



Competency 2.2 Industrial hygiene personnel shall demonstrate the ability to determine the adequacy of local compliance with the industrial hygiene-related sections and/or requirements of Department of Energy (DOE) Orders such as the following:

- **DOE Order 3790.1B, Federal Employee Occupational Safety and Health Program**
- **DOE Order 5000.3B, Occurrence Reporting and Processing of Operations Information**
- **DOE Order 5480.1B, Environment, Safety and Health Program for Department of Energy Operations**
- **DOE Order 5480.4, Environmental Protection, Safety, and Health Protection Standards**
- **DOE Order 5480.8A, Contractor Occupational Medical Program**
- **DOE Order 5480.9A, Construction Project Safety and Health Management**
- **DOE Order 5480.10, Contractor Industrial Hygiene Program**
- **DOE Order 5480.19, Conduct of Operations Requirements for DOE Facilities**
- **DOE Order 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities**
- **DOE Order 5480.22, Technical Safety Requirements**
- **DOE Order 5480.23, Nuclear Safety Analysis Reports**
- **DOE Order 5481.1B, Safety Analysis and Review System**
- **DOE Order 5482.1B, Environment, Safety, and Health Appraisal Program**
- **DOE Order 5483.1A, Occupational Safety and Health Program for DOE Contractor Employees at Government Owned Contractor Operated Facilities**
- **DOE Order 5484.1, Environmental Protection, Safety, and Health Protection Information Reporting Requirements**
- **DOE Order 5500.3A, Planning and Preparedness for Operational Emergencies**



1. Supporting Knowledge and Skills

- a. Describe the purpose, scope, and application of the requirements detailed in the listed Orders with respect to industrial hygiene.
- b. Discuss what constitutes acceptable contractor compliance/work performance consistent with the requirements of the above Orders.
- c. Using an appropriate level of coverage, evaluate contractor compliance with the requirements of the selected Orders. During this evaluation, demonstrate the ability to properly conduct interviews, observations, and document reviews.
- d. Given data from an evaluation, analyze the results of the evaluation to determine contractor compliance or noncompliance with the requirements.
- e. Given the results from an analysis of contractor compliance or noncompliance, document the results and communicate them to contractor and Department line management.

2. Recommended Reading

Review

- The listed DOE Orders or their current replacements.

3. Summary

A variety of DOE Orders and guidelines contain requirements and information relating to industrial hygiene.

The industrial hygiene-related content of DOE Orders is as follows:

DOE Order	Industrial Hygiene Aspects
DOE 3790.1B, <i>Federal Employee Occupational Safety and Health Program</i> (canceled except for Chapter 8)	Key IH Responsibilities <ul style="list-style-type: none"> • Chapter 8 lists requirements for federal occupational medicine program.
DOE 5000.3B, <i>Occurrence Reporting and Processing of Operations Information</i>	DOE policy to ensure timely identification, categorization, notification, and reporting to DOE management of all reportable occurrences at DOE-operated facilities or DOE-owned, contractor-operated facilities. <ul style="list-style-type: none"> • Requires reporting of unusual or off-normal exposure events.



DOE Order	Industrial Hygiene Aspects
DOE 5480.1B, <i>Environment, Safety and Health Program for Department of Energy Operations</i>	<ul style="list-style-type: none"> • Ensures that contractors execute ES&H program elements. • Requires contractors' appraisal program be in accordance with DOE Order 5482.1B.
DOE 5480.4, <i>Environmental Protection, Safety, and Health Protection Standards</i>	<ul style="list-style-type: none"> • Lists IH standards mandatory to DOE operations.
DOE 5480.8A, <i>Contractor Occupational Medical Program</i>	<ul style="list-style-type: none"> • Describes occupational medicine program elements not driven by exposure.
DOE 5480.9A, <i>Construction Project Safety and Health Management</i>	<ul style="list-style-type: none"> • Requires that project managers are trained. • Requires that construction project acquisition documents include provisions that allow for noncompensable work stoppages. • IH input may be required during planning, reviews, and evaluations.
DOE 5480.10, <i>Contractor Industrial Hygiene Program</i>	<ul style="list-style-type: none"> • Requires the following: <ul style="list-style-type: none"> – Internal directives/operating procedures – IH review of construction plans – IH coordination with occupational medicines – IH participation in procurement – The performance of surveys describing all potential hazards – Reports to be forwarded to First Line supervisors – Exposure be controlled – Periodic program reviews – A Carcinogen Control Program – An IH staff that is qualified and sufficient – Adequate sampling capability – Sampling data be retrievable
DOE 5480.19, <i>Conduct of Operations Requirements for DOE Facilities</i>	<ul style="list-style-type: none"> • Requires personal protection against chemical and physical agents and investigation of abnormal events.
DOE 5480.20A, <i>Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities</i>	<ul style="list-style-type: none"> • Lists minimum requirements of education and experience for nuclear facility technical personnel.
DOE 5480.22, <i>Technical Safety Requirements</i>	<ul style="list-style-type: none"> • Contains no apparent IH requirements.
DOE 5480.23, <i>Nuclear Safety Analysis Reports</i>	<ul style="list-style-type: none"> • Although primarily a nuclear U.S. document, requires evaluation of respiratory protection program and potential exposure to hazardous materials.
DOE 5481.1B, <i>Safety Analysis and Review System</i>	<ul style="list-style-type: none"> • No explicit IH responsibilities; however, IH usually has involvement in safety analysis program.
DOE 5482.1B, <i>Environment, Safety, and Health Appraisal Program</i>	<ul style="list-style-type: none"> • Contains no specific IH responsibilities beyond the inference of potential IH involvement or the performance of appraisals in a compatible format.



DOE Order	Industrial Hygiene Aspects
DOE 5483.1A, <i>Occupational Safety and Health Program for DOE Contractor Employees at GOCO Facilities</i>	<ul style="list-style-type: none"> • Describes how DOE performs inspections of contractor operations, and how DOE investigates complaints from contractor personnel.
DOE 5484.1, <i>Environmental Protection, Safety, and Health Protection Information Reporting Requirements</i>	<ul style="list-style-type: none"> • Requires the investigation of occurrences, occupational illnesses resulting in hospitalization, and series of occupational illnesses.
DOE 5500.3A, <i>Planning and Preparedness for Operational Emergencies</i>	<ul style="list-style-type: none"> • Requires use of Emergency Response Planning Guidelines (ERPGs) and the monitoring of exposure during emergencies.
DOE 440.1, <i>Worker Protection Management for DOE Federal and Construction Employees</i>	<ul style="list-style-type: none"> • Contains Industrial Hygiene Program requirements for both contractor and federal employees and replaces DOE 5480.10 when written into new contracts and DOE 3790.1B.

4. Suggested Exercises

Please refer to Scenario 7 in the Scenario section of this document.