

Office of Fossil Energy Headquarters

Integrated Safety Management

System Description

May 31, 2007

APPROVED BY:

Thomas D. Shope 6/12/07

Thomas D. Shope
Acting Assistant Secretary for Fossil Energy (FE-1)

Victor K. Der 6/4/07

Victor K. Der
Deputy Assistant Secretary for Clean Coal (FE-20)

James A. Slutz 6-5-07

James A. Slutz
Deputy Assistant Secretary for Oil and Natural Gas (FE-30)

John D. Shages 6/10/07

John D. Shages
Deputy Assistant Secretary for Petroleum Reserves (FE-40)

Charles J. Roy 6/4/07

Charles J. Roy
Director, Office of Budget and Financial Management (FE-3)

Mark J. Matarrese 5/31/07

Mark J. Matarrese
Director, Office of Environment, Security, Safety and Health (FE-7)

Executive Summary	4
Definitions	5
Acronyms	8
1.0 Purpose, Objectives and Scope.....	9
2.0 Overview of the ISM System.....	12
3.0 Management Expectations	20
4.0 Roles and Responsibilities.....	22
5.0 Implementation of ISM.....	24
5.1 Implementation of ISM Guiding Principles.....	24
5.2 Implementation of the Five Core Functions.....	32
5.3 Integration with QA, EMS and ISSM	35
5.4 Communications and Training Plan	38
6.0 Other Safety-Related Initiatives	41
7.0 Annual ISM Maintenance and Continuous Improvement Processes	43
7.1 ISM System Description Maintenance and Continuous Improvement Process.....	43
7.2 ISM Annual Oversight, Self-Assessments, Annual Effectiveness Reviews, and Annual Declarations Process.....	46
7.3 ISM Annual Safety Performance Objectives, Measures and Commitments Process	49
8.0 Conclusions	52

Executive Summary

With the issuance of DOE M 450.4-1, Integrated Safety Management System Manual, Integrated Safety Management (ISM) System Descriptions are to be developed for each DOE Secretarial Office. This document constitutes Fossil Energy's (FE) Headquarters (HQ) ISM System Description.

This ISM System Description is the primary management system description for the FE-Secretarial Office for accomplishing work in a safe and environmentally sound manner. This ISM System Description describes the following:

- How the FE-Secretarial Office defines its work activities for the purposes of achieving the ISM objective of safe mission accomplishment.
- The ISM mechanisms, processes, and methods by which the FE-Secretarial Office implements:
 - ISM guiding principles (and supplemental safety culture elements) to create an effective environment for achieving high levels of ISM performance
 - ISM core functions.
- How the Environmental Management System (EMS), Quality Assurance Program (QAP), Integrated Safeguards and Security Management System (ISSM), and other management processes and systems are integrated.
- How the FE-Secretarial Office:
 - Measures ISM effectiveness
 - Performs annual ISM effectiveness reviews
 - Prepares annual ISM declarations
 - Improves the effectiveness of the ISM system.
- How the FE-Secretarial Office establishes, documents, and implements relevant safety performance objectives, measures, and commitments.
- How the FE-Secretarial Office maintains its ISM System Description so that it is accurate and up-to-date.
- How the FE-Secretarial Office plans on continuously improving the effectiveness and efficiency of its ISM System, primarily using the results of the annual ISM effectiveness review and the annual ISM declaration statement, in order to promote and demonstrate continuous improvement in its performance of safe work activities.
- The high-level implementing mechanisms and processes for use by DOE-FE's Field Offices and Sites to meet the requirements in DOE M 450.4-1, Integrated Safety Management System Manual.

Definitions

- *Annual ISM declaration:* A determination by a DOE or contractor organization regarding whether it is in full conformance with the requirements and expectations for an effective Integrated Safety Management system and its bases for this determination. An annual ISM declaration must be based on an annual ISM effectiveness review.
- *Annual ISM effectiveness review:* An annual review conducted by a DOE or contractor organization for determining whether its Integrated Safety Management system is in full conformance with the requirements and expectations for effective implementation. The annual ISM effectiveness review is a qualitative review that encompasses multiple elements, including review of: self-assessments, oversight reviews results, integrated reviews across multiple reporting elements; performance against established performance objectives, measures, and commitments; and other feedback and performance information.
- *Behavior based safety:* A proactive approach to injury prevention that focuses on at-risk behaviors that can lead to an injury or on safe behaviors that can contribute to injury prevention.
- *Core functions (or ISM core functions):* The core safety management functions are defined in DOE P 450.4, Safety Management System Policy, to be (1) define the scope of work; (2) analyze the hazards; (3) develop and implement hazard controls; (4) perform work within controls; and (5) provide feedback and continuous improvement. These functions are also identified in DEAR 48 CFR 970.5223-1(c).
- *Guiding principles (or ISM guiding principles):* Conditions for performance of work that an integrated safety management system must address. The guiding principles are defined in DOE P 450.4, Safety Management System Policy, to be: (1) line management responsibility for safety; (2) clear roles and responsibilities; (3) competence commensurate with responsibilities; (4) balanced priorities; (5) identification of safety standards and requirements; (6) hazard controls tailored to work being performance; and (7) operations authorization. These principles are also identified in DEAR 48 CFR 970.5223-1(b).
- *Integrated Safety Management:* The DOE approach for systematically integrating safety into management and work practices at all levels so that missions are accomplished while protecting the public, the worker, and the environment.
- *Integrated Safety Management System:* A safety management system that provides a formal, organized process whereby people plan, perform, assess, and improve the safe conduct of work efficiently and in a manner that ensures protection of workers, the public, and the environment. This management system is used to implement ISM to systematically integrate safety into management and work practices at all levels so that missions are accomplished while protecting the public, the worker, and the environment.

- *ISM Champion:* DOE employees designated to support their line management in implementing ISM and serving on the ISM Champions Council. The DOE ISM Champion is designated by the Deputy Secretary and chairs the ISM Champions Council. Each DOE Secretarial Office and Field Office designates an ISM Champion to support them in ISM implementation activities.
- *Line management:* Any management level within the line organization, including contractor management that is responsible and accountable for directing and conducting work.
- *Performance commitments:* Specific actions/steps taken during a specific year to further the achievement of long-term performance objectives. Performance commitments would be expected to address significant identified weaknesses or areas of improvement and may include either major corrective actions or major improvement actions.
- *Performance indicator:* Operational information indicative of the performance or condition of a facility, group of facilities, site, or process.
- *Performance measures:* Used to track progress and monitor achievement of performance objectives and commitments. Performance measures may include a combination of leading (process or behavioral) and lagging (outcome or results) indicators. These measures are changed as necessary to address the performance objectives and significant identified weaknesses and areas for improvement. Typically, annual performance measures are established for most performance measures.
- *Performance objectives:* Long-term management system goals or specific management objectives or deficiencies that need to be addressed. Performance objectives may be driven by strategic planning processes or safety goals processes (see DOE P 450.7). Performance objectives are expected to remain relatively unchanged over multiple years, with a bias toward continuously rising standards of measured performance.
- *Safety:* In ISM, the term “safety” is used synonymously with environment, safety, and health (ES&H) to encompass protection of the public, the workers, and the environment (DOE P 450.4). Safety is a dynamic non-event; a stable outcome produced by constant adjustments to system parameters. To achieve stability, change in one system parameter must be compensated for by changes in others parameters, through a process of continuous mutual adjustment.
- *Self-assessment:* A review, analysis or evaluation, that can be informal or formal and structured, of a program or management system performed by the organization responsible for the program or system to determine whether its implementation is in conformance with established requirements and/or defined expectations.
- *Supplemental safety culture elements:* Four elements, to supplement the original seven ISM guiding principles, to help organizations develop the appropriate context or environment for effective implementation of ISM systems: (1)

individual attitude and responsibility for safety; (2) operational excellence; (3) oversight for performance assurance; and (4) organizational learning for performance improvement.

Acronyms

- BBS – Behavior Based Safety
- CAIRS – Computerized Accident/Incident Reporting System
- COO – Conduct of Operations
- CRAD – Criteria and Review Approach Documents
- DEAR – Department of Energy Acquisition Regulation
- DOE – Department of Energy
- DOE-FE – Department of Energy Fossil Energy
- DOE-HQ – Department of Energy Headquarters
- EMS – Environmental Management System
- ES&H – Environment, Safety and Health
- ESS&H – Environment, Security, Safety and Health
- EWP – Enhanced Work Planning
- FE – Fossil Energy
- FE-HQ – Fossil Energy Headquarters
- FRAM – Functions, Responsibilities and Authorities Manual
- HQ – (DOE) Headquarters
- FE-HQ – Fossil Energy Headquarters
- ISM – Integrated Safety Management
- ISSM – Integrated Safeguards and Security Management
- OHSAS – Occupational Health and Safety Assessment Standard
- ORPS – Occurrence Reporting and Processing System
- QA – Quality Assurance
- QAP – Quality Assurance Program
- QMS – Quality Management System
- TQM – Total Quality Management
- VPP – Voluntary Protection Program

1.0 Purpose, Objectives and Scope

Purpose and Objectives:

The purpose and objectives of this ISM system description are to:

- (1) Clearly identify and institutionalize DOE-FE's requirements and responsibilities regarding the development and implementation of Integrated Safety Management (ISM) systems within DOE-FE. This directive provides requirements and guidance for FE-HQ and its Field Offices/Sites to ensure the development and implementation of an effective ISM system that is periodically reviewed and continuously improved.
- (2) Implement the requirements and guidelines outlined in DOE M 450.4-1 – Integrated Safety Management System Manual.

Specific Objectives:

The specific objectives of this DOE-FE ISM system description are to describe the following:

- (1) How the FE-Secretarial Office defines its work activities for the purposes of achieving the ISM objective of safe mission accomplishment.
- (2) The ISM mechanisms, processes, and methods by which the FE-Secretarial Office implements:
 - a. ISM guiding principles to create an effective environment for achieving high levels of ISM performance
 - b. ISM core functions.
- (3) How EMS, QAP, ISSM, and other management processes/systems are integrated.
- (4) How the FE-Secretarial Office will:
 - a. Measure ISM effectiveness
 - b. Perform annual ISM effectiveness reviews
 - c. Prepare annual ISM declarations
 - d. Improve the effectiveness of the ISM system.
- (5) How the FE-Secretarial Office will establish, document, and implement relevant safety performance objectives, measures, and commitments.
- (6) How the FE-Secretarial Office will maintain its ISM System Description.

Scope:

This ISM System Description will be implemented on a graded approach at FE-HQ, depending on the particular functions associated with each Program Office. For instance, this ISM System Description only applies to FE-20 to the extent that the individual requirements in each section of this ISM System Description apply to FE-HQ

operations, since FE-20 does not have significant and/or direct oversight of ISM implementation at a field office or site (e.g., NETL). The application of ISM principles and core functions does apply to FE-20 internal operations in FE-HQ. However, FE-1, FE-30 and FE-40 Program Offices have direct, frequent and significant management and oversight responsibilities for ISM implementation at field offices and sites (e.g., NETL, NPR-3/RMOTC and SPRPMO/SPR storage sites), so the full range of requirements presented in this ISM System Description apply to some degree to these Offices. FE-1, FE-30 and FE-40 Program Offices are directly responsible for ISM implementation and have chain-of-command, line authority over operations, personnel, and ESS&H budgets at these sites. FE-7 will assist FE-1 with oversight and implementation of ISM activities at NETL. FE-7 will also provide independent oversight of ISM implementation and performance of FE-30/NPR-3/RMOTC activities, as well as FE-40/SPRPMO/SPR storage site activities. FE-7 will provide ISM assistance to FE-20, FE-30 and FE-40, as requested. However, day-to-day, hands-on, line management of field operations is led by FE-30 and FE-40 personnel. Likewise, the degree/extent of implementation for any particular applicable requirement will be based on the risks presented. As an example, since FE-20 work activities at FE-HQ are typically of relatively low risk (e.g., occurring in an office environment), the programs and activities chosen to implement applicable ISM System Description requirements may be substantially less rigorous (e.g., in scope, breadth, resources allocated, documentation, etc.) than those chosen for FE Program Offices having oversight of higher risk activities. It should be noted that FE-HQ Quality Assurance (QA) requirements in this FE-HQ ISM System Description will apply equally to all FE Program Offices, including FE-20. In particular, since FE-20 and FE-30 Program Offices directly approve and authorize the expenditure of R&D funds and operations both at HQ and at field sites/offices, they have significant responsibility for ensuring the QA aspects of these R&D projects both at HQ and at field sites/offices as outlined in this ISM System Description (see Section 5.3 -- Integration with QA, EMS, ISSM, and in the DOE-HQ FE Quality Assurance Program Plan). FE-40 has direct responsibility, accountability and oversight of QA activities at the SPRPMO and SPR storage sites.

References:

- (1) DOE O 151.1 – Comprehensive Emergency Management System (latest version)
- (2) DOE P 226.1 – Department of Energy Oversight Policy (latest version)
- (3) DOE O 226.1 – Implementation of Department of Energy Oversight Policy (latest version)
- (4) DOE O 414.1 – Quality Assurance (latest version)
- (5) DOE M 411.1-1 – Safety Management Functions, Responsibilities, and Authorities Manual (FRAM) (latest version)
- (6) DOE O 440.1 – Worker Protection Management for DOE Federal and Contractor Employees (latest version)
- (7) DOE O 450.1 – Environmental Protection Program (latest version)

- (8) DOE G 450.1-1 – Implementation Guide for Use with DOE O 450.1, Environmental Protection Program (latest version)
- (9) DOE G 450.1-2 – Implementation Guide for Integrating Environmental Management Systems into Integrated Safety Management Systems (latest version)
- (10) DOE P 450.2 – Identifying, Implementing and Complying with Environment, Safety and Health Requirements (latest version)
- (11) DOE P 450.4 – Safety Management System Policy (latest version)
- (12) DOE M 450.4-1 – Integrated Safety Management System Manual (latest version)
- (13) DOE G 450.4-1 – Integrated Safety Management System Guide for Use with Safety Management System Policies (DOE P 450.4, DOE P 450.5, and DOE P 450.6); the Functions, Responsibilities, and Authorities Manual; and the DOE Acquisition Regulation (latest version)
- (14) DOE P 450.7 – Environment, Safety and Health (ES&H) Goals (latest version)
- (15) DOE-HDBK-3027-99 – Integrated Safety Management Systems Verification Team Leader’s Handbook (latest version)
- (16) DEAR 970.5223-1 – Integration of environment, safety, and health into work planning and execution
- (17) 10 CFR 851 – Worker Safety and Health Program.

2.0 Overview of the ISM System

Purpose:

To describe the overall philosophy of, considerations associated with, and roles and responsibilities within the DOE-HQ FE's ISM System Description.

Overall Philosophy and Considerations:

- (1) DOE-FE organizations (except government-owned, government-/contractor-operated facilities operating in the field) do not normally perform "operational work activities" involving physical, hands-on work.
- (2) "Operational work activities" are typically the focus of ISM due to the fact that physical work activities are the main source of active human errors that can lead to facility occurrences and organizational accidents.
- (3) As such, DOE-HQ FE ISM System Description is primarily interested in:
 - a. Providing a framework for providing DOE-FE oversight of ISM implementation and effectiveness at government-owned and government-operated sites.
 - b. Providing a framework for providing DOE-FE oversight of ISM implementation and effectiveness at its contracted operations (e.g., management and operations contracts) through its Field Office oversight arrangements.
 - c. Promoting DOE-HQ FE ISM leadership, ISM vision, ISM integration, and a positive ISM environment.

Work Activities:

Based on DOE-HQ FE's lead oversight and budgetary functions, the work activities most pertinent for inclusion in the ISM system description are the following:

- (1) Providing clear and visible DOE-FE leadership vision on the ISM system.
- (2) Establishing a positive DOE-FE environment for effective ISM system implementation.
- (3) Establishing missions and translating these missions into meaningful and approved scopes of work.
- (4) Establishing/allocating annual budgets, including making decisions on mission-safety trade-offs.
- (5) Prioritizing major projects and work-scopes, and allocating resources to ensure that work and safety are integrated and that sufficient resources are available to conduct work safely.
- (6) Evaluating the safety impacts of resource short-falls.

- (7) Developing DOE-FE-specific safety rules, directives, and standards.
- (8) Establishing DOE-FE contracts, including delineation of safety requirements.
- (9) Reviewing and commenting on DOE-FE major site support and management and operation contracts, including delineation of safety requirements.
- (10) Approving exemptions to safety requirements.
- (11) Assigning DOE-FE safety management roles and responsibilities.
- (12) Recruiting highly qualified, technical Federal personnel.
- (13) Reviewing and approving contractor safety documentation, where appropriate, such as documented safety analyses, technical safety requirements, ISM Systems, Quality Assurance Programs, worker safety and health programs, and contractor assurance systems.
- (14) Determining when authorization agreements are needed and approving these authorization agreements.
- (15) Maintaining Federal awareness of Federal and contractor work activities in the field, including implementation of hazard controls.
- (16) Establishing and implementing feedback and improvement programs/processes to facilitate a culture that promotes ongoing examination and learning.
- (17) Monitoring various sources of feedback information and promoting/integrating feedback from various sources.
- (18) Developing and implementing DOE-FE corrective actions and improvements actions.
- (19) Monitoring performance of corrective actions and improvement actions.
- (20) Planning and performing self-assessments of assigned Federal work activities.
- (21) Planning and performing oversight of contractor work activities.
- (22) Providing clear expectations for the conduct of DOE-FE line management reviews and self-assessment activities, and when appropriate, including direction on criteria and review approach documents (CRADs) to use.
- (23) Planning and performing DOE-FE line management oversight of DOE-FE activities.
- (24) Performing independent oversight of DOE-FE and contractor activities.

- (25) Identifying and acting on ISM weaknesses and opportunities for improvement.
- (26) Reviewing annual ISM declarations and supporting documentation by Field Offices/Sites.
- (27) Performing annual DOE-FE HQ ISM effectiveness reviews.
- (28) Providing direction, establishing schedules, and approving annual DOE-FE performance objectives, performance measures, and commitments.
- (29) Integrating management systems and processes for safety, quality, environmental protection and security.
- (30) Determining when full ISM verification reviews are necessary.

Roles and Responsibilities:

FE Secretarial Office (FE-1) shall:

- (1) Appoint a DOE-HQ FE ISM Champion.
- (2) Provide clear and visible DOE-FE HQ leadership vision on ISM philosophy and the ISM system.
- (3) Establish a positive DOE-FE HQ environment for effective ISM system implementation.
- (4) Establish missions and translates these missions into meaningful scopes of work; approves work scopes.
- (5) Establish/allocate annual budgets, including making decisions on mission-safety trade-offs.
- (6) Prioritize major projects and work-scopes; allocate resources to ensure that work and safety are integrated and that sufficient resources are available to conduct work safely.
- (7) Evaluate the safety impacts of resource short-falls.
- (8) Approve DOE-HQ FE-specific safety rules, directives, and standards.
- (9) Assign safety management roles and responsibilities to DOE-HQ FE and FE line management.
- (10) Recruit highly qualified, technical DOE-Federal personnel.
- (11) Plan and perform DOE-FE line management oversight of DOE-FE activities.
- (12) Perform independent oversight of DOE-FE and FE-contractor activities.

- (13) Identify and act on ISM weaknesses and opportunities for improvement.
- (14) Review annual ISM declarations and supporting documentation by DOE-FE HQ Offices and Field Offices/Sites, and develop a consolidated DOE-FE ISM Declaration.
- (15) Approve the “high-level” or “aggregated” DOE-FE ISM declaration.
- (16) Perform DOE-HQ FE annual ISM effectiveness reviews.
- (17) Provide direction and approves annual DOE-FE HQ performance objectives, performance measures, and commitments.
- (18) Determine when full ISM verification reviews are necessary.

FE Offices of the Deputy Assistant Secretaries (FE-20, FE-30, FE-40), with the assistance of FE-7 as requested, shall:

- (1) Provide clear and visible DOE-HQ FE Office leadership vision on ISM philosophy and the ISM system.
- (2) Establish a positive DOE-HQ FE Office environment for effective ISM system implementation.
- (3) Establish missions and translate these missions into meaningful scopes of work; approve work scopes.
- (4) Establish/allocate annual Office budgets, including making decisions on mission-safety trade-offs.
- (5) Prioritize major projects and work-scopes; allocate resources to ensure that work and safety are integrated and that sufficient resources are available to conduct work safely.
- (6) Evaluate the safety impacts of resource short-falls.
- (7) Assign DOE-HQ FE safety management roles and responsibilities within their respective Office.
- (8) Recruit highly qualified, technical DOE-Federal personnel.
- (9) Review and approve, as appropriate, contractor safety documentation, such as documented safety analyses, technical safety requirements, ISM systems descriptions, quality assurance programs, worker safety and health programs, and contractor assurance systems.
- (10) Maintain DOE-Federal awareness of contractor work activities, as appropriate, including implementation of hazard controls.
- (11) Monitor various sources of feedback information; promote and integrate feedback from various sources.

- (12) Develop and implement DOE-FE HQ corrective actions and improvements actions for their Office.
- (13) Monitor DOE-FE HQ performance of corrective actions and improvement actions associated with their Office.
- (14) Plan and perform self-assessments of DOE-FE HQ work activities.
- (15) Plan and perform oversight of contractor work activities, as appropriate.
- (16) Provide clear expectations for the conduct of DOE line management reviews and self-assessment activities, including direction on criteria and review approach documents (CRADs) to use, as appropriate.
- (17) Plan and perform DOE-FE line management oversight of DOE-FE activities.
- (18) Perform independent oversight of DOE-FE and contractor activities, as appropriate.
- (19) Identify and act on DOE-FE HQ ISM weaknesses and opportunities for improvement.
- (20) Review and approve annual ISM declarations by their Office and/or responsible DOE-FE Field Offices/Sites.
- (21) Participate in DOE-FE HQ annual “high-level” or “aggregated” ISM effectiveness reviews.
- (22) Provide input to the development of annual DOE-FE HQ performance objectives, performance measures, and commitments.
- (23) Integrate DOE-FE HQ management oversight systems and processes for safety, quality, environmental protection and security.
- (24) Assist the Secretarial Office in determining when full ISM verification reviews are necessary.

Field Office/Site Managers shall:

- (1) Appoint an ISM Champion and provide clear and visible DOE-FE Field/Office leadership and vision on ISM philosophy and the ISM system.
- (2) Establish a positive DOE-FE Field/Office environment for effective ISM system implementation.
- (3) Allocate internal budgets, including making decisions on mission-safety trade-offs.

- (4) Prioritize major projects and work-scopes; allocate resources to ensure that work and safety are integrated and that sufficient resources are available to conduct work safely.
- (5) Evaluate the safety impacts of resource short-falls.
- (6) Assign DOE-FE Field Office/Site safety management roles and responsibilities.
- (7) Recruit highly qualified, technical DOE-Federal personnel.
- (8) Review and approve contractor safety documentation, such as documented safety analyses, technical safety requirements, ISM system descriptions, quality assurance programs, worker safety and health programs, and contractor assurance systems.
- (9) Maintain DOE-Federal awareness of contractor work activities, as appropriate, including implementation of hazard controls.
- (10) Establish and implement feedback and improvement programs and processes to facilitate a culture that promotes ongoing examination and learning.
- (11) Monitor various sources of feedback information; promote and integrate feedback from various sources.
- (12) Develop and implement DOE-FE corrective actions and improvements actions for Field Office/Site.
- (13) Monitor performance of corrective actions and improvement actions.
- (14) Plan and perform self-assessments of assigned Federal work activities.
- (15) Plan and perform oversight of contractor work activities, as appropriate.
- (16) Provide clear expectations for the conduct of DOE-FE line management reviews and self-assessment activities, including direction on criteria and review approach documents (CRADs) to use, as appropriate.
- (17) Plan and perform DOE-FE line management oversight of DOE-FE activities in the Field Office/Site.
- (18) Perform independent oversight of DOE-FE and contractor activities, as appropriate.
- (19) Identify and act on ISM weaknesses and opportunities for improvement.
- (20) Perform and approve annual ISM effectiveness reviews for Field Office/Site.
- (21) Approve annual DOE-FE Field Office/Site performance objectives, performance measures, and commitments, including its contractors.

- (22) Integrate internal management systems and processes for safety, quality, environmental protection and security.
- (23) Determine when full ISM verification reviews are necessary for Field Office/Site.

Office of Budget and Financial Management (FE-3) shall:

- (1) Establish DOE-FE HQ contracts, including the delineation of safety requirements.
- (2) Review and comment on DOE-FE major site support and management/operation contracts, including delineation of safety requirements.
- (3) Determine when authorization agreements are needed and review and comment on these authorization agreements.
- (4) Maintain Federal awareness of major contractor work activities, including implementation of hazard controls.
- (5) Provide direction on the content and inclusion of criteria and review approach documents (CRADs) in contracts, as appropriate.

FE ISM Champion (FE-7) shall:

- (1) Assist the DOE-FE Secretarial Office in evaluating safety impacts of resource short-falls.
- (2) Develop DOE-HQ FE-specific safety rules, directives, and standards for approval by the FE Secretarial Office.
- (3) Review and approve exemptions to safety requirements for DOE-HQ FE and for the DOE-FE Field Offices/Sites prior to passing onto the DOE-FE Secretarial Office for approval.
- (4) Establish and implement feedback and improvement programs/processes to facilitate a culture that promotes ongoing examination and learning.
- (5) Monitor various sources of feedback information; promote and integrate feedback from various sources.
- (6) Monitor performance of corrective actions and improvement actions.
- (7) Plan and perform self-assessments of assigned DOE-HQ FE ISM activities.
- (8) Identify and act on DOE-HQ FE ISM weaknesses and opportunities for improvement.
- (9) Review annual ISM declarations generated by DOE-FE Field Offices/Sites.

- (10) Assist the DOE-HQ FE Secretarial Office in performing annual ISM effectiveness reviews and drafting the DOE-HQ FE annual ISM declaration statement and supporting documentation.
- (11) Assist the DOE-HQ FE Secretarial Office in developing annual DOE-HQ FE performance objectives, performance measures, and commitments.
- (12) Assist DOE-HQ FE and DOE-FE Field Offices/Sites in integrating management oversight systems and processes for safety, quality, environmental protection and security.
- (13) Assist FE Offices of the DASs with oversight and implementation of ISM activities and provide independent oversight of ISM implementation and performance of FE-30/NPR-3/RMOTC activities and FE-40/SPRPMO/SPR storage site activities.

3.0 Management Expectations

Purpose:

To describe management expectations related to (1) performance outcomes and impacts related to implementing an effective ISM system, (2) continual improvement, and (3) establishing a safety culture, including manager and worker participation.

Management Expectations:

- (1) ***Performance Outcomes and Impacts:***
 - a. It is DOE-HQ FE management's expectation that planning and implementing an effective ISM system will lead to reduced safety risk:
 - i. As measured by the number and severity of work-related accidents, injuries and illnesses, and
 - ii. As observed by the number of positive safety behaviors being evidenced in the workplace.
 - b. It is DOE-HQ FE management's expectation that planning and implementing an effective ISM system will lead to smaller "environmental footprints" associated with DOE-FE operations.
 - c. It is DOE-HQ FE management's expectation that planning and implementing an effective ISM system will result in DOE-FE understanding and controlling safety risk to such a degree that will be no "surprises" related to execution of the DOE-FE mission.
- (2) ***Continual Improvement:***
 - a. It is DOE-HQ FE management's expectation that safety performance under an effective ISM will generally improve over time. This improvement shall be realized in two major areas:
 - i. Improved processes in terms of effectiveness and efficiencies.
 - ii. Improved behaviors in terms of understanding and controlling personal and institutional risk.
 - b. It is DOE-HQ FE management's expectation that it will become increasingly more difficult and perhaps cost prohibitive to achieve certain incremental improvements over time. As such, even though safety should never be subordinate to mission accomplishment, mission accomplishment should not become secondary to attempting to achieve continuous improvements related to those activities and improvements having minimal value. Thus, it is management's expectation that the ISM system and its continual improvement initiatives:
 - i. Be tailored and commensurate to the safety risks at hand.
 - ii. Be cost-effective.
 - iii. Make sense from practical perspectives.
- (3) ***Safety Culture:***
 - a. It is DOE-HQ FE management's expectation that managers and workers will fully participate in designing and implementing an effective ISM system.

- b. It is DOE-HQ FE management's expectation that managers and workers will work together in developing and implementing ISM-related processes that are effective and efficient.
- c. It is DOE-HQ FE management's expectation that in the long run the success of the ISM program will be based on developing and sustaining an "entrenched" safety culture. It is expected that this safety culture will involve:
 - i. Managers and workers understanding those behaviors that will lead to safety.
 - ii. Managers and workers implementing those behaviors in such a manner that these behaviors become "second-nature" or inherent in the culture.

4.0 Roles and Responsibilities

Purpose:

To describe how roles and responsibilities related to planning and implementing the DOE-FE HQ ISM System Description will be documented and enforced.

Process:

- (1) ***ES&H Functions, Responsibilities and Authorities Manual (FRAM):***
 - a. Documentation of the DOE-HQ FE ISM System Description roles and responsibilities (Federal responsibilities only) shall be contained within the DOE-HQ FE FRAM.
 - b. The DOE-HQ FE FRAM shall include a matrix or table outlining functions/activities (x-axis) and responsibilities/authorities (y-axis) (see Appendix 1 to the FRAM).
 - c. The DOE-HQ FE ISM System Description-related functions, responsibilities and authorities shall be contained as a subgroup within this overall matrix (see Appendix 1, Part B of the FRAM).

- (2) ***Execution of DOE-HQ FE ISM System Roles and Responsibilities:***
 - a. The degree and success of executing DOE-HQ FE ISM System roles and responsibilities shall be determined (and documented when appropriate) through:
 - i. General management oversight actions and activities
 - ii. Independent assessments
 - iii. Self-assessments
 - iv. Employee performance appraisals
 - v. Annual ISM effectiveness reviews
 - vi. Any other feedback mechanisms deemed appropriate by the DOE-FE Secretarial Office.
 - b. Based on the findings of the above review and feedback mechanisms, improvement opportunities to achieve higher degrees of success related to executing these roles and responsibilities or revising these roles and responsibilities shall occur. If deemed appropriate, formal corrective and improvement actions shall be developed and tracked.

- (3) ***Contractor Roles and Responsibilities:***
 - a. Contractor roles and responsibilities shall be developed in accordance with the requirements outlined in DOE M 450.4-1 – Integrated Safety Management System Manual (see “Contractor Requirements Document” in the Appendix to this Manual).
 - b. The DOE-FE (Federal) heads/managers of Field Offices/Sites shall assess the applicability of these contractor ISM system documentation requirements (through DEAR 970.5223-1 – Integration of environment, safety, and health into work planning and execution) to their contractor operations.
 - c. Even if the Contractor Requirements Document is not required by DEAR 970.5223-1, the DOE-FE (Federal) heads/managers of Field Offices/Sites

may elect through contract development, negotiation and agreement to apply all or a portion of these requirements to their contractor operations.

Roles and Responsibilities:

FE Offices of the Deputy Assistant Secretaries (FE-20, FE-30, FE-40) shall:

- (1) Determine if a “Contractor Requirements Document” (as outlined in DOE M 450.4-1) detailing a Contractor ISM System is required for their contractor operations according to DEAR 970.5223-1.
- (2) Elect to incorporate through contract development, negotiation and agreement any (if optional) or all (if required) portions of requirements in a “Contractor Requirements Document.”

Field Office/Site Managers shall:

- (1) Determine if a “Contractor Requirements Document” (as outlined in DOE M 450.4-1) detailing a Contractor ISM System is required for their contractor operations according to DEAR 970.5223-1.
- (2) Elect to incorporate through contract development, negotiation and agreement any (if optional) or all (if required) portions of requirements in a “Contractor Requirements Document.”

Office of Budget and Financial Management (FE-3) shall assist DOE-HQ and Field Offices/Sites in determining if a “Contractor Requirements Document” (as outlined in DOE M 450.4-1) detailing a Contractor ISM System is required for their contractor operations according to DEAR 970.5223-1.

FE ISM Champion (FE-7) shall be responsible for keeping information accurate and up-to-date in the DOE-HQ FE FRAM.

5.0 Implementation of ISM

5.1 *Implementation of ISM Guiding Principles (including four supplemental safety culture elements)*

Purpose:

To describe the overall requirements, processes, and roles and responsibilities associated with implementing ISM Guiding Principles (including Four Supplemental Safety Culture Elements) at DOE-HQ FE and its oversight of Field Operations/Sites.

Requirements and Processes:

- (1) ***Line Management Responsibility for Safety:***
 - a. Line managers shall be directly responsible for protecting the public, the workers, and the environment.
 - i. Line managers shall not depend on supporting non-Federal organizations to build safety into line management work activities.
 - ii. Line managers shall have a clear understanding of their work activities and their performance objectives:
 1. Performance objectives shall be developed related to safety for assigned work when appropriate.
 2. Line managers shall be aware of current performance and trends on these key safety performance indicators either at their duty station or for off-site workplaces for which they have oversight responsibility in the field.
 3. An analysis of work activities (in terms of assessing what constitutes the work and how the work is to be performed, the hazards associated with that work, and the mitigation, controls and other activities that will be implemented to conduct work safety) shall be developed and implemented for assigned work.
 - b. Line managers shall demonstrate their commitment to safety:
 - i. By conducting walkthroughs of worksites and by spending time on the floor – if primary work location of line manager is at a site characterized largely as having operational risk.
 - ii. By visiting worksites in the field (as appropriate based on the degree of hazards and risks) or reviewing independent- and self-assessment information of worksites in the field – if line manager has oversight activities of field locations whose work is characterized largely as having operational risk.
 - iii. By reviewing independent- and self-assessment information of worksites in the field – if line manager has oversight activities of Field locations whose work is characterized largely as having non-operational risk.
 - c. Line managers shall provide an open and honest environment for encouraging workers' questions and for reporting safety issues and errors. Line managers shall promote a strong, positive safety culture.

- i. Line managers shall learn from errors or mistakes; the initial response from errors or mistakes shall not be to assign blame.
- ii. A system of rewards and sanctions shall be developed and implemented that will be aligned with strong safety policies and which will reinforce the desired behaviors and outcomes. Positive rewards shall be a part of this system.

(2) ***Clear Roles and Responsibilities:***

- a. Clear and unambiguous lines of authority and responsibility for ensuring safety shall be established and maintained. Responsibilities and authorities for safety shall be:
 - i. Well defined (ownership boundaries and interface issues between HQ and the Field shall be clearly delineated) and understood as an integral part of performing work.
 - ii. Sufficiently comprehensive to address work activities and their hazards.
 - iii. Commensurate/consistent with positional authority, reporting relationships, control of financial resources, and assigned staffing levels.
- b. Clear and unambiguous lines of authority and responsibility for ensuring safety shall be documented:
 - i. Major safety roles and responsibilities shall be contained in the DOE-HQ FE FRAM.
 - ii. The FRAM shall be kept current and accurate.
- c. The degree of success in executing safety roles and responsibilities shall be an important consideration when evaluating and rewarding safety performance.

(3) ***Competence Commensurate with Responsibilities:***

- a. Personnel shall possess the experience, knowledge, skills and abilities that are necessary to discharge their responsibilities.
- b. Managers shall place a high personal priority and time commitment on recruiting, selecting, and retaining an excellent technical staff.
- c. Technical and safety expertise shall be embedded in the organization; outside expertise shall be employed when necessary.
- d. Individuals shall have an in-depth understanding of safety and technical aspects of their jobs. To ensure this in-depth understanding, this understanding shall be a high priority for line managers to attain (as validated through performance appraisals, performance awards, supervisory directives, etc.).
- e. Assignments of specific safety responsibilities and authorities shall be made to individuals with necessary technical expertise and experience.
- f. Training shall be provided to attain, maintain and improve safety and technical skills.
 - i. Safety training shall be an integral part of the continual learning experience at DOE.
 - ii. Professional and technical growth shall be formally supported and tracked to build organizational capability.

- (4) ***Balanced Priorities:***
- a. Effective systems of checks and balances shall be in place to make sure that safety considerations are adequately weighed and prioritized in planning and performing work.
 - b. Managers shall communicate frequently and consistently the safety message (during meetings, in training, in correspondence, etc.).
 - c. Allocation of monetary resources:
 - i. Resources shall be effectively allocated to address safety, programmatic, and operational considerations. Protecting the public, the workers, and the environment shall be a priority whenever activities are planned and performed. If funding is not adequate to ensure safety, operations shall be discontinued or postponed.
 - ii. Safety, quality and productivity shall receive balanced consideration in funding allocations.
 - iii. Adequate resources shall be allocated for safety upgrades and repairs to aging infrastructure.
 - d. Allocation of personnel resources:
 - i. Staffing levels and capabilities shall be consistent with the expectation of maintaining safe and reliable operations.
 - ii. The organization shall develop sufficient resources to rapidly cope and respond to unexpected changes. Organizational knowledge shall be valued and efforts shall be made to preserve it.

- (5) ***Identification of Safety Standards and Requirements:***
- a. Before work is performed, its associated hazards shall be evaluated through an approved process. Through this process (1) an agreed-upon set of safety and technical standards and requirements (including applicable laws, statutes, rules, regulations, and consensus standards) and (2) a safety envelope shall be established which, if properly implemented/adhered to, shall provide sufficient assurance that the public, the workers, and the environment are protected from adverse consequences and through which compliance can be demonstrated and verified.
 - b. A clearly defined set of safety requirements and standards (covering safety, quality assurance, and environmental protection) shall be invoked in management contracts (or similar agreements) using an accepted, established process.
 - c. Facilities shall be designed, constructed, operated, maintained, and decommissioned using consensus industry codes and standards (where available and applicable) to protect workers, the public, and the environment.
 - d. Exemptions from applicable technical safety requirements shall be the exception, rather than the rule. Exemptions shall:
 - i. Provide an equivalent level of safety, and may not conflict with legal requirements (e.g., OSHA)
 - ii. Have a compelling technical basis
 - iii. Be approved at the appropriate organizational level.

- e. Organizations and personnel shall be held strictly accountable for adherence to safety and technical standards – but within the context of a just culture.
 - i. Failures to following requirements and standards shall be promptly reported.
 - ii. Self-identification of non-compliances shall be organizationally supported.
- f. The organization shall share effective practices regarding safety, technical standards/requirements, and processes for their implementation.

(6) ***Hazard Controls Tailored to Work Being Performed:***

- a. Work hazards shall be identified (using pre-defined, approved and documented safety analysis and review processes / procedures that are integrated and comprehensive).
- b. Work hazards shall be controlled to prevent or mitigate hazards, with particular attention being made to high consequence events with unacceptable consequences.
 - i. The selection of hazard controls shall consider the type of hazard, the magnitude of the hazard, the type of work being performed; hazard controls shall be designed and implemented commensurate with the inherent level and type of hazard.
 - ii. Design and operating safety margins shall be determined through these safety analyses/reviews and shall be rigorously maintained.
 - iii. All hazard controls shall be consistently and reliably implemented.
- c. Hazards shall be controlled via the following hierarchy: (1) elimination and/or reduction of the hazards, (2) engineering controls, (3) work practices and administrative controls, and (4) personal protective equipment.
 - i. Inherently safe designs are preferred over ones requiring engineering controls.
 - ii. Prevention shall be emphasized in design and operations to minimize the use of, and thereby possible exposure to, toxic or hazardous substances.
 - iii. Administrative and engineering controls to prevent and mitigate hazards shall be tailored to the work being performed and associated hazards.
 - iv. Hazard controls shall be designed with an understanding of the potential for human error (with error-likely situations being identified, eliminated, or mitigated).
- d. Equipment shall be consistently maintained so that it meets design requirements.

(7) ***Operations Authorization:***

- a. Conditions and requirements to be satisfied for commencing and continuing operations shall be clearly established.
- b. Formal facility authorization agreements shall be in place for those instances in which owner (e.g., Federal) and operator (e.g., contractor) are different.

- c. The extent of documentation and level of authority for work authorizations shall be based on the complexity and hazards associated with the work to be performed.
- d. Readiness reviews:
 - i. There shall be pre-operational reviews conducted verifying that controls are in place/effective.
 - ii. There shall be formal readiness reviews conducted for verification purposes prior to commencing hazardous operations.

(8) ***Individual Attitude and Responsibility for Safety:***

- a. Every individual shall accept responsibility for safe mission performance.
- b. Culture:
 - i. A constructive, questioning attitude (e.g., challenging assumptions, investigating anomalies, etc.) shall be supported in the workplace.
 - ii. Other behaviors or attitudes that demonstrate responsibility for safety include:
 - 1. Worker involvement in identifying, planning, and improving work and work practices.
 - 2. Workers following approved directives.
 - 3. Individuals promptly reporting errors and incidents.
 - 4. Individuals and groups counteracting tendencies for superficial and/or simplistic analyses of work situations, assumptions, expectations, etc.
 - 5. Organizations supporting diversity of thought and opposing views.
 - 6. Organizations supporting the idea that work activities need to be safe before proceeding, rather than unsafe before halting.
 - iii. The culture characterized above shall be promoted by (1) assigning, promoting and/or rewarding line managers and (2) hiring, promoting and/or rewarding employees who demonstrate a "safety attitude." Continual training to promote this culture shall occur so that managers and employees will understand performance expectations under this safety culture.

(9) ***Operational Excellence:***

- a. Organizations (Federal and their contractors) shall achieve sustained, high levels of operational performance in order to meet mission, safety, productivity, environmental and other objectives.
- b. Culture:
 - i. A "high-reliability" culture focused on operations, conservative decision-making, open communications, deference to expertise, and systematic approaches to eliminate or mitigate error-likely situations shall be supported.
 - ii. Other behaviors or attitudes that demonstrate operational excellence include:
 - 1. Operational anomalies, even small ones, getting prompt attention and evaluation.
 - 2. Systematic and rigorous approaches to informed decision-making being evident.

3. Candid dialogue and debate and a healthy skepticism being encouraged when safety issues are being evaluated.
 4. Line managers regularly and promptly communicating important operational decisions, their basis, expected outcomes, potential problems, and planned contingencies.
 5. Organizations knowing and using the expertise of their personnel.
- iii. This culture shall be promoted by (1) assigning, promoting and/or rewarding line managers and (2) hiring, promoting and/or rewarding employees who demonstrate a “high reliability” attitude/behavior. Continual training to promote this culture shall occur so that managers and employees will understand performance expectations under this safety culture.
- c. Organizational systems and processes are designed to provide layers of defenses, recognizing that people and systems are fallible. Prevention and mitigation measures are used to preclude errors from occurring or propagating.
- (10) ***Oversight for Performance Assurance:***
- a. Competent, robust, periodic and independent oversight shall be an essential source of feedback – this oversight shall verify that expectations, standards and requirements are being met and shall identify opportunities for improvement.
 - i. Assessments shall be performed against established requirements.
 - ii. Efficient redundancy in monitoring shall be valued.
 - iii. Oversight shall include a diversity of independent “fresh looks” to ensure completeness and to avoid complacency.
 - iv. Complete, accurate, and forthright information shall be provided to performance assurance organizations.
 - v. Results from performance assurance activities shall be effectively integrated into the performance management processes.
 - b. Line managers throughout the organization shall set an example for safety through their direct involvement in oversight activities and associated performance improvement.
 - c. Periodic ISM reviews, assessments, and verifications shall be conducted and used as a basis for ISM program adjustments and implementation improvements.
- (11) ***Organizational Learning for Performance Improvement:***
- a. Organizations (Federal and Contractor) shall demonstrate excellence in performance monitoring, problem analysis, solution planning, and solution implementation. Line managers shall be actively involved in these activities.
 - i. Organizations shall actively and systematically monitor performance through multiple means, such as line manager walk-arounds, performance indicators, trend analysis, benchmarking, self-assessments and performance assessments.
 - ii. Expertise in causal analysis shall be applied effectively to examine events and improve safe work performance.

- iii. Vigorous corrective and improvement action programs shall be in place and effective.
- b. Organizations shall cultivate a continuous learning environment.
 - i. Organization members shall convene to swiftly uncover lessons and learn from mistakes.
 - ii. Prompt incident reviews shall be conducted after an incident to ensure data quality to identify improvement opportunities.
 - iii. The organization shall regularly examine and learn from operating experiences, both internal and in related industries.
- c. Performance improvement processes shall encourage workers to offer innovative ideas to improve performance and to solve problems.

Roles and Responsibilities:

FE Secretarial Office (FE-1) shall:

- (1) Ensure through oversight activities and through direction given to his/her line managers that directives and processes at HQ-FE and FE Field Offices/Sites are developed, executed, and effective in implementing ISM Guiding Principles and their associated requirements (including Four Supplemental Safety Culture Elements for Federal operations) as documented in Office- or Site-specific policies, plans, and procedures.
- (2) Promote a management and working culture in which strong, positive safety behaviors are nurtured, evidenced and rewarded. The degree of success in executing safety roles and responsibilities shall be an important consideration when evaluating and rewarding safety performance.
- (3) Approve FE-wide safety-related performance objectives.
- (4) Be aware of current performance and trends on key safety performance indicators at FE.
- (5) Keep abreast on Field Offices/Sites mission- and ISM-performance by reviewing independent- and self-assessment reports and information.

FE Offices of the Deputy Assistant Secretaries (FE-20, FE-30, FE-40) shall:

- (1) Ensure through oversight activities and through direction given to his/her line managers that directives and processes at assigned FE Field Offices/Sites are developed, executed, and effective in implementing ISM Guiding Principles and their associated requirements (including Four Supplemental Safety Culture Elements for Federal operations) as documented in Office- or Site-specific policies, plans, and procedures.
- (2) Promote a management and working culture in which strong, positive safety behaviors are nurtured, evidenced and rewarded. A system of rewards and sanctions shall be developed and implemented that will be aligned with strong safety policies and will reinforce the desired behaviors and outcomes. The degree of success in executing safety roles and responsibilities shall be

an important consideration when evaluating and rewarding safety performance.

- (3) Provide an open and honest environment for encouraging workers' questions and for reporting safety issues and errors.
- (4) Approve Office-specific safety-related performance objectives.
- (5) Be aware of current performance and trends on key safety performance indicators (in particular, those related to Office performance).
- (6) Assess mission and ISM performance of assigned Field Offices/Sites by reviewing independent- and self-assessment reports and information.
- (7) Ensure that analyses of mission-related work activities (in terms of assessing what constitutes the work and how the work is to be performed, the hazards associated with that work, and the mitigation, controls and other activities that will be implemented to conduct work safety) are being developed and implemented for their areas of responsibility.

Field Office/Site Managers shall:

- (1) Ensure through oversight activities and through direction given to his/her line managers that directives and processes at his/her Field Office/Site are developed, executed, and effective in implementing ISM Guiding Principles and their associated requirements (including Four Supplemental Safety Culture Elements for Federal operations) as documented in Office- or Site-specific policies, plans, and procedures.
- (2) Promote a management and working culture in which strong, positive safety behaviors are nurtured, evidenced and rewarded. A system of rewards and sanctions shall be developed and implemented that will be aligned with strong safety policies and will reinforce the desired behaviors and outcomes. The degree of success in executing safety roles and responsibilities shall be an important consideration when evaluating and rewarding safety performance.
- (3) Provide an open and honest environment for encouraging workers' questions and for reporting safety issues and errors.
- (4) Approve Field Office-/Site-specific safety-related performance objectives.
- (5) Be aware of current performance and trends on key safety performance indicators (in particular, those related to Field Office/Site performance).
- (6) Conduct walkthroughs of worksites and spend time "on the floor" where operational risk is present in order to assess mission and ISM performance and opportunities for improvement.
- (7) Ensure that analyses of mission-related work activities (in terms of assessing what constitutes the work and how the work is to be performed, the hazards

associated with that work, and the mitigation, controls and other activities that will be implemented to conduct work safety) are being developed and implemented for their areas of responsibility.

FE ISM Champion (FE-7) shall:

- (1) Assist the Assistant Secretary and the Secretarial Offices in planning and conducting oversight activities.
- (2) Act as a technical and management expert for the Assistant Secretary and the Secretarial Offices in understanding, developing, executing, and implementing ISM Guiding Principles and their associated requirements (including Four Supplemental Safety Culture Elements for Federal operations).
- (3) Ensure that ISM-related roles and responsibilities are accurate, up-to-date, and documented in the DOE-HQ FE FRAM.

5.2 Implementation of the Five Core Functions

Purpose:

To describe the overall requirements, processes, and roles and responsibilities associated with implementing ISM Core Functions at DOE-HQ FE and its oversight of Field Operations/Sites.

Requirements and Processes:

- (1) **Define the Scope of Work:**
 - a. By defining the scope of work, mission shall be translated into work, expectations shall be set, resources shall be allocated, and tasks shall be prioritized.
 - b. The scope of FE work shall be defined prior to commencing work and implementing work activities.
 - i. The scope of “recurring” types of work shall only need to be defined initially unless there are changes in work scope or hazards.
 - ii. Scopes of work need to be in sufficient detail to allow for a general understanding by managers and workers of the hazards and risks involved with the work.
 - c. Scopes of work shall typically be documented.
 - d. Translation of mission into work – Project Implementation Plans and other pertinent, similar plans shall be acceptable means of defining scope of work at “higher levels” of operation (e.g., HQ). These plans may be based in part on technical and political direction from the DOE Secretarial Office and the Congress.
 - e. Setting Expectations – DOE-HQ FE shall document the expectations for work within its mission. Besides the plans previously mentioned, specific directives shall be developed when necessary to implement the identified

standards, requirements and performance expectations. These documents shall be made available to all employees.

- f. Resource Allocation – Appropriate resources shall be made available to staff ISM core functions, to make corrective actions, and to improve performance. The mechanism for allocating resources shall be a plan outlining resource needs and expected outcomes.
- g. Task Prioritization – Tasks shall be prioritized based on their potentials for reducing safety risk and for promoting a strong safety culture.

(2) **Analyze the Hazards:**

- a. Hazards shall be analyzed and categorized for work to be performed (for both “operational” and “non-operational” work).
- b. Systematic approaches for analyzing hazards shall be used.
 - i. A process for analyzing and categorizing hazards shall be developed, approved, and documented, and must follow all 29 CFR 1910.119 Process Safety Management requirements.
 - ii. The depth and sophistication of hazard analysis shall be commensurate with the degree of risk and hazard associated with the work to be performed.
 - iii. Routine hazards may be analyzed through a work control or work permitting systems.
- c. Workers shall be involved in the analysis of hazards.
- d. These hazard analyses shall be approved by line management.

(3) **Develop and Implement Hazard Controls:**

- a. In developing and implementing hazard controls, standards and requirements shall be identified, controls to prevent or mitigate hazards shall be identified, safety envelopes shall be established, and controls shall be implemented.
- b. Controls shall be identified for hazards present in the work to be performed.
- c. The selection of hazard controls shall be approved by line management.
- d. Controls shall be documented and communicated to employees.
- e. The hierarchy to be used for hazard control is: elimination or reduction of hazard, followed by engineering controls, administrative controls, and then personal protective equipment.
 - i. Engineering controls shall be implemented during the design and/or construction of the activity, project or facility.
 - ii. Administrative controls and personal protective controls shall be implemented through procedures and training before and during project and/or operation.
- f. The presence and performance of identified hazard controls shall be verified prior to commencing operation.
- g. A “safety envelope” shall be established for hazardous work activities which represents the limits of permitted operations.
- h. Line management shall be responsible for the implementation of identified controls.

(4) **Perform Work within Controls:**

- a. To perform work within controls, readiness shall be confirmed, work shall be safely performed, and quality shall be assured.

- b. Work shall be executed using controls that are:
 - i. effective and properly functioning
 - ii. operating within control limits, and
 - iii. operating within pre-established safety envelopes.
- c. The performance of identified hazard controls shall be verified during operation.
- d. Line management shall be responsible for ensuring that:
 - i. operations are conducted within the approved safety envelope, and
 - ii. controls are being implemented and continue to provide the expected level of protection.
- e. Line management shall be responsible for ensuring that:
 - i. the workers are properly trained,
 - ii. equipment is provided and in good working order,
 - iii. operating procedures are correct and available, and
 - iv. materials to accomplish the work are appropriate and do not present hazards to employees.
- f. All employees shall be responsible to perform work safely and in accordance with established requirements and conditions, and are responsible for stopping any work that creates an imminent danger situation.
- g. All employees shall be responsible for generating quality work.
 - i. Line management shall be responsible for providing the resources and training so that employees can generate quality work.
 - ii. These provisions shall generally be accomplished through the same mechanisms used to ensure that the work is done safely.

(5) ***Provide Feedback and Continuous Improvement:***

- a. In order to support a culture of continual improvement, feedback information shall be collected, assessments shall be conducted, and changes shall be made to improve performance.
- b. Workers and managers shall provide regular feedback to management regarding work processes, work performances, and work behaviors, especially in terms of achieving or maintaining risk levels at acceptable levels and for use in attaining a higher-performing organization regarding safety.
- c. Feedback shall be obtained through a variety of means: through periodic internal assessments, oversight of the operation by line management, performance indicators (metrics), the DOE Occurrence Reporting and Processing System (ORPS), the DOE Computerized Accident and Incident Reporting System (CAIRS), and program assessments conducted by external parties.
 - i. Changes to standards lists, requirements and processes shall be made as needed to provide improved levels of safety.
 - ii. Any operation/activity that is found to be not conforming to pre-determined requirements shall be brought into conformance.
- d. An internal DOE-FE “lessons learned” program shall be instituted that includes review of lessons from internal and other sources (DOE sites, industrial facilities, trade publications, etc.), applies lessons learned within the DOE-FE, and tracks the results of the lessons learned program.

If information trends show that the major processes or systems are degrading, improvement plans shall be developed to bring the processes or systems back into conformance with the requirements. These improvement plans shall be documented.

Roles and Responsibilities:

FE Secretarial Office (FE-1) shall:

- (1) Ensure that resources are available to implement ISM core functions across the DOE-FE complex.
- (2) Ensure through line management that DOE-FE mission is translated into scopes of work and that ISM core functions are being effectively executed.

FE Offices of the Deputy Assistant Secretaries (FE-20, FE-30, FE-40) shall ensure through oversight activities that operations under their responsibility are effectively implementing ISM core functions (and are continually improving in this implementation): work is being defined; hazards are being analyzed; hazard controls are being developed and implemented; work is being performed with controls; and feedback is being provided for continuous improvement purposes.

Field Office/Site Managers shall ensure through oversight activities (including walk-through of operations) that operations under their responsibility are implementing ISM core functions (and are continually improving in this implementation): work is being defined; hazards are being analyzed; hazard controls are being developed and implemented; work is being performed with controls; and feedback is being provided for continuous improvement purposes.

FE ISM Champion (FE-7) shall assist the DOE-FE Secretarial Office and FE Assistant Secretarial Offices by providing technical expertise on ISM core functions and by assisting these Offices in planning and performing independent and self-assessments.

5.3 *Integration of QA, EMS, ISSM, and ISM*

Purpose:

To describe the overall approach for the effective and efficient integration and management of quality assurance (QA) systems, environmental management systems (EMS) and other related management systems into/under integrated safety management (ISM) systems.

Process:

- (1) ***Quality Assurance Program:***
 - a. DOE-FE is committed to promoting excellence and continually improving processes, products, and services to better satisfy customer needs and requirements. To support these objectives, DOE-FE HQ established a Quality Assurance Program (QAP) based on DOE Order 414.1C, "Quality Assurance."

- b. In many respects, the DOE-FE QAP is the most cross-cutting program at FE, influencing the development and execution of all other programs, including ISM.
 - i. The QAP shall be viewed as the cross-cutting program impacting all other management systems.
 - ii. ISM, EMS, security and other deficiencies shall be considered as breakdowns in quality systems and processes.
 - iii. ISM, EMS and other improvement opportunities shall be considered as improvements in quality systems and processes.
 - iv. The QAP shall therefore be considered as the master “umbrella” program covering all other programs at DOE-FE.
- c. DOE-HQ FE has written a Quality Assurance Program Plan (QAPP) to document and institutionalize its quality program.
- d. DOE-HQ FE supports the use of the following programs in support of its QAP:
 - i. Baldrige Model, ISO 9001-2000
 - ii. Six Sigma Quality Program.

(2) ***High Priority DOE-FE Management Systems for Integration with ISM:***

The following is a priority list of those systems that lend themselves for integration with the ISM system (note: this list is not all-inclusive, but represents a critical list of systems):

- a. Quality Assurance Program (QAP)
- b. Environmental Management System (EMS)
- c. Worker Safety and Health Program (as required by 10 CFR 851) - not applicable to FE field sites
- d. Emergency Management Program
- e. Integrated Safeguards and Security Management (ISSM) system.

(3) ***Environmental Management System:*** The EMS should be constructed as a major sub-component of the ISM system.

(4) ***Assessments:***

- a. Wherever and whenever possible, the annual ISM effectiveness review should be composed of a roll-up of other assessments or audits conducted during the course of the year (e.g., quality audits, line management oversight reviews; EMS recurring audits, etc.).
- b. When planning and conducting assessments, opportunities for combining assessments or applying assessment results to multiple system audits shall be pursued (e.g., an audit on the QA aspects of safety system documentation could be used as part of a QA audit, a safety audit, and an ISM audit).
- c. Sites should determine for themselves how to “package” or “roll-up” their audit/assessment information on a recurring (e.g., annual) basis. Some options for organization are presented below:
 - i. Organization of assessments/audits based on function or system (e.g., safety, environment, quality, emergency management; QA, EMS, ISM).
 - ii. Organization of assessments/audits based on stand-alone documents that are cross-referenced in terms of function or system.

- iii. Organization within a single document which is internally cross-referenced with respect to function or system.
 - iv. Combination of the above options.
- (5) **Goals and Objectives:** If feasible, opportunities for using sets of goals and objectives across systems shall be pursued (e.g., pollution prevention goals mandated by executive orders can become EMS goals which also can become ISM goals.)
- (6) **Integration:**
- a. DOE-FE Offices shall encourage integration of contractor worker health and safety programs into contractor ISM system descriptions, as well as the DOE ISM system descriptions, if feasible and efficient to do so.
 - b. If possible, management for programs to be integrated (ISM, EMS, QA, emergency management, Federal Employee Occupational Safety and Health Programs, safeguards and security programs, etc.) should be out of the same office, directorate or division or have the same managers across multiple programs in order to facilitate integration. If possible, the “architecture” of programs and their approaches to developing and overseeing the implementation of requirements should be similar in order to facilitate integration. Oversight/Validation of assurance systems shall be performed in accordance with DOE Order 226.1

Roles and Responsibilities:

FE Secretarial Office (FE-1) shall:

- (1) Provide leadership and commitment to quality achievement and improvement.
- (2) Ensure that the DOE-FE HQ Quality Assurance Program Plan (QAPP) and ISM System Description are implemented in an integrated manner.
- (3) Approve QAPPs governing work in HQ and Field organizations.
- (4) Review/resolve differences of opinion and approve or reject QAPPs.
- (5) Report management assessment results periodically.
- (6) Specify the frequency of independent QA assessments and their participants.

FE Offices of the Deputy Assistant Secretaries (FE-20, FE-30, FE-40) shall:

- (1) Serve as champions for integrating DOE-HQ FE programs for consistency and efficiency purposes.
- (2) Serve as the FE-HQ Program Line Management for implementing all QA requirements for all work in their organization and Field Site operations.
- (3) Provide direction and resources to implement QA for work under their purview.

- (4) Perform management assessments periodically of DOE-HQ FE and Field Site operations under their purview.
- (5) Be responsible for the quality of all activities and deliverables within their respective DOE-HQ FE Program Office and FE Field organizations.

Field Office/Site Managers shall:

- (1) Serve as champions for integrating DOE-FE programs in the field for consistency and efficiency purposes.
- (2) Be responsible for leadership and accountability for QA compliance at their Field locations.
- (3) Review and approve new and revised contractor QAPPs.
- (4) Develop and implement an FE Field QAPP governing the work under their purview including suspect/counterfeit prevention requirements.
- (5) Submit QAPPs to the FE-HQ for review, resolution of differences of opinion and approval.
- (6) Perform independent assessments of contractor organizations to evaluate the adequacy and QAP implementation effectiveness.

FE QA Manager (FE-7) shall:

- (1) Serve as the technical expertise for assisting in the integration between DOE-HQ and Field Office/Site programs.
- (2) Act as the primary DOE-HQ FE interface on QA.
- (3) Interact with other DOE Offices on QA issues.
- (4) Assess implementation of the DOE-HQ FE QAPP.
- (5) Report assessment results to the FE Secretarial Office.
- (6) Coordinate independent assessments, as directed by FE-1.

5.4 ***Communications and Training***

Purpose:

To describe the overall approach for the effective and efficient communication of requirements contained in and expectations related to DOE-HQ FE's ISM System Description.

Process:

- (1) **Training:**
 - a. Continual training shall be a core implementing mechanism utilized to achieve continual improvement expectations within an ISM culture.
 - b. A combination of formal and informal continual training on the ISM System and ISM System Description is recommended.
 - c. Formal training can include (list is not exhaustive):
 - i. Computer-based training modules
 - ii. Lecture-based training (both on-site and off-site)
 - iii. CD disks and power-point files.
 - d. Informal training can include (list is not exhaustive):
 - i. Discussions during staff meetings
 - ii. Discussion during “all-hands” meetings
 - iii. “Lunch and learn” meetings
 - iv. Pamphlets
 - v. Posters
 - vi. Information sent via intranet.
 - e. Wherever and whenever possible, training shall be documented.
 - f. One formal training course on the most recent ISM System Description (or some major aspect of ISM or this description) should be offered annually to DOE-HQ FE managers and employees.

- (2) **Communications:**
 - a. The DOE-HQ FE ISM System Description shall be made available to all DOE-FE employees by placing the most recent version on the DOE-HQ FE ESS&H webpage.
 - b. Hardcopies and “read-only” electronic copies of the DOE-HQ FE ISM System Description shall be made available to the requestor by contacting the DOE-FE ISM Champion.
 - c. Line managers shall be responsible for communicating the contents and the importance of the ISM System Description to their workers. As part of this communication process, the following shall be highlighted:
 - i. The aspects (e.g., processes) of the ISM System and ISM System Description most relevant to his/her employees.
 - ii. The applicable ISM roles, responsibilities, and performance expectations for managers and employees as these apply to the operational and non-operational work being performed by manager’s work unit.
 - iii. Ways that workers can become involved in and provide feedback on continually improving the ISM System (and its documentation).

Roles and Responsibilities:

FE Secretarial Office (FE-1) shall:

- (1) Ensure that all DOE-FE entities have ISM System Descriptions in place and that these descriptions have been communicated to employees.

FE Offices of the Deputy Assistant Secretaries (FE-20, FE-30, FE-40) shall ensure that the ISM System Description is communicated to their employees and that relevant training (both formal and informal) is offered on a continual basis.

Field Office/Site Managers shall:

- (1) Ensure that the Office's/Site's ISM System Description is communicated to employees and that relevant training (both formal and informal) is offered on a continual basis.
- (2) Approve their Office's/Site's annual training plan.

FE ISM Champion (FE-7) shall:

- (1) Serve as the technical expertise for assisting the DOE-FE Assistant Secretary and his/her Secretarial Offices in developing and deploying ISM System Description training modules and communication approaches.
- (2) Gather and provide FE-wide metrics to the DOE-FE Assistant Secretary regarding ISM System Descriptions being in place, being communicated, and that training has been developed/deployed.
- (3) Ensure that the most recent version of the DOE-HQ FE ISM System Description is posted on the DOE-FE ESS&H webpage and provide hardcopies and read-only electronic versions of DOE-HQ FE ISM System Description to requesters.

6.0 Other Safety-Related Initiatives

Purpose:

To describe other DOE-FE improvement initiatives, behavioral change strategies, and other activities supplemental to the ISM system that improve safety and promote a positive safety culture.

Process:

- (1) ***Additional Performance-Improving Supplemental Programs:***
 - a. DOE-HQ FE supports the effective and efficient use of a variety of supplemental programs geared toward improving organizational and individual performance.
 - b. A list of these supplemental programs (list is not all inclusive) is shown below:
 - i. Voluntary Protection Program (VPP)
 - ii. Occupational Health and Safety Assessment Standard (OHSAS 18001)
 - iii. Behavior Based Safety (BBS) Program
 - iv. Enhanced Work Planning (EWP) Program
 - v. Conduct of Operations Program (COPS)
 - vi. ISO Standard 9001-2000, Quality Management System (QMS)
 - vii. ISO Standard 14001, Environmental Management System (EMS)
 - viii. ANSI Z10 Standard for Safety Management Systems
 - ix. Human Performance Improvement
 - c. These supplemental programs share many common principles with ISM systems that affect organizational and individual worker, supervisor and management behavior and performance.
 - d. If these supplemental programs are chosen for adoption, they shall be implemented within an ISM framework (not stand-alone programs outside of the ISM framework). These programs shall support the ISM System and the Quality Assurance Program.
 - i. These supplemental programs, if adopted, shall be analyzed in terms of how their processes, inputs, outputs, requirements and roles and responsibilities support ISM.
 - ii. The processes within these supplemental programs should dovetail with those processes used within the ISM system wherever practically possible and effective to do so.
 - iii. The inputs into these programs should be made as congruent as possible (or at least complementary) with the ISM process inputs described in this ISM System Description.
 - iv. The outputs from these programs should feed into the ISM processes described in this ISM System Description or be made as congruent as possible with the actual outputs from ISM System processes.
 - v. Roles and responsibilities within these supplemental programs should not be inconsistent with those outlined in the ISM System.

- (2) **Other Activities:** There are additional activities that can be adopted to promote a positive safety culture. Some of these include:
 - a. All-hands meetings having a safety focus
 - b. Developing a safety brochure explaining the manager's safety values
 - c. Establishing DOE-FE teams to develop and promote improvement initiatives.

Roles and Responsibilities:

FE Secretarial Office (FE-1) shall determine which supplemental programs (consistent with the ISM System Description) and activities shall be adopted for implementation at DOE-HQ FE and/or FE-wide.

FE Offices of the Deputy Assistant Secretaries (FE-20, FE-30, FE-40) shall support the FE Secretarial Office in the planning and implementation of these supplemental "safety" programs and activities within an ISM framework.

Field Office/Site Managers shall:

- (1) Determine which supplemental programs (consistent with their ISM System Description) shall be implemented.
- (2) Be responsible for their efficient and effective implementation within an ISM framework.

FE ISM Champion (FE-7) shall:

- (1) Support the FE Assistant Secretary and the FE Deputy Assistant Secretaries in planning and implementing these supplemental "safety" programs and activities within an ISM framework.
- (2) Assist in establishing DOE-FE teams to develop and promote improvement initiatives across FE.

7.0 Annual ISM Maintenance and Continuous Improvement Processes

7.1 *ISM System Description Maintenance and Continuous Improvement Process*

Purpose:

To describe how the DOE-HQ FE Secretarial Office will:

- (1) Update and maintain a complete, accurate, and up-to-date DOE-HQ FE ISM System Description.
- (2) Continuously improve the effectiveness and efficiency of its ISM System, primarily using the results of the annual ISM effectiveness review/evaluation report and the annual ISM declaration statement, in order to promote and demonstrate continuous improvement in its performance of safe work activities.

Process:

- (1) ***Process for Updating and Maintaining FE ISM System Description:***
 - a. Critical changes may be made at any time to the DOE-HQ FE ISM System Description following the established DOE-HQ FE process for change control of its directives.
 - i. These changes shall be made to the ISM System Description by the DOE-HQ FE ISM Champion.
 - ii. These changes shall be approved by the DOE-HQ FE Secretarial Office.
 - iii. These changes shall be communicated to the Field Offices/Sites through:
 1. Posting of the revised and dated DOE-HQ FE ISM System Description on the DOE-HQ FE ESS&H webpage.
 2. Communicating with Field Office/Site ISM points of contact on revisions/updates through e-mails or through the monthly ESS&H conference calls.
 - b. At least once per fiscal year (typically in the spring), the DOE-HQ FE ISM System Description shall be reviewed for updating and maintenance purposes.
 - i. This review shall be documented.
 - ii. This review shall be performed to determine if the ISM system description is still accurate and up-to-date and/or can be improved.
 - iii. Input from FE-HQ managers and Field Offices/Sites shall be solicited.
 - iv. In particular, the ISM System Description shall be reviewed to determine if:

1. DOE-HQ FE safety performance objectives, measures, and commitments require revision.
2. Certain specific initiatives need to be incorporated or highlighted in order to promote the adoption of a particular safety behavior or characteristic.
3. Certain corrective actions need to be incorporated to resolve deficiencies.

(2) ***Process for Continuous Improvement:***

- a. The continuous improvement process shall be iterative in nature. Measured performance shall drive the revising and updating of processes, requirements and performance expectations which shall then be measured to determine if improvements have been achieved.
- b. The DOE-HQ FE ISM System Description – in particular, the requirements and processes contained in this system description – shall be reviewed for continuous improvement opportunities at least on an annual basis. This review can be made concurrently with (and will be an important component of) the annual FE ISM System Description review described above.
- c. Feedback shall be used as the primary mechanism by which continuous improvement opportunities will be determined (for inclusion in an updated FE ISM System Description). The main feedback mechanisms are:
 - i. Results of current DOE-HQ FE and Field Offices'/Sites' ISM system effectiveness reviews/evaluation reports and declaration statements.
 - ii. Current performance/trends against DOE-HQ FE's objectives, commitments, and measures.
 - iii. Trends in performance against OSHA-type measures, such as total recordable case rate, lost workday case rate, and number of operational occurrences.
 - iv. Progress in attaining sustainable environmental stewardship and pollution prevention objectives, commitments and measures.
 - v. Safety behaviors that need to be evidenced in FE as determined by the DOE-HQ FE Secretarial Office.
- d. In addition, "best safety practices" identified within FE, within DOE, and outside of DOE will be identified for possible inclusion as:
 - i. Continuous improvement opportunities.
 - ii. Updates/revisions in the FE ISM System Description.

Roles and Responsibilities:

FE Secretarial Office (FE-1) shall:

- (1) Approve updates to the DOE-HQ FE ISM System Description.
- (2) Provide direction related to continuously improving DOE-HQ FE ISM system performance by:
 - a. Approving and/or formulating revised/updated DOE-HQ FE safety goals, objectives, and commitments that shall be documented and disseminated throughout FE.

- b. Identifying certain ISM-related behaviors that he/she wishes to see evidenced in FE (as well as possible mechanisms to be used to achieve these behaviors), as documented in an updated DOE-HQ FE ISM System Description.
- c. Identifying specific ISM-related continuous improvement initiatives that he/she wishes to have implemented, as documented in an updated DOE-HQ FE ISM System Description.
- d. Rewarding those line managers and employees who demonstrate continuous excellence in ISM performance in FE.

Field Office/Site Managers shall:

- (1) Approve updates to the Field Office/Site ISM System Descriptions.
- (2) Provide direction related to continually improving ISM system performance by:
 - a. Approving and/or formulating revised/updated Field Office/Site safety goals, objectives, and commitments, as documented in an updated Field Office/Site ISM System Description or another similar document.
 - b. Identifying certain ISM-related behaviors that he/she wishes to see evidenced in the Field Office/Site (as well as implementing mechanisms), as documented in updated Field Office/Site ISM System Descriptions.
 - c. Identifying specific ISM-related continual improvement initiatives that he/she wishes to have implemented, as documented in an updated Field Office/Site ISM System Description.
 - d. Rewarding those line managers and employees who demonstrate continual excellence in ISM performance in the field.

FE ISM Champion (FE-7) shall:

- (1) Update (at least on an annual basis) and maintain the DOE-HQ FE ISM System Description.
- (2) Document the annual review of the DOE-HQ FE ISM System Description.
- (3) Communicate updates/revisions to the DOE-HQ FE ISM System Description by posting on the DOE-HQ FE ESS&H webpage (mandatory) and also through e-mails and conference calls with ISM Field representatives (optional).
- (4) Recommend for approval by the DOE-HQ FE Secretarial Office (and for inclusion in an updated DOE-HQ FE ISM System Description) the following:
 - a. Revised DOE-HQ FE safety objectives, measures, and commitments.
 - b. Continual improvement initiatives (including best practices evidenced by other organizations) for implementation in DOE-HQ FE and in the field.
 - c. Targeted ISM-related behaviors to be evidenced in DOE-HQ FE and in the field, including implementation mechanisms.
- (5) Act internally to DOE-HQ FE as the point of contact and subject matter expert on FE-HQ's ISM System Description Maintenance and Continuous Improvement Process.

- (6) Act as the DOE-HQ FE point of contact to other DOE ISM Champions related to FE's ISM System Description Maintenance and Continuous Improvement Process.

7.2 ***ISM Annual Oversight, Self-Assessments, Annual Effectiveness Reviews, and Annual Declarations Process***

Purpose: To describe how the DOE-HQ FE Secretarial Office will:

- (1) Measure ISM effectiveness and perform an annual ISM effectiveness review.
- (2) Prepare and document this annual ISM effectiveness review (e.g., through issuance of an annual summary evaluation report).
- (3) Prepare an annual ISM declaration statement (supported by information contained in the annual summary evaluation report).
- (4) Implement the supplemental safety culture element – oversight for performance assurance.

Process:

- (1) ***Process Involving the DOE-HQ FE Secretarial Office:***
 - a. The DOE-HQ FE Secretarial Office shall perform line oversight of ISM implementation for its own organization – including its Field Offices/Sites – by receiving and analyzing feedback from DOE-HQ FE line managers, the DOE-HQ FE ISM Champion, and Field Office/Site managers.
 - b. This feedback may include the following (list is not all-inclusive):
 - i. Annual integrated review of lower-level ISM reviews
 1. This integrated review will be based largely on those reviews received from FE Field Offices/Sites
 2. The Field Office/Site reviews will consist primarily of their annual ISM effectiveness reviews as documented in summary evaluation reports and declaration statements.
 - ii. Self-assessments
 - iii. Line oversight reviews
 - iv. Performance against the past year's safety performance objectives, measures, and commitments
 - v. Status of action plans including corrective or compensatory actions to address weaknesses and opportunities for improvement.
 - c. Feedback analysis shall be the major basis for conducting the DOE-HQ FE Secretarial Office ISM effectiveness reviews.
 - i. This feedback review shall be as “qualitative” as possible.
 - ii. The feedback mechanisms outlined above shall include the evaluation of the processes, systems, process measures and output measures necessary to support the content development of an annual evaluation report/declaration statement as outlined

below. In particular, the following shall be evaluated through these feedback mechanisms:

1. Implementation status of ISM functions, principles, and supporting safety culture elements
 2. Integration of ISM with other management systems
 3. Completion of ISM commitments
 4. Identification of weaknesses and improvement activities
 5. Performance on process-based and outcome-based performance measures.
- d. Using the feedback mechanisms outlined above, the DOE-HQ FE Secretarial Office shall conduct an ISM effectiveness review and submit its own evaluation report and declaration statement of the status of ISM implementation within FE organizations by February 1st.
- i. This effectiveness review will rely heavily on the input received from the Field Offices'/Sites' annual summary evaluation reports (which are based on the results of their own annual ISM effectiveness reviews, culminating in their annual ISM declarations).
 - ii. The DOE-HQ FE Secretarial Office shall submit its ISM declaration statement/evaluation report to the cognizant Central Technical Authority, the Under Secretary for Energy.
- e. The contents of the DOE-HQ FE Secretarial Office ISM evaluation report and declaration statement shall include:
- i. A summary of relevant activities and assessments that were completed during the fiscal year that provides the basis for the determination of overall ISM effectiveness.
 - ii. An overall determination/declaration of the effectiveness of ISM implementation, using one of three summary evaluation levels: "Effective Performance," "Needs Improvement" or "Significant Weakness."
 - iii. A summary of strengths (for sharing across other DOE elements), weaknesses, and opportunities for improvement.
 - iv. Planned or ongoing actions to enhance ISM effectiveness.
 - v. A discussion of potential site vulnerabilities to provide an opportunity to develop and implement risk management options and strategies, such as:
 1. Allocating funds and resources to address vulnerabilities
 2. Re-scoping activities
 3. Identifying the consequences of proceeding without addressing vulnerabilities.
 - vi. Any directive exemptions per changes in the contract (related to FE's contractor-operated sites) during the preceding fiscal year.

(2) ***Process Involving Field Offices/Sites:***

- a. Field Offices'/Sites' annual ISM effectiveness reviews as documented in their annual evaluation reports and declaration statements (for the preceding fiscal year) shall be submitted to the FE Secretarial Office through the DOE-HQ FE ISM Champion by December 1st.
 - i. For conducting ISM effectiveness verification, the Field Offices/Sites shall utilize as a minimum the feedback mechanisms outlined above for the DOE-HQ FE Secretarial Office.

- ii. The Field Offices'/Sites' annual ISM evaluation reports and declaration statements shall cover as a minimum the contents of DOE-HQ FE Secretarial Office's ISM declaration statement/evaluation report as described above.
- b. Field Offices/Sites shall determine whether and when to conduct full ISM verifications of Field Office/Site ISM activities, including both Federal and contractor implementation of ISM, in accordance with the guidance provided in Attachment 4 in DOE M 450.4-1, Integrated Safety Management System Manual.

Roles and Responsibilities:

FE Secretarial Office (FE-1) shall:

- (1) With the assistance of the DOE-HQ FE ISM Champion and the Assistant Secretary's line managers, conduct line oversight of the implementation of ISM at DOE-HQ FE and its Field Offices/Sites, consistent with the requirements and guidance of DOE O 226.1, Implementation of Department of Energy Oversight Policy, and Attachment 4 of DOE M 450.4-1, Integrated Safety Management System Manual.
- (2) With the assistance of the DOE-HQ FE ISM Champion and the Assistant Secretary's line managers, perform an annual effectiveness review (resulting in an ISM evaluation report), and using the results of the review and report, make an annual declaration in writing of the status of ISM implementation within the Secretarial Office to the Central Technical Authority (Under Secretary of Energy).
- (3) Approve the DOE-HQ FE annual ISM evaluation report and declaration statement.
- (4) With the assistance of the DOE-HQ FE ISM Champion and the Assistant Secretary's line managers, provide direction, including reporting dates, to Field Offices/Sites for submitting their annual ISM effectiveness reviews and annual ISM declarations.

Field Office/Site Managers shall:

- (1) Perform an annual ISM effectiveness review and using the results of this review, generate an evaluation report and make an annual declaration in writing of the state and effectiveness of ISM implementation within the Field Office/Site, including their contractor's organizations, and submit this evaluation report and declaration to the DOE-HQ FE Secretarial Office through the DOE-HQ FE ISM Champion.
- (2) Provide direction, including reporting dates, to contractors for conducting annual ISM effectiveness reviews, generating resulting evaluation reports and annual ISM declarations, and reporting on current and formulating new safety performance objectives, measures, and commitments.

- (3) Determine whether and when to conduct full ISM verifications of Field Office/Site ISM activities, encompassing both Federal and contractor implementation of ISM, consistent with the guidance in Attachment 4 of DOE M 450.4-1, Integrated Safety Management System Manual.

FE ISM Champion (FE-7) shall:

- (1) Assist the DOE-HQ FE Secretarial Office in conducting line oversight of ISM implementation for the FE organization.
- (2) Act as the primary person who integrates input from the various feedback mechanisms – including Field Offices/Sites’ annual ISM effectiveness reviews as documented in their annual evaluation reports and declaration statements – for the purpose of developing the DOE-HQ FE annual ISM evaluation report and declaration statement.
- (3) Submit the draft DOE-HQ FE annual ISM evaluation report and declaration statement to the DOE-HQ FE Secretarial Office for discussion and approval.
- (4) Provide direction, including reporting dates, to Field Offices/Sites for developing and submitting annual ISM effectiveness evaluation reports and annual ISM declarations.
- (5) Act as a DOE-HQ FE point of contact and subject matter expert on conducting ISM effectiveness reviews and developing annual ISM evaluation reports and declaration statements.
- (6) Act as a DOE-HQ FE point of contact to other DOE ISM Champions on the ISM effectiveness review and documentation processes.

7.3 ISM Annual Safety Performance Objectives, Measures and Commitments Process

Purpose:

To describe how the DOE-HQ FE Secretarial Office will:

- (1) Establish, document, and implement relevant safety performance objectives, measures, and commitments in response to DOE Secretarial direction and budget execution guidance.
- (2) Use safety performance objectives, measures, and commitments to drive improvement in safety performance and ISM system effectiveness.

Process:

- (1) By July 1st of each year, the DOE-HQ FE ISM Champion shall prepare and the DOE-HQ FE Secretarial Office shall approve DOE-HQ FE safety performance objectives, measures, and commitments for application to the following fiscal year (beginning October 1).

- (2) By August 1st of each year, the DOE-HQ FE Secretarial Office shall provide these objectives, measures, and commitments (for application to the following fiscal year) to his direct reports, including the DOE-HQ FE Deputy Assistant Secretaries over each FE Office.
- (3) By August 1st of each year, the DOE-HQ FE ISM Champion shall provide the objectives, measures, and commitments to his/her points of Field Office/Site contacts and post them on the DOE-HQ FE ESS&H website.
- (4) FE Field Offices/Sites shall annually prepare and submit to the DOE-HQ FE ISM Champion their own safety performance objectives, measures, and commitments by October 1st of each fiscal year for application to that fiscal year. These objectives, measures, and commitments should take into account (be based in part on) those developed by the DOE-HQ FE Secretarial Office. However, the FE Field Offices/Sites will need to develop site-specific objectives, measures, and commitments based on its own internal assessments, needs, and results of ISM verification activities.
- (5) In order to achieve these performance objectives, measures, and commitments and to satisfy the ISM core function of “balanced priorities,” resources shall be effectively allocated – generally through the overall DOE budgeting process and specifically through the Field Offices’/Sites’ internal budget allocation process.
- (6) Development of performance objectives, measures, and commitments shall be based on numerous considerations, including:
 - a. Budget
 - b. Opportunities for improvement based on ISM assessments and effectiveness reviews
 - c. Direction and guidance from the DOE Secretarial Office
 - d. Stakeholder input
 - e. Attributes and behaviors that need to be demonstrated to continually improve ISM performance.
- (7) Sustainable environmental stewardship and pollution prevention objectives, commitments and measures shall be largely based on those set forth in DOE O 450.1 and through the Executive Order (13423) on Strengthening Federal Environmental, Energy, and Transportation Management.
- (8) Safety measures shall primarily utilize OSHA-type measures, such as total recordable case rate, lost workday case rate, and number of operational occurrences.
- (9) FE’s objectives, commitments, and measures shall be:
 - a. Reviewed and updated as appropriate on at least an annual basis
 - b. Placed on DOE-HQ FE’s ESS&H website.

Roles and Responsibilities:

FE Secretarial Office (FE-1) shall:

- (1) Approve DOE-HQ FE's annual safety performance objectives, measures, and commitments.
- (2) Provide DOE-HQ FE's annual safety performance objectives, measures, and commitments to the cognizant Central Technical Authority.
- (3) Identify new goals and directions for the following year based on results from annual ISM reviews and declarations.
- (4) Allocate budgets to implement objectives, measures, and commitments.

Field Office/Site Managers shall:

- (1) Prepare annual Field Office/Site safety performance objectives, measures, and commitments, and provide these to the DOE-HQ FE Secretarial Office through the DOE-HQ FE ISM Champion.
- (2) Develop and implement processes for establishing, documenting, tracking, and implementing relevant safety performance objectives, measures, and commitments in response to DOE-HQ FE Secretarial and budget execution guidance.
- (3) Allocate and manage budgets to implement Field Office/Site objectives, measures, and commitments.

FE ISM Champion (FE-7) shall:

- (1) Prepare (for approval of the DOE-HQ FE Secretarial Office) annual safety performance objectives, measures, and commitments for application to the following fiscal year.
- (2) Provide annual objectives, measures, and commitments to his/her points of Field Office/Site contacts.
- (3) Post objectives, measures, and commitments on the FE ESS&H website.
- (4) Track progress on achieving objectives, measures, and commitments at least on a quarterly basis.
- (5) Act as an FE point of contact and subject matter expert on safety objectives, measures, and commitments for Field Offices/Sites.
- (6) Act as an FE point of contact to other DOE ISM Champions related to safety objectives, measures, and commitments.

8.0 Conclusions

By developing this FE-HQ ISM System Description and implementing its requirements, the objective of ISM – to perform work in a safe and environmentally friendly manner – will be achieved and maintained in the Office of Fossil Energy. Management support for implementing these requirements is critical for success, as well as the understanding of these requirements by employees. Thus, continual education, line management encouragement and assistance, and employee cooperation, collaboration and participation are important elements within the FE ISM system.