

memorandum

Oak Ridge Office

DATE: November 3, 2011

REPLY TO

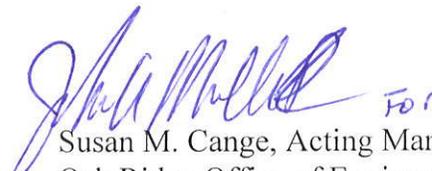
ATTN OF: EM-93: Moon

SUBJECT: **ENVIRONMENTAL MANAGEMENT PROCEDURE EM-2.2, REVISION 4, "SAFETY SYSTEMS OVERSIGHT PROGRAM" - APPROVED**

TO: Environmental Management Staff, EM-90

The subject procedure (attached) is issued for your use. Please read and familiarize yourself with it. It will be placed onto the Office of Environmental Management's Office Policies and Procedures Webpage, <http://www.oakridge.doe.gov/External/Default.aspx?tabid=120>, as soon as possible and will be available there for future reference.

If you have any questions or if we can be of any further assistance, please contact me at 576-0742 or Sherry Moon at 576-0109.

 For
Susan M. Cange, Acting Manager
Oak Ridge Office of Environmental Management

Attachment
(as stated)

cc w/attachment:

Jason Armstrong, EM-93

Scott Foster, SE-33

David Greer, SE-33

Ryan Hilmes, EM-93

Sherry Moon, EM-93

Melyssa Noe, EM-92

David Queen, EM-93

Patrick Smith, SE-33

U.S. Department of Energy
Oak Ridge Office of Environmental Management
Procedure

SAFETY SYSTEM OVERSIGHT PROGRAM

EM-2.2
Revision 4

Prepared: Sherry D. Moon 10/11/11
Sherry D. Moon
Instrumentation & Control Safety System Oversight
Date

Approved: John A. Mullen For 11/3/11
Susan M. Cange, Acting Manager
Oak Ridge Office of Environmental Management
Date



EM Environmental Management

safety ♦ performance ♦ cleanup ♦ closure

REVISION LOG

Revision	Description of the Revision	Issue Date
0	Initial Issue.	10/06/2003
1	HQ and ORO formally issued directives requiring the updating of the EM implementing document.	12/07/2005
2	DOE Order 420.1A, <i>Facility Safety</i> , was revised to DOE Order 420.1B Changes made to reflect the current Oak Ridge Office Environmental Management organizational structure.	05/30/2008
3	Update references and eliminate out-of-date material	11/10/2009
4	Added Required Reading, stop work actions, reporting requirements, ORION documentation requirements, and updated references.	11/03/2011

TABLE OF CONTENTS

REVISION LOG	2
ACRONYMS.....	4
1.0 PURPOSE	5
2.0 SCOPE	5
3.0 REFERENCES AND DEFINITIONS	5
3.1 References	5
3.2 Definitions.....	5
4.0 RESPONSIBILITIES	6
4.1 Manager for Environmental Management (MEM).....	6
4.2 Engineering Division Director (EDD)	7
4.3 Safety System Oversight Coordinator (SSOC).....	8
4.4 Safety System Oversight (SSO) Personnel	8
5.0 PROCEDURE.....	9
5.1 Programmatic Action Steps (Management).....	9
5.2 Oversight Action Steps (SSOs).....	10
6.0 RECORDS.....	11
6.1 Program Records.....	11
6.2 Records Maintenance	11

ACRONYMS

MEM	Manager for Environmental Management
AMESH	Assistant Manager for Environment, Safety, and Health
CSE	Cognizant System Engineer
DOCS	Document Online Coordination System
DOE	Department of Energy
EDD	Engineering Division Director
EM	Office of Environmental Management
FAQS	Functional Area Qualification Standard
FEM	Field Element Manager
FR	Facility Representative
FRA	Functions, Responsibilities, and Authorities
ISM	Integrated Safety Management
ORION	Official Name/Title for what was formerly referred to as Oak Ridge Issues, Open Items and Non-conformances
ORO	Oak Ridge Office
PFPD	Program Federal Project Director
PM	Project Manager
RR	Required Reading
SCMS	Science Management System
SME	Subject Matter Expert
SSO	Safety System Oversight
SSOC	Safety System Oversight Coordinator
TDG	Training and Development Group

1.0 PURPOSE

To establish requirements and responsibilities for the U.S. Department of Energy (DOE) Oak Ridge Office (ORO) Office of Environmental Management (EM) Safety System Oversight (SSO) Program to ensure SSO staffing and coverage meet the requirements to adequately oversee active safety systems and the contractors' Cognizant System Engineer (CSE) Programs. This document does not change any requirements contained in any DOE Directive. Therefore, if any conflicts arise between this EM Directive and a DOE Directive, the requirements contained in the DOE Directive shall take precedence.

2.0 SCOPE

This procedure applies to staff identified as SSO personnel to cover EM identified active safety systems. This procedure describes responsibilities for SSO personnel, their supervision and management, and those directly supporting the SSO function.

3.0 REFERENCES AND DEFINITIONS

3.1 References

Note: The latest revision of references should be used.

- 3.1.1 DOE Order 420.1, *Facility Safety*
- 3.1.2 DOE Guide 420.1-1, *Nonreactor Nuclear Safety Design Criteria and Explosive Safety Criteria Guide For Use With DOE O 420.1, Facility Safety*
- 3.1.3 DOE Policy 450.4, *Safety Management System Policy*
- 3.1.4 DOE Order 433.1, *Maintenance Management Program for DOE Nuclear Facilities*
- 3.1.5 DOE-STD-1073-2003, *Configuration Management Program*
- 3.1.6 DOE-STD-3024-98, *Content of System Design Descriptions*
- 3.1.7 DOE Order 426.1, *Federal Technical Capability*
- 3.1.8 Oak Ridge Office-Level III *Functions, Responsibilities, and Authorities*
- 3.1.9 EM-3.3, *Integrated Assessment Program*
- 3.1.10 Science Management System (SCMS); Environment, Safety, and Health (ES&H) Management System; Environment, Safety, and Health (ES&H) Oversight of Contractors; Procedure 1. *Stop Work and Facility Shutdown*
- 3.1.11 DOE-STD-1063-2011, *Facility Representatives*

3.2 Definitions

- 3.2.1 Active Safety Systems. Safety systems credited in safety basis documents as controls that perform important roles to protect the health and safety of the public, workers, and the environment, including safety-class systems,

safety-significant systems, and other systems that, in the judgment of line management, perform an important defense-in-depth safety function

- 3.2.2 Operational Awareness. (DOE-STD-1063-2011) Operational awareness refers to those activities taken by DOE line personnel to maintain cognizance of overall facility or activity status, major changes planned, and overall safety posture. Activities include routine day-to-day monitoring of work performance through facility tours/walkthroughs, work observation; document reviews, meeting attendance and participation, and ongoing interaction with contractor workers, support staff, and management.
- 3.2.3 SSO Personnel. Individuals assigned responsibility for overseeing assigned active safety systems to ensure they will perform as required by the safety basis and other applicable requirements. Highly qualified personnel perform assessments and investigations to confirm performance of assigned active safety systems in meeting established safety and mission requirements and review sections of the documented safety analysis related to these systems. With respect to the assigned SSO personnel's expertise, the individual has technical understanding of the system requirements, design, operation, testing, and maintenance and knowledge of relevant codes, standards, procedures, and acceptance criteria.
- 3.2.4 Stop Work Actions. Stop Work Actions shall be initiated to cease:
- Activities that pose an imminent danger to the health and safety of workers or the public,
 - Activities that could adversely affect the safe operation of or could cause serious damage to a facility, or
 - Activities that could result in the release of radiological or chemical effluents to the environment in excess of regulatory limits.
- 3.2.5 Walkthrough. (DOE-STD-1063-2011) A tour through a facility to maintain operational awareness of the facility.

4.0 RESPONSIBILITIES

4.1 Manager for Environmental Management (MEM)

- 4.1.1 Ensures EM contractors, where applicable, develop a CSE Program according to DOE Order 420.1.
- 4.1.2 Ensures staffing and coverage meet the EM SSO requirements to adequately oversee active safety systems and the contractor's CSE Program with respect to EM resource needs.

4.2 Engineering Division Director (EDD)

- 4.2.1 Ensures assignment of SSO personnel to specific safety systems as necessary. Coordinates with appropriate EM Supervisors and Assistant Manager for Environment, Safety, and Health (AMESH) when relying on their personnel to perform SSO responsibilities.

Note: In situations where EM is relying on personnel from the Office of AMESH to support SSO responsibilities, the following requirements found in EM-3.3 for SSOs are shared with the AMESH:

- Ensuring that SSO personnel are identified and trained.
- Establishing qualification schedules.
- Facilitating SSO personnel qualification.
- Ensuring Individual Performance Plans contain SSO responsibilities.
- Ensuring SSO personnel qualifications are maintained current.
- Ensuring SSO supervisors maintain their qualifications as Senior Technical Safety Managers.
- Approves EM SSO Program Documents.

- 4.2.2 Ensures that the EM Active Safety System List is accurate and maintained current.
- 4.2.3 Identifies necessary coverage areas for SSO personnel with respect to the EM missions and programs.
- 4.2.4 Ensures identification of resource needs for SSO coverage.
- 4.2.5 Ensures that the EM SSO TQP Memo is initiated and approved for each EM SSO candidate.
- 4.2.6 Ensures appropriate training is provided and documented for SSO personnel roles and responsibilities, and coordinates training with the ORO Training and Development Group (TDG).
- 4.2.7 Ensures SSO personnel qualifications are maintained current.
- 4.2.8 Provides data input into SSO Program performance measures and in addition, extracts data taken from the performance measure analyses and identifies and oversees implementation of program improvements where appropriate.
- 4.2.9 Ensures a periodic SSO Program self-assessment is scheduled and conducted in coordination with the Performance Assurance Division Director.

4.2.10 Designates Required Reading (RR) material which may include, but is not limited to, the following:

- New and revised procedures.
- Significant Lessons Learned.
- Any other information determined to be of significant importance.

4.3 SSO Coordinator (SSOC)

- 4.3.1 Schedules and coordinates periodic assessments of the EM contractors' CSE Program.
- 4.3.2 Schedules and coordinates periodic SSO program self-assessments in accordance with EM-3.3, Integrated Assessment Program, as requested by the EDD.
- 4.3.3 Recommends to the EDD suggested formal and informal assessments to be conducted by SSO personnel.
- 4.3.4 Coordinates the tracking and trending of issues and findings from EM SSO Program audits/assessments/walkthroughs.
- 4.3.5 Tracks RR and ensures documentation of RR is provided to the TDG.
- 4.3.6 Ensures that applicable SSO information be provided on Share Point.

4.4 Safety System Oversight (SSO) Personnel

- 4.4.1 Performs SSO responsibilities identified in DOE Order 426.1.
- 4.4.2 Provides oversight of contractor planned actions regarding assigned active safety systems. Ensure MEM's expectations are met.
- 4.4.3 Provides technical support to Facility Representatives, subject matter experts (SMEs), and Federal Project Directors/Project Managers in evaluating the significance and impact of identified system problems and other issues related to assigned active safety systems, as necessary.
- 4.4.4 Participates on operational readiness reviews, readiness assessments, safety basis implementation reviews, project reviews, and other reviews and assessments as assigned.
- 4.4.5 Informs management of contractor actions within assigned active safety system area.
- 4.4.6 Qualifies and maintains qualifications in accordance with the Technical Qualification Program requirements for the assigned active safety system.
- 4.4.7 As requested, participates in budget reviews to ensure adequate funding is requested to maintain system operability and reliability.

- 4.4.8 When performing assessments of assigned active safety system, utilizes DOE Order 420.1 to perform the assessments.
- 4.4.9 Completes the SSO Required Reading (RR) program by reading and understanding the assigned RR and acknowledging completion of the RR assignments. Sends confirmation of RR completion to SSO Coordinator and TDG.
- 4.4.10 Documents oversight activities in ORION.
- 4.4.11 Tracks and trends issues and findings related to assigned safety system.

5.0 PROCEDURE

DOE SSO personnel typically will be assigned based on engineering disciplines and necessary areas of coverage as defined by the Engineering Division Director. Thus, SSO personnel may be assigned to cover areas such as criticality alarms, fire detection and suppression, instrumentation and control, ventilation, and mechanical systems.

EM is staffed by Facility Representatives that have day-to-day operational oversight responsibility for assigned facilities and SMEs that provide support for oversight of specific environment, safety, and health programs (e.g., Fire Protection, Criticality Safety, Radiation Protection, Facility Safety). The SSO position is not meant to infringe on these duties or those of EM Federal Project Directors/Managers, but rather to enhance EM oversight and provide a focused view on certain specific systems. The Facility Representatives, SMEs, and SSO personnel will, on occasion, be required to simultaneously provide management with input on the same contractor operations. Coordination between individuals performing each of these functions will be necessary to avoid duplication and provide consistent input to EM management and to the contractor. The assigned SSO personnel will be expected to provide this coordination for issues involving the active safety systems to which they are assigned.

5.1 Programmatic Action Steps (Management)

- 5.1.1 Review and verify the accuracy of the EM Active Safety System List.
- 5.1.2 Ensure that the training and qualification requirements for SSO personnel assigned to EM systems are defined.
- 5.1.3 Ensure SSO personnel are assigned based on established resource needs.
- 5.1.4 Ensure SSO personnel have competence commensurate with assigned responsibility.
- 5.1.5 Schedule and coordinate periodic SSO program self-assessments in accordance with EM-3.3, Integrated Assessment Program.

5.2 Oversight Action Steps (SSOs)

Note: DOE SSO duties and responsibilities are documented in DOE Order 426.1, Attachment D. Additional guidance may be obtained from the other references in this procedure.

- 5.2.1 Perform walkthroughs and assessments of assigned safety systems in accordance with Environmental Management Procedure EM-3.3.
- 5.2.2 Record the results of walkthroughs and assessments in ORION.
- 5.2.3 Send e-mail notification of ORION entries to the Program Federal Project Director (PFPD), Project Manager (PM), FR, SSO Coordinator, and EDD
- 5.2.4 Initiate a Stop Work Action to cease activities when an imminent danger situation is identified. Reference 3.1.10 provides general guidance on issuance of Stop Work Actions and examples of action or activities that may warrant Stop Work Actions.
- 5.2.5 If a Stop Work Action is initiated, notify the following EM management as soon as possible:
 - Manager for Environmental Management
 - Facility Operations Division Director
 - Federal Project Director
- 5.2.6 Document Stop Work Action in ORION with complete description of the issue that caused it.
- 5.2.7 Perform reliability, availability, and maintainability reviews of assigned systems, including configuration and material condition.
- 5.2.8 Evaluate if adequate numbers of qualified contractor system engineers have been assigned for the identified active safety systems.
- 5.2.9 Evaluate the training and qualifications of the contractor system engineers to determine if commensurate with the systems to which they are assigned and are maintained up to date.
- 5.2.10 Evaluate if contractor system engineers are adequately involved with the operation, maintenance, and configuration of their systems and periodically observe the contractor system engineer in the performance of system condition walkdowns for assigned active safety systems.
- 5.2.11 Participate on reviews and assessments as requested involving safety system(s).
- 5.2.12 Maintain cognizance of assigned safety system status, including but not limited to operability; safety basis compliance; planned activities; configuration management; and related documentation.

5.2.13 Report potential or emergent hazard(s) immediately to FRs, PM, PFPD, EDD.

6.0 RECORDS

6.1 Program Records

Records generated as a result of implementation of this procedure may include but are not limited to:

- Assessment plans.
- Assessment reports.
- Walkthrough reports.
- Corrective action plans.
- Correspondence on changes to corrective action plans, including extensions and rejections.
- Letters transmitting SSO documents (e.g., reports, plans, comments, etc.)
- Letters requesting corrective action plans.
- Corrective action plan approval letters.
- Evidence files for corrective action closure.
- Any other assessment correspondence.
- RR material and associated documentation.

6.2 Records Maintenance

The RR records generated as a result of this procedure will be provided to TDG for inclusion in the SSO personnel's Technical Qualification Record. Other records will be maintained in ORION; DOCS; or the AMEM mailroom files.