environmental Response	(317) 233-7745
National Response Center (Chemical Response)	(800) 424-8802

Appendix B: Important Phone Numbers

IUB Office of Environmental, Health, and Safety Management	(812) 855-6311
IU Police Department (IUPD)	_____
Fire Department	_____
Police Department	_____
Ambulance Service	_____
Indiana State Department of Health (ISDH)	(317) 233-1325
County Health Department	_____
_____ Hospital Emergency Room	_____
IU Risk Management	_____
IU Physical Plant	_____
Water and Wastewater Utilities	_____
Indiana Department of Environmental Management (IDEM)	(317) 232-8603 (800) 451-6027
IDEM Office of Environmental Response	(317) 233-7745
National Response Center (Chemical Response)	(800) 424-8802

Appendix C: Important Phone Numbers – Other Campuses

IUPUI Environmental Health and Safety	(317) 274-2005
IUPU Columbus Facility Services	(812) 348-7237
IU East Business Office	(765) 973-8348
IUPU Fort Wayne Occupational Health and Safety	(260) 481-5744
IU Kokomo Physical Plant	(765) 455-9273
IU Northwest Environmental Health and Safety	(219) 981-4230
IU South Bend Environmental Health and Safety	(574) 520-4575
IU Southeast Physical Plant	(812) 941-2330