

INDUSTRIAL HYGIENE PROGRAM

Program Element R2-10-207(11)

Each agency shall develop and implement “An industrial hygiene program that encompasses an existing or potential health hazard within an agency, or those agency personnel may be exposed to during the course of work.”

“The program shall include a documented survey of agency facilities and work practices to identify areas of concern such as noise, air contamination, ergonomic factors, lighting and confined spaces. The program shall include procedures to notify employees of health hazards, medical monitoring when applicable and personal protective equipment requirements including training, fit testing and care.”

Industrial Hygiene (IH) is defined by the American Industrial Hygiene Association (AIHA) as “a science and art devoted to the anticipation, recognition, evaluation, and control of environmental factors or stresses, arising in or from the workplace, which may cause sickness, impaired health and well-being, or significant discomfort and inefficiency among workers, or among citizens of the community.”

Definition:	A written Industrial Hygiene Program, designed to protect employees from illness and injury, consists of procedures for the anticipation, recognition, evaluation, and control of the chemical, physical, and/or biological exposures when they exist in the workplace.
Why do I need this program?	The establishment of an Industrial Hygiene Program will protect employee health through recognition, evaluation, control, employee training, monitoring, recordkeeping, and annual program evaluation. Determining which Industrial Hygiene Program elements apply will involve a comprehensive assessment of your agency operations.
How do I know if this program applies to my agency and my specific job hazards?	When determining which Industrial Hygiene Program elements must be established, the work place assessment should focus on the following: Chemical substance/material hazards: <ul style="list-style-type: none">• Are workers using chemicals in operations or tasks that they perform?• Are chemicals stored in the workplace, or integral components of equipment?

- Are there Occupational Exposure Limits (OELs) for the chemicals used by the agency?
- If the answer is Yes, the agency must have a qualified individual, such as an industrial hygienist, conduct a Chemical Exposure Assessment for each chemical hazard that is identified to ensure that regulated OSHA Permissible Exposure Limits (PELs) are not exceeded.
- A Hazard Communication Program with site-specific procedures and training will be required.
- Determine routes of entry: inhalation, ingestion, injection, dermal absorption, and evaluate all pathways from the source to the receiver (worker).
- A Respiratory Protection Program must be established whenever respiratory protection is used as a means to control employee exposures to hazardous substances.
- Multiple programs are required when workers perform tasks in a laboratory using potentially hazardous chemicals.
- A Confined Space Program is required when workers must enter a confined space to perform job tasks.

Physical hazards:

- **Noise:** Whenever employees are exposed to noise levels above 85 dBA over an 8-Hour time weighted average and 50% dose, a Hearing Conservation Program is required.
- **Radiation:** Are there ionizing or non-ionizing radiation or electromagnetic materials or radiation producing machines in the workplace?
- **Ergonomics:** Are work areas and job procedures evaluated to identify potential back or repetitive motion injuries? This can be addressed by an ergonomics evaluation and plan.
- **Thermal Stress:** Are employees exposed to extreme heat or extreme cold temperatures for extended periods?

	<p>Biological hazards:</p> <ul style="list-style-type: none"> • Bloodborne pathogens: A Bloodborne Pathogen Program is required when employees may potentially be exposed to materials contaminated with blood or other potentially infectious materials (OPIM). • Tuberculosis or other infectious disease: Are employees exposed to other individuals who may carry an infectious disease? E.g. Healthcare, nursing, etc. <p>If the assessment identifies a potential in any of the above-mentioned areas then programs must be implemented to protect the workers from the potential hazards.</p>
<p>What are the minimum required elements and/or best practices for an Industrial Hygiene Program?</p>	<p>The following IH Program elements are required by OSHA and must be established whenever the specific exposure is present:</p> <ul style="list-style-type: none"> a. Hazard Communication; b. Laboratory Safety (Chemical Hygiene Plan); c. Hearing Conservation; d. Confined Space Entry; e. Handling and Disposing of Hazardous Waste; h. Asbestos Management; j. Chemical Exposure Assessment; k. Personal Protective Equipment; l. Respiratory Protection; m. Bloodborne Pathogens Protection; <p>The following IH Program elements are best management practices:</p> <ul style="list-style-type: none"> f. Back Protection; g. Ergonomics; i. Building Air Quality; n. Tuberculosis Protection <p>For more information on each of these elements, see Loss Prevention Manuals R2-10-207(11)(a) through R2-10-207(11)(n).</p>

Are there any mandatory training requirements or best practices that must be developed by the agency?

Individual Industrial Hygiene Program elements have specific training requirements. Below are the requirements found in the OSHA General Industry Standards. Regulatory requirements are not limited to OSHA, other applicable regulators may include EPA and DOT.

a.) Hazard communication - **Yes**, refer to OSHA 29 CFR 1910.1200

b.) Laboratory safety (Chemical Hygiene Plan) - **Yes**, refer to OSHA 29 CFR 1910.1450

c.) Hearing conservation - **Yes**, refer to OSHA 29 CFR 1910.95

d.) Confined Space Entry - **Yes**, refer to OSHA 29 CFR 1910.146

e.) Handling and Disposing of Hazardous Waste (HAZWOPER) - **Yes**, refer to OSHA 29 CFR 1910.120

f. and g.) Back Protection and Ergonomics – **No**, a proposed OSHA ergonomic standard can be found on www.osha.gov

h.) Asbestos Management - **Yes**, refer to OSHA 29 CFR 1910.1001

i.) Building Air Quality – **No**, EPA and ASHRAE had established industry guidelines for assisting with indoor air quality concerns and sick building syndrome (SBS)

j.) Chemical Exposure Assessment – **Yes**, refer to OSHA 29 CFR 1910 Subpart Z for a full list of Chemical Specific Standards

k.) Personal Protective Equipment - **Yes**, refer to OSHA 29 CFR 1910.132

l.) Respiratory Protection - **Yes**, refer to OSHA 29 CFR 1910.134

m.) Bloodborne Pathogens Protection - **Yes**, refer to OSHA 29 CFR 1910

n.) Tuberculosis Protection – **No**, refer the CDC/NIOSH and OSHA for more information on TB and other infectious diseases

<p>Are there specific requirements for documenting the program, training, etc...?</p>	<p>Yes. All of the required IH Program elements require documentation. If an agency determines, after evaluating the work area, that a particular program element is not applicable to the agency, the agency must document how the determination of non-applicability was made and why the element is not applicable.</p> <ul style="list-style-type: none"> • Pursuant to A.R.S. § 41-151.12: All employee exposure assessment records must be maintained for 30 years following an employee's term of employment and must be kept separated from the employee personnel file. • All employee-training records must be retained for 3 years after the training was received.
<p>Are there any resources available that can assist me in putting together an Industrial Hygiene Program?</p>	<p>Yes. Risk Management has an Industrial Hygienist and Loss Prevention Consultants available who can assist managers and supervisors in identifying potential hazards, and guide agencies on the establishment of program elements.</p> <p>www.OSHA.gov</p> <p>OSHA Chemical Index: https://www.osha.gov/dts/chemicalsampling/toc/chmn_A.html</p> <p>The American Conference of Governmental Hygienists (ACGIH) TLV Booklet http://www.nsc.org/news_resources/facultyportal/AnswerKeys/FIH%206e%20Appendix%20B.pdf</p> <p>The National Institute of Occupational Safety and Health (NIOSH) Pocket Guide: http://www.cdc.gov/niosh/npg/default.html</p>