

ORAU POLICY AND PROCEDURE ESH-100

SUBJECT: INTEGRATED SAFETY MANAGEMENT (ISM)

CANCELLATION: This policy supersedes policy ESH-IPD-100, dated 05-02-03.

DATE: March 1, 2004

INITIATING ORGANIZATION: President's Office

APPLICABILITY: This policy applies to all employees.

POLICY STATEMENT

Within Oak Ridge Associated Universities (ORAU) operations, safety is an integral part of all that we do. Nothing is more important than employee safety. Safety impacts people, which means it impacts all that we are about and all that we do. Our overarching objective is zero accidents. Anything less than a focus on preventing all accidents is unacceptable.

Inherent in our philosophy of zero accidents is that we need to continue building the right culture. The foundation for our philosophy is that it involves all of us--line manager leadership and employee involvement. It takes all of us working together to make ORAU safer. The culture we want to achieve is one that rests on behavior based safety--looking out for one another.

Our approach to building the right culture is **attitude, awareness, action, and access to management:**

- Having an attitude that there is nothing more important than safety; safety is at the top of our list of management and operational priorities.
- Being aware of hazards and things that impact our ability to conduct our work safely.
- Taking action to mitigate those hazards by applying the functions and principles of Integrated Safety Management (ISM).
- Having access to management for identification and resolution of safety issues.

ORAU embraces the concept of ISM in the conduct of daily operations. All managers and employees together are expected to systematically define the scope of work and its hazards, analyze the hazards, develop and implement hazard controls, perform work within controls, and provide feedback for continuous improvement.

In support of this, ORAU fosters free and open expression of safety concerns without fear of reprisal, maintains safe and productive working environments, and holds employees at all levels accountable for workplace safety.

ORAU has identified the Department of Energy (DOE) Voluntary Protection Program (VPP) as the benchmark of health and safety program success and has targeted VPP certification as an indicator of performance by which we can go beyond compliance with DOE orders, government regulations, and industry standards. This program encourages both the creative stretch for and the commitment to excellence through systematic approaches and cooperative efforts involving management, workers, and regulators.

REFERENCES

48 CFR 970.5204-2, Integration of Environment, Safety, and Health into Work Planning and Execution
DOE O 225.1A, Accident Investigations
DOE O 231.1A, Environment, Safety, and Health Reporting
DOE M 231.1-2, Occurrence Reporting and Processing of Operations Information

DOE O 440.1A, Worker Protection Management for DOE Federal and Contractor Employees
DOE O 442.1, Employee Concerns Program
DOE P 450.2, Identifying, Implementing, and Complying with Environment, Safety and Health Requirements
DOE P 450.4, Safety Management System Policy
DOE P 450.6, Secretarial Policy Statement, Environment, Safety and Health
DOE Voluntary Protection Program Manual
Oak Ridge Operations (ORO) Order 230, Chapter I, Environment, Safety, and Health Program for Oak Ridge Operations
ORO O 440, Chapter I, Worker Protection Management for DOE Federal and Contractor Employees
ORO O 450 Chapter V, ORO Integrated Safety Management Program
ORAU Policy GP-1100, Occupational Medicine Program
ORAU Health and Safety Manual
ORAU Integrated Safety Management System Program Description
ORAU Radiation Protection Manual
ORAU/ORISE FMS-7, Safe Subcontractor Work

DEFINITIONS

Close call: a non-injury incident, which potentially could have resulted in an operationally significant injury or could have caused substantial property damage. These events are less acute than the DOE-defined near-misses discussed below and do not meet the required DOE reporting definitions. However, they are potential precursors to more serious events, and are followed up and tracked in ORAU safety management systems (e.g., parking lot low speed "brake screeching," non-injury slips on icy walkways, and a dropped delivery package).

Leadership Team: individuals in positions of program directors, department directors, technical directors, functional directors, and executives.

Manager: individuals that are group managers, section managers, or a member of the ORAU Leadership Team.

Managers: leadership level that consists of group managers, section managers, section managers, directors, and executives.

Near miss: as defined in DOE Manual 231.1-2, Occurrence Reporting and Processing of Operations Information (ORPS), an operational event where barriers to an accident have been compromised such that no barriers or only one barrier remain (e.g., lack of fall protection, electric shock without injury, and unauthorized confined space entry).

RESPONSIBILITIES

A. Employee

- 1) Takes personal responsibility for maintaining a safe workplace by using prudent judgment in all matters related to the health and safety of fellow employees, visitors, and members of the general public, and in protection of the environment.
- 2) Observes established environment, safety and health (ES&H) practices and standards in daily routines and in any new work that may develop.
- 3) Understands the potential hazards in the workplace, uses hazard controls as directed by the unit manager, and assists in the development and use of Job Hazard Analyses (JHAs).
- 4) Understands the ISM Core Functions and Guiding Principles and employs them in day-to-day activities.
- 5) Participates in the ISM and VPP process by attending required training, performing inspections, reporting problems, offering suggestions, and other relevant activities.
- 6) Notifies his or her manager immediately upon learning of any hazardous condition, occupational injury or illness, equipment failures, near-miss experiences, or other hazardous conditions.
- 7) Exercises the authority to stop or suspend work, including the initiation of work, if an unsafe condition or serious hazard is suspected or discovered.

- 8) Maintains familiarity with and follows the provisions of ISM materials posted on the Safety 1st intranet site. This includes the ORAU ISM System Description, the unit-specific ISM plan, and other relevant information as posted.
- 9) Understands and exercises rights to have and maintain a safe and healthful work environment, including the use of the DOE Employee Concerns Management System in those situations that remain unresolved after notification of manager as described in the DOE Employee Concerns Reporting Form (Attachment 1).

B. Site Safety Representative

- 1) Coordinates activities involving the Environment, Safety and Health office personnel (ESH) and the organizational units.
- 2) Disseminates ES&H information to employees.
- 3) Reports problems and near-miss events to program managers and ESH for action.
- 4) Monitors environmental conditions for hazards in the workplace.
- 5) Assists manager in conducting quarterly ES&H walkthrough inspections.
- 6) Serves on Safety Council and participates in its regularly scheduled meetings and other activities.
- 7) Serves as a safety advocate in representing employee needs.
- 8) Assists in implementing ISM.
- 9) Assists ORAU in determining ES&H priorities for planning purposes.

C. Manager

- 1) Notifies the ESH director immediately upon learning of any event or condition that could adversely affect human health or safety, or environmental quality.
- 2) Takes prudent measures to protect human life and property, including exercising stop-or-suspend work authority if an unsafe condition or serious hazard is suspected or discovered.
- 3) Ensures that workers understand their stop-or-suspend work authority.
- 4) Involves workers in the JHA process to the greatest reasonable extent.
- 5) Develops, implements, and revises at least annually a unit-specific ISM plan that is consistent with the ORAU ISM System Description.
- 6) Ensures that workers comply with ISM plans and ORAU policies and procedures related to ES&H.
- 7) Holds staff accountable for worker protection practices.
- 8) Assists ORAU in determining ES&H priorities.
- 9) Encourages employee involvement in worker protection activities including development of goals, objectives, and performance measures.
- 10) Provides worker access to regulations, standards, written procedures, lessons learned, and reference documents, including material safety data sheets (MSDS) and results of sampling, monitoring, and inspections.
- 11) Informs workers of their rights and responsibilities, including the ability to accompany inspectors and to decline performance of a task when there is reasonable belief by the employee that both the circumstances of the task pose imminent risk of death or serious bodily harm and that there is insufficient time to seek effective redress through the normal hazard reporting and abatement procedures.
- 12) Provides worker protection training programs appropriate to the potential hazards and conditions.
- 13) Identifies existing or potential workplace hazards and evaluates the risk of associated worker injury or illness.
- 14) Reports and investigates all on-the-job injuries, illnesses, close calls and near misses.
- 15) Reduces or eliminates hazards; substitutes hazardous substances with less hazardous substances in procurement actions.
- 16) Addresses hazard control and abatement in the selection and purchase of equipment, products, and services.
- 17) Communicates to employees within their work group the sound practices that ensure ES&H compliance.
- 18) Ensures employee attendance at required ES&H training.
- 19) Monitors employees' ES&H practices and provides prompt corrective action when necessary.
- 20) Reports promptly and investigates all accidents, near misses, and close calls that occur in their assigned workplace.
- 21) Provides employees and visitors with appropriate ES&H training, including the use of ORISE ES&H Web-based refresher training.

- 22) Annually reviews employees' Physical Requirements and Working Conditions (PRWC) for accuracy of the actual working conditions and potential hazards.

D. Occupational Health Nurse

- 1) Plans and implements the occupational health program to provide services as necessary for worker protection and the promotion and maintenance of a healthful work environment.
- 2) Cooperates with other safety and health professionals to identify hazards and possible health risks.
- 3) Carries out programmatic duties as outlined in ORAU policy GP-1100, Occupational Medical Program.
- 4) Reviews PRWCs and schedules related pre-employment and mandatory physical exams, and other health care services as needed.

E. Director, ESH

- 1) Performs hazard assessments and ensures that appropriate controls are implemented at all worksites, including the use of engineering and administrative controls and personnel protective equipment.
- 2) Promotes the development, maintenance, and use of JHAs throughout ORAU.
- 3) Ensures that managers and workers understand their stop-or-suspend work authority. Also exercises stop-work authority when appropriate to discontinue suspected unsafe operations
- 4) Conducts an annual self-assessment, including compliance with the ORAU ISM System Description and unit-specific ISM plans.
- 5) Submits to the ORAU president an updated ORAU ISM System Description annually, or more frequently as needed.
- 6) Maintains an up-to-date calendar of ISM responsibilities for the next 12 months and informs the Safety Council of progress toward satisfying those responsibilities.
- 7) Establishes written policies, goals, and emphasis programs.
- 8) Evaluates workplaces for hazards and assesses worker exposures, as appropriate.
- 9) Assists managers in completing PRWC with regard to documenting potential workplace hazards.
- 10) Maintains effective liaison with managers to promote safety initiatives.
- 11) Meets regularly with the site safety representatives to discuss safety issues and initiatives.
- 12) Maintains knowledge of state-of-the-art technologies, legal interpretations, and current regulations.
- 13) Performs ES&H oversight of activities related to construction and maintenance work.
- 14) Participates with project managers in the review of plans and specifications for construction and renovation projects.
- 15) Conducts regular on-site inspections of major construction projects and completes a review with the project manager.
- 16) Ensures that ES&H awareness is promoted among managers, employees, and others (such as visitors, contractors, and community members) through orientation programs and regularly scheduled education and training sessions, as appropriate.
- 17) Investigates all hazardous conditions reported and takes appropriate action as necessary to eliminate or reduce the hazard.
- 18) Implements an effective surveillance program to determine if ES&H goals and objectives are being met.
- 19) Coordinates the Operational Awareness Visits by DOE representatives.
- 20) Ensures that standard operating procedures or similar directives on the manner in which work is performed include all appropriate ES&H requirements.
- 21) Notifies the director of the Oak Ridge Institute for Science and Education (ORISE) of any adverse event or condition that could significantly affect human health or safety, environmental quality, or continuation of operations.
- 22) Submits reports as required by law, regulations, directives, and ORAU policies and procedures.
- 23) Advises ORAU president and managers on ESH matters, including ISM and VPP.
- 24) Acts as gatekeeper for the Safety 1st website.
- 25) Analyzes safety-related data for patterns and trends. Summarizes safety data quarterly and makes available to all employees on the Safety 1st website.
- 26) Reviews policy and assures ORAU president that policy contains appropriate guidance for ORAU oversight and compliance responsibilities.

F. Director, Employment, Development & Performance (EDP)

- 1) Maintains and implements a current training plan for delivery of ES&H training prescribed by the director, ESH.
- 2) Documents attendance at ES&H training sessions and submits timely reports on employee attendance to accountable program managers.
- 3) Maintains permanent records (e.g., agendas and attendance documentation) for all ES&H training attended by ORAU employees, guest workers, consultants, and subcontractors, including courses and programs conducted outside ORAU.

G. General Counsel

- 1) Coordinates institutional response regarding policy.
- 2) Interprets policy documents as necessary.

H. President and Chief Executive Officer

- 1) Has overall operational responsibility and authority for ensuring that ORAU complies with this policy.
- 2) Ensures that every revised ORAU ISMS Program Description is submitted to DOE for review.

REQUIREMENTS/GUIDELINES

The ORAU ISM System Description is a comprehensive plan for implementing the ISM system program at ORAU. It explains how the ISM Core Functions and Guiding Principles flow down to unit-specific ISM plans, and it describes the administrative processes that must be followed to achieve the benefits of ISM.

PROCEDURES

Consistent with the provisions of DOE O 440.1A, Worker Protection Management for DOE Federal and Contractor Employees, the specific functional areas cited below shall serve as guidance as appropriate at ORISE facilities.

1) Hazard Assessment and Control

Managers are responsible for identifying existing and potential workplace hazards and evaluating the risk of associated worker injury or illness. This includes reviewing designs for new facilities and modifications to existing facilities and operations and procedures, and assessing worker exposure, program activities, and ergonomic hazards, with technical support from ESH. A comprehensive hazards survey has been completed for all ORISE facilities. Specific occupational hazards and control methods are addressed in the ORISE JHA documents that are readily available to all affected workers. Hazard control methods shall be selected based on the following hierarchy: substitution or elimination, engineering controls, work practices and administrative controls, and personal protective equipment. Managers shall maintain and provide employee access to MSDS records for all chemicals that are used in the workplace.

2) Accident Reporting

Managers shall promptly report and investigate all accidents, injuries, illnesses, near misses, and close calls that occur in their assigned workplace consistent with the ORISE Reporting On-the-Job Injuries and Near-Misses procedure. ESH will record the appropriate information and analyze the related data for patterns and trends. Safety data will be summarized quarterly and made available to all employees.

3) Worker Training

Managers shall provide employees and visitors with appropriate ES&H training, including the use of ORISE ES&H web-based refresher training.

4) Compliance with Standards and Codes

ES&H requirements, including directives, regulations, industry standards and Executive Orders, are established in the ORISE Work Smart Standards set.

5) Subcontractor work

Project managers in the Facilities and Transportation Department's (FTD) Facilities Management Section (FMS) shall ensure that subcontractors performing construction and maintenance work on DOE-owned or -leased facilities comply with applicable federal and state ES&H standards and codes and the requirements of Safe Subcontractor Work. FMS-7 specifies subcontractor requirements for project safety plans and subcontractor work permits and defines the responsibilities of FMS and ESH. ORAU Procurement personnel will ensure that the requirements of FMS-7 are included as part of the subcontract where appropriate. Procurement will assist as requested in the resolution of project hazardous work issues that arise during subcontract performance. All work involving subcontractors outside of FTD will come under the ISM plans and provisions of the sponsoring program or department.

6) Fire Protection

FTD and ESH manage a comprehensive fire protection program with the objective of providing an acceptable level of safety from fire and related hazards for DOE contractor personnel and for the public. This program is described in the ORAU Fire Safety and Procedure Document. Certain procedures are also described in the ORAU/ORISE Emergency Preparedness Manual. Together these documents cover facility fire protection, fire alarm notification and egress features, fire department response, fire protection criteria and procedures, apparatus and equipment, and personnel responsibilities.

7) Industrial Hygiene

ESH manages a comprehensive industrial hygiene program to reduce the risk of work-related disease or illness. The industrial hygiene program is described in the ORAU/ORISE Health and Safety Manual. It has several key elements, and these are described in procedural documents within the manual and are readily accessible as follows:

- Hazard Communication
- Chemical Hygiene Plan
- Ergonomics Program
- Respiratory Protection
- Bloodborne Pathogens Exposure Control Plan
- Hearing Protection
- Asbestos Management
- Biohazards
- Personal Protective Equipment
- Non-ionizing Radiation

8) Industrial Safety

ESH manages a comprehensive industrial safety program to reduce the risk of work-related injuries and disabilities. There are several major program areas that are detailed in the ORAU/ORISE Health and Safety Manual including the following focus areas:

- Personal Protective Equipment (PPE)
- Lockout/Tagout
- Forklift Safety
- Confined Space
- Gas Cylinder Safety
- Safety Inspections
- Flammable/Combustible Liquids
- Travel Safety
- Small Appliances and Coffee Makers
- Occurrence Reporting

- Storage Safety
- Visitor and Subcontractor Handbook

9) Radiological Health & Safety

a. Radiation Protection

ESH manages a comprehensive and effective Radiation Protection Program (RPP) to reduce the risk of occupational radiation exposure to workers and members of the general public. The RPP as administered by ORISE shall be consistent with the requirements of 10 CFR 835 and shall be approved by DOE. The content of the RPP is commensurate with the nature of the activities performed and includes plans and measurements for applying the “as low as reasonably achievable” (ALARA) process to occupational exposures. The RPP specifies the existing and/or anticipated operational tasks that are intended to be included within the scope of the RPP. Any task outside of the scope of the RPP must not be initiated without prior approval by DOE. The RPP includes any plans or schedules for achieving compliance with applicable regulatory requirements. Any updates to the ORISE RPP shall be submitted to DOE whenever there is a change or addition prior to the initiation of a task not within the scope of the current RPP or within 180 days of the effective date of any modification or amendment to 10 CFR 835. Changes, additions, or updates to the RPP may become effective without prior DOE approval only if the changes do not decrease the effectiveness of the RPP. Internal audits of all functional elements of the RPP are conducted at least every 36 months. Individuals responsible for the development and implementation of the RPP to ensure compliance with the requirements of 10 CFR 835 have appropriate education, training, and skills to discharge these responsibilities. Written procedures are developed and implemented as necessary to ensure compliance with applicable regulatory requirements and that are commensurate with the radiological hazards performed for DOE.

b. ALARA

The ALARA Committee is a chartered committee of ORISE that meets on a quarterly basis. The chairman of the committee is appointed by the ORISE Radiation Safety Officer, and each program director nominates a member for areas involved in radiological work. The ORISE ALARA Committee is established to meet the requirements of 10 CFR 835 and ORISE policy and procedures. The mission of the ORISE ALARA Committee is to advise the ORISE Radiation Safety Officer and Program Business Units on radiation safety. This advice is based on the principles that radioactive material and radiation producing devices will be handled in a safe manner and radiation exposures of employees and members of the general public will be kept as low as reasonably achievable (ALARA). ORISE implements ALARA through several mechanisms. The first is the monitoring of radiological workers to ensure that radiation exposures are maintained as low as reasonably achievable. Quarterly, the Radiation Safety Officer reviews the summary exposure report for all workers to determine if doses are within expected parameters. The second mechanism is procurement monitoring of radioactive material. All purchases of radioactive material must be reviewed and approved by the Radiation Safety Officer prior to purchasing. This ensures that the quantity of material is kept as low as necessary for the proposed operation and minimizes waste. In addition, this mechanism ensures that the purchaser is qualified to handle the radioactive material he or she wishes to purchase. A third mechanism employed at ORISE is proper planning of work projects involving radioactive material and/or potential for contamination. Prior to any work process involving radioactive material, the Radiation Safety Officer must review a work plan or radiation work permit that describes the operation, any hazards that may be encountered, and safety measures that are to be implemented to mitigate the hazards. The function of the ALARA Committee is described in detail in the Radiation Protection Manual.

c. Nuclear Materials Control and Accountability

The Nuclear Materials Control and Accountability Program components are addressed in the ORISE Nuclear Materials Control and Accountability Plan.

d. Radioactive Waste Management

Radioactive Waste Management policies, procedures, plans, and controls are addressed in an ORAU/ORISE Site-Wide Radioactive Waste Management Basis document. The Waste Certification Officer is authorized to suspend operations that generate waste deemed to be outside the scope of the ORAU/ORISE Site-Wide Radioactive Waste

Management Basis document. In addition, the ORISE program for certification of waste will be addressed in the ORAU/ORISE Waste Certification Program Plan.

10) Occupational Health

Occupational health program components are addressed in ORAU policy GP-1100, Occupational Medical Program.

11) Boiler and Pressure Vessel Safety

Pressure vessel safety is managed by the FTD/FMS. All ORISE boilers, pressure vessels, and relief devices are inspected and tested in strict accordance with the Tennessee Boiler and Unfired Pressure Vessel Inspection Law, Rules, and Regulations. These requirements are consistent with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Safety Code, Section I and Section VIII, and the American National Standards Institute (ANSI)/ASME B.31 Process Piping Code.

FMS maintains a database of all boilers and pressure vessels at the Oak Ridge site. This database is used in conjunction with the FMS Preventive Maintenance Scheduler Application program to ensure all boilers, pressure vessels, and relief devices are inspected and documented in accordance with the above regulatory requirements. FMS also maintains a copy of all state of Tennessee inspection reports and certifications in its central files.

12) Motor Vehicle Safety

Motor vehicle safety requirements are addressed in ORAU policy FM-300, Vehicle Management Policy, and in the ORAU Vehicle Management Implementation Procedures Manual.

13) Suspect and Counterfeit Item (S/CI) Controls

FTD and ESH conduct an S/CI identification process commensurate with the risks posed by the ORISE facility to ensure that the controls are appropriate to the circumstances. Major components of the process include training, inspection, identification, and reporting.

In addition to the 13 items cited above, refer to the ORAU Health and Safety Manual, the Emergency Preparedness Manual, and the Radiation Protection Manual for specific requirements and guidance. The requirements detailed in these manuals are incorporated into this policy by reference and hereby become a part of this policy.

Policy approved and signed by Ronald D. Townsend, ORAU President, on March 1, 2004.

ATTACHMENT

[Employee Concerns Reporting Form](#)