RL-F-1325.6 (02/98)

United States Government **Department of Energy**

memorandum

Richland Operations Office

DATE: DEC 13 2005

REPLY TO ATTN OF: SED:BEH/06-SED-0036

SUBJECT: FOLLOW-UP REVIEW OF THE IDAHO OPERATIONS OFFICE (ID) SAFETY SYSTEM OVERSIGHT (SSO) PROGRAM

TO: Elizabeth Sellers, Manager
Idaho Operations Office

The Richland Operations Office supported by the ID staff performed a follow-up SSO program review during the week of September 26, 2005. This memorandum formally transmits the report from the subject review. If you have any questions, please contact me, or your staff may contact Doug S. Shoop, Assistant Manager for Safety and Engineering, on (509) 376-0108.

Keith A. Klein
Manager

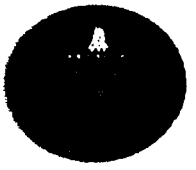
Attachment

cc: R. Stallman (ID)
T. Elias (ID)
T. Wichmann (ID)

U.S. Department of Energy

Follow-Up Review of the Idaho Operations Office Safety System Oversight Program

September 2005



Assessment Team

Richland Operations Office
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EXECUTIVE SUMMARY

A team from DOE Richland Operations Office (RL) and the DOE Idaho Operations Office (ID) reviewed the ID Safety System Oversight (SSO) Program and its implementation. This review is conducted as a follow-up to an initial review performed last August 2004. A year ago the team found that there existed many working elements of a program (System Subject Matter Experts program) which were recognizably very similar to the requirements and goals of DOE M 426.1-1A, *Federal Technical Capability Panel Manual.* ID has updated their program to be compliant with DOE M 426.1-1A. Today, a significantly improved program has been developed which includes a formal documented program including clearly defined roles, responsibilities, authorities and accountabilities, oversight expectations and a qualification process. ID SSO line management demonstrates responsibility and ownership of the SSO Program and its implementation to ensure safety in their nuclear facilities. Although the program is well documented, limited evidence was provided to demonstrate full implementation. The two most significant areas needing further implementation are the performance of assessments to evaluate the contractors System Engineer (SE) program and the operability of Vital Safety Systems (VSS). However it was clear from their oversight planning process that the program is headed in the right direction. The team concluded that ID had developed an effective oversight program once fully implemented.

Several Noteworthy Practices as well as Areas of Improvement and observations were identified.

Noteworthy Practices:

PGM-NP-1 Although a system for safety oversight was functioning, the initial review conducted a year ago found little existing documentation establishing the program. The documentation forming the safety system oversight program has significantly improved over the initial review.

PGM-NP-2 The roles, responsibilities, authorities and accountabilities are clearly defined and documented in the SSO's position description and identified in the ID Functions, Responsibilities and Authorities Matrix (FRAM). This is viewed as a strong commitment to the SSO program.

PGM-NP-3 The functional area Subject Matter Experts (SME) were very knowledgeable of the SSO program functions and duties and provide technical expertise available to support the SSO program implementation. The interface between the SMEs and the SSOs was viewed as a strength in program implementation.

OP-NP-4 One of the elements of oversight planning consisted of an assessment schedule. Use of this schedule to plan System Engineer program and Vital Safety System assessment was viewed as a noteworthy practice and a good indication of SSO's commitment to monitor the systems and contractors performance.

OP-NP-5 The SSO had direct access to an automated contactor configuration management system that included current detailed information in areas such as design, work management, procurement, and maintenance. Using this system, the SSO's could quickly access current contractor documents (such as DSA) necessary to perform effective oversight.

Opportunities for Improvement:

PGM-OFI-1 An SSO qualification program and standard has been developed which meets the requirements of DOE-M-426.1-1A. Although many of the SSO candidates have qualified under a previous program (SSME), they have not yet qualified under the SSO qualification program.

PGM-OFI-2 Many of the SSO program requirements have not been implemented for the recently received INL program (MFC), particularly, the alignment of VSS with the systems identified in the DSA.

PGM-OFI-3 Roles, responsibilities, authorities and accountabilities (R2A2s) were not included in the SSO program for the team leads with responsibility for managing SSO staff.

TQ-OFI-4 A process has not been established to track the progress of candidates in the qualification program.

MG-OFI-5 SSO Individual Performance Plans (IPP) do not consistently include SSO responsibilities.

OP-OFI-6 SSO personnel did not perform routine VSS assessments to ensure reliable operations (e.g., equipment configuration, material condition, effects of aging).

OP-OFI-7 SSO personnel did not perform routine oversight of the contractor implementation of DOE O 420.1A requirements for the SE program.

PGM-OFI-8 Contractor System Engineers (SE) did not fully understand the SSO roles and relationship to the SEs. This indicates interactions between the SEs and the SSOs need strengthening.

Observations:

PGM-O-1 Succession planning was not evident to ensure future SSO staffing needs can be met.

PGM-O-2 Review of the SSO qualification program and SSO qualification standard led to confusion over who may sign off the competencies.

INTRODUCTION

In May 2004, the Department of Energy (DOE) published DOE M 426.1-1A, *Federal Technical Capability Panel Manual,* and thus institutionalized the Safety System Oversight (SSO) Program to monitor the performance of Vital Safety Systems in DOE nuclear facilities and to evaluate effectiveness of the Contractor's cognizant System Engineer (SE) Program. DOE M 426.1-1A describes the SSO function, including roles and responsibilities of SSO personnel (SSO), and defines the knowledge, skills and abilities to be incorporated into technical qualification programs for SSOs.

In September 2005, a review was conducted to evaluate progress by the Idaho Operations Office (ID) in developing and implementing an SSO program. The objective of this review was to follow up to the 2004 initial review which focused on the program documentation and found ID had many working elements of an effective SSO Program in the former ID System Subject Matter Expert (SSME) program. However, ID needed to formally document SSO program compliant to DOE-M-426.1-1A.

SCOPE AND METHODOLOGY

The review was performed by the Richland Operation Office (RL) Director for Safety and Engineering Division, the RL SSO Team Lead and the RL Confinement Ventilation System (CVS) SSO. ID SSO Program Manager and an ID SSO engineer provided assistance on behalf of ID in the conduct of this review. Criteria and Review Approach Documents (CRADs) developed by the FTCP were used to evaluate actions taken to define and implement the SSO Program at ID. The CRADs are provided in Attachment A of this report.

Interviews were conducted with line management, SSO personnel, and contractor personnel responsible for vital safety systems (VSS). The results of document reviews and interviews are documented in the "Results" section of this report and broken out by the four CRADs functional areas: Program (PGM); Training and Qualification (TQ); Management (MG); and Oversight Performance (OP).

RECORDS REVIEWED/PERSONNEL INTERVIEWED

Documents reviewed:

1. SSO Qualification Cards
2. ID M 360.A-1, *ID Technical Qualification Program Manual*
3. List of VSS/SSOs
4. Individual Qualification Records
5. Individual PDs
6. Individual Performance Agreements
7. DSAs
8. ID SSO Program Assessment Report 2004

9. List 253, *Vital Safety Systems*
10. SSO Program
11. SSO Qualification Program (ID M 360.A-1 Attachment N)
12. ICP Contract Assessment Schedule
13. ID M 411.A-1, FRAM

Personnel interviewed:

1. Assistant Manager, Operational Support
2. SSO Program Manager
3. Director, Quality & Safety Division
4. ID SSO Engineer
5. ID Training Team Lead
6. ID Radcon/CVS SME
7. ICP Chief Engineer
8. ICP SE Tech Lead
9. ICP SE
10. ICP Department Manager
11. ICP Materials Engineering Manager
12. INL (MFC) Director Nuclear Technical Services
13. INL (RTC) SE Tech Lead

RESULTS

Program (PGM)

OBJECTIVE
PGM.1 An effective SSO Program is established by the Field Element Manager to apply engineering expertise to maintain safety system configuration and to assess system condition and effectiveness of safety management program implementation.

Discussion of Results:

The ID SSO program was observed to be established and documented. ID management has shown strong support for the SSO program. This was in evidence during interviews conducted with the Assistant Manager, Team Leader, and SSOs. They were aware of the advantages of a sound SSO program and provided support, not only in words but with the appropriate time and resources. Although a program for safety oversight was functioning, the initial review conducted a year ago found little existing documentation establishing the program in accordance with DOE M-426.1-1A. The documentation forming the safety system oversight program has significantly improved over the initial review and was viewed as **noteworthy [PGM-NP-1]**. The roles, responsibilities, authorities and accountabilities are clearly defined and documented in the SSO's position description and identified in the ID Functions, Responsibilities and Authorities Matrix (FRAM). This is viewed as a strong commitment to the SSO program and **noteworthy [PGM-NP-2]**. A key resource for managing the SSO staff are the team leads providing

the day to day direction. In addition to supervisors, team leads of SSO personnel need to be accountable for the effective implementation of the SSO program. Roles, responsibilities, authorities and accountabilities (R2A2s) were not included in the SSO program for the team leads with responsibility for managing SSO staff. An **opportunity for improvement [PGM-OFI-3]** exist to define and document the safety oversight R2A2s for the team leads. ID developed this oversight program using the services of the SSOs, Facility Representatives (FRs), Subject Matter Experts (SMEs), and Senior Technical Safety Managers (STSMs). ID SSO personnel are safety system experts, but they are not necessarily functional area (i.e. confinement ventilation) experts. The SSO personnel have subject matter experts for various disciplines (i.e. fire protection, radiation control etc.) available as needed to support various reviews or issues resolution. The functional area Subject Matter Experts (SME) were very knowledgeable of the SSO program functions and duties and provide technical expertise available to support the SSO program implementation. The interface between the SMEs and the SSOs was viewed as a strength and **noteworthy practice [PGM-NP-3]** in program implementation.

An SSO qualification program and qualification standard have been developed which meets the requirements of DOE-M-426.1-1A. Although many of the SSO candidates have qualified under a previous program (SSME), they have not yet qualified under the SSO qualification program. Considering all of the progress that ID has made over the last year in development and implementing the SSO program, an **opportunity for improvement [PGM-OFI-1]** was noted to qualify the current SSO on the new qualification standard. Review of the SSO qualification program and SSO qualification standard led to confusion over who may sign off the competencies and resulted in an **observation [PGM-O-2]** that Qualifying officials should be clearly defined and established in the Program documentation. Additionally, an **observation [PGM-O-1]** was identified that succession planning was not evident to ensure future SSO staffing needs can be met.

Interviews with the ID SSO and contractor staff led to the conclusion that the contractor SE program had been implemented for the Idaho Closure Project. However, many of the SSO/SE program requirements have not been implemented for the recently received INL program (MFC). Identification of VSS was not observed to be consistent with the ID standards established by the SSO program. Particularly, the alignment of VSS with the systems identified in the DSA was viewed as an **opportunity for improvement [PGM-OFI-2]**. Interviews with the contractor management and SEs indicated a knowledge exists of the interactions between the SEs and the SSOs, but not a full understanding of the SSO functions. Contractor System Engineers (SE) did not fully understand the SSO roles and relationship to the SEs. This indicates interactions between the SEs and the SSOs need strengthening **[PGM-OFI-8]**.

Training and Qualification (TQ)

OBJECTIVE

TQ.1 SSO personnel and supervisors with responsibilities for SSO personnel are appropriately trained and qualified, or are in the process of achieving qualification.

Discussion of Results:

The training and qualification program was well established and documented implementing the requirements of DOE M-426.1-1A. Supervisors with responsibility for SSO's are STSM qualified. Candidate SSOs have documented SSO assignments with qualification cards meeting the requirements of DOE M-426.1-1A. Maximum schedules are established in the SSO Program documentation. A tickler system is in place to notify candidates and supervisors one calendar quarter before qualification is due. An **opportunity for improvement [TQ-OFI-4]** exist to develop a process has for tracking the progress of candidates in the qualification program.

Management (MG)

OBJECTIVE

MG.1 SSO Supervisors effectively perform their SSO program responsibilities.

Discussion of Results:

ID-SSO personnel report to Senior Technical Safety Managers. SSO personnel have been selected and assigned responsibility for vital safety systems in facilities. Qualification cards for SSOs are tailored to their assigned systems and were approved by STSMs. Supervisors have assigned SSO and established schedules for qualification. Although a tickler system (notification one calendar quarter before date due) in the training program, supervisors do not track the progress of candidates in the qualification program **[see TQ-OFI-4]**. The review team examined the Individual Performance Agreements (IPAs) for some of the SSOs. The IPA is a supervisory performance agreement tailored to each individual and is the basis for personnel accountability and implements the requirements for Individual Performance Plans (IPP). However, SSO IPAs do not consistently include SSO responsibilities. An **opportunity for improvement [MG-OFI-5]** exists to ensure all SSO IPAs contain SSO responsibilities. ID has periodically evaluated program effectiveness and effectively implemented resulting corrective actions.

Oversight Performance (OP)

OBJECTIVE

OP.1 Collectively, SSO personnel provide oversight of the Contractors' System Engineer Program.

OP.2 SSO personnel are knowledgeable and familiar with assigned safety systems and/or programs.

Discussion of Results:

Since the initial ID assessment last year, ID has established a SSO program **[see PGM-NP-1]** including establishing SSO roles and responsibilities with regards to establishing SE and safety system oversight goals, objectives and performance expectations. One of the elements of oversight planning consisted of an assessment schedule. Use of this schedule to plan System Engineer program and Vital Safety System assessment was viewed as a **noteworthy practice [OP-NP-4]** and a good indication of SSO's commitment to monitor the systems and contractors performance.

The ID contractor has implemented the System Engineer (SE) Program requirements identified in DOE O 420.1A. The program formally establish expectations for oversight of contractor SE program, particularly for oversight of the SE program for periodic system assessments of system operability, reliability and material condition. However ID SSOs have not yet implemented the SE program oversight. An **opportunity for improvement [OP-OFI-7]** exist for SSO personnel to perform routine oversight of the contractor implementation of DOE O 420.1A requirements for the SE program. When interviewed, the Contractor System Engineers (SE) did not fully understand the SSO roles and relationship to the SEs. This indicates interactions between the SEs and the SSOs need strengthening [see **PGM-OFI-8**].

While the SSO personnel review periodic facility equipment reports and interface with the FR in various reviews such as equipment failure causal analysis reviews ("critiques"), there was little direct independent assessment and evaluation of equipment configuration and material condition. SSO personnel did not perform routine VSS assessments to ensure reliable operations (e.g., equipment configuration, material condition, effects of aging). An **opportunity for improvement [OP-OFI-6]** exists to perform routine assessments to ensure reliable operations of assigned safety systems. It is recommended that the SSO personnel also assess and evaluate the effects of aging on systems and consider the appropriateness of system maintenance and surveillance activities with respect to performance of safety functions.

The contractor has developed an integrated data system which links design, configuration management, procurement, work management and maintenance information for the vital safety system components. The SSO had direct access to an automated contactor configuration management system that included current detailed information in areas such as design, work management, procurement, and maintenance. Using this system, the SSO's could quickly access current contractor documents (such as DSA) necessary to perform effective oversight. It is **noteworthy [OP-NP-5]** that the SSOs have this available as an oversight tool, giving them direct access to the contactor's automated configuration management system.

CONCLUSIONS and RECOMMENDATIONS

ID has made significant improvements to the existing program during the last year. ID has established and documented an effective SSO Program in accordance with the requirements of DOE M 426.1-1A, *Federal Technical Capability Panel Manual.* ID has designated SSOs and established a SSO qualification program. ID SSO line management demonstrates responsibility and ownership of the SSO Program and its implementation in their nuclear facilities. While the program is well documented, some improvements are required before full implementation. Limited evidence was provided to demonstrate full implementation. The two most significant areas needing further implementation are the performance of assessments to evaluate the contractors System Engineer (SE) program and the operability of Vital Safety Systems (VSS). However it was clear from their oversight planning process that the program is headed in the right direction. The team concluded that ID had developed an effective oversight program once fully implemented.

Several Noteworthy Practices as well as Areas of Improvement and observations were identified. Specific applicable criteria are identified in "[ ]".

Noteworthy Practices:

PGM-NP-1 Although a system for safety oversight was functioning, the initial review conducted a year ago found little existing documentation establishing the program. The documentation forming the safety system oversight program has significantly improved over the initial review. [PGM]

PGM-NP-2 The roles, responsibilities, authorities and accountabilities are clearly defined and documented in the SSO's position description and identified in the ID Functions, Responsibilities and Authorities Matrix (FRAM). This is viewed as a strong commitment to the SSO program. [PGM]

PGM-NP-3 The functional area Subject Matter Experts (SME) were very knowledgeable of the SSO program functions and duties and provide technical expertise available to support the SSO program implementation. The interface between the SMEs and the SSOs was viewed as a strength in program implementation. [PGM]

OP-NP-4 One of the elements of oversight planning consisted of an assessment schedule. Use of this schedule to plan System Engineer program and Vital Safety System assessment was viewed as a noteworthy practice and a good indication of SSO's commitment to monitor the systems and contractors performance. [OP]

OP-NP-5 The SSO had direct access to an automated contactor configuration management system that included current detailed information in areas such as design, work management, procurement, and maintenance. Using this system, the SSO's could quickly access current contractor documents (such as DSA) necessary to perform effective oversight. [OP]

Opportunities for Improvement:

PGM-OFI-1 An SSO qualification program and standard has been developed which meets the requirements of DOE-M-426.1-1A. Although many of the SSO candidates have qualified under a previous program (SSME), they have not yet qualified under the SSO qualification program. [PGM-1.2]

PGM-OFI-2 Many of the SSO program requirements have not been implemented for the recently received INL program (MFC), particularly, the alignment of VSS with the systems identified in the DSA. [PGM-1.3]

PGM-OFI-3 Roles, responsibilities, authorities and accountabilities (R2A2s) were not included in the SSO program for the team leads with responsibility for managing SSO staff. [PGM-1.2, PGM-1.4]

TQ-OFI-4 A process has not been established to track the progress of candidates in the qualification program. [MG-1.3, TQ-1.5]

MG-OFI-5 SSO Individual Performance Plans (IPP) do not consistently include SSO responsibilities. [MG-1.6]

OP-OFI-6 SSO personnel did not perform routine VSS assessments to ensure reliable operations (e.g., equipment configuration, material condition, effects of aging). [OP-2.1.4, OP-2.1.5, OP-2.5, OP-2.6]

OP-OFI-7 SSO personnel did not perform routine oversight of the contractor implementation of DOE O 420.1A requirements for the SE program. [OP-1.1, OP-1.2, OP-1.3]

PGM-OFI-8 Contractor System Engineers (SE) did not fully understand the SSO roles and relationship to the SEs. This indicates interactions between the SEs and the SSOs need strengthening. [PGM-1.5, OP-1.1, OP-1.2, OP-1.3]

Observations:

PGM-O-1 Succession planning was not evident to ensure future SSO staffing needs can be met. [PGM-1.4]

PGM-O-2 Review of the SSO qualification program and SSO qualification standard led to confusion over who may sign off the competencies. [PGM-1.6]

ATTACHMENT: Safety System Oversight (SSO) Program Implementation Assessment Criteria Review and Approach Documents (CRADs)

Signatures:

-- Original signed by

Pete J. Garcia Jr.

Pete J. Garcia
Director, Safety and Engineering
DOE-RL

-- Original signed by

Thomas J. Elias
SSO Program Manager
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-- Original signed by

Burton E. Hill
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C R Enos

Craig R. Enos
SSO Engineer
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Mark R. Hahn
Confinement Ventilation SSO
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Attachment A

Criteria and Review Approach Documents (CRADs)

Safety System Oversight (SSO) Program Implementation Assessment Criteria and Review Approach Documents (CRADs)

Revision 0

PROGRAM (PGM)

OBJECTIVE

PGM.1 An effective SSO Program is established by the Field Element Manager to apply engineering expertise to maintain safety system configuration and to assess system condition and effectiveness of safety management program implementation.

Criteria

PGM.1.1 The SSO Qualification Program is part of the Technical Qualification Program (DOE M 426.1-1A, Chapter III, Section 1, 2.b (1)).

PGM.1.2 The SSO Program establishes appropriate training, qualification, and performance requirements for SSO personnel and the supervisors are held accountable for achieving them (DOE M 426.1-1A, Chapter III, Section 1, 2.b (2)).

PGM.1.3 The safety systems and safety management programs included in the SSO Program align with those systems and programs identified in the applicable Documented Safety Analysis (DOE M 426.1-1A, Chapter III, Section 1, 4.c).

PGM.1.4 Safety system oversight requirements are defined and implemented, for example, functions, responsibilities, and authorities of personnel assigned to perform safety system oversight and their interface/support of Facility Representatives are clearly defined, and SSO staffing needs are identified and there is a plan or process to ensure future staffing needs are met and maintained (DOE M 426.1-1A, Chapter III, Section 1, 2.b (3) & (4)).

PGM.1.5 Affected DOE and contractor managers understand the SSO role and relationship to Facility Representatives and the contractor's cognizant System Engineers, and provide the necessary access and support (DOE M 426.1-1A, Chapter III, Section 1, 3.d).

PGM.1.6 Qualifying Officials are assigned to sign site-specific Qualification Cards (DOE M 426.1-1A, Chapter III, Section 1, 2.b (6)).

PGM.1.7 The SSO Program contains features to verify that SSO candidates possess the required level of knowledge and/or skills to perform assessments and investigations to confirm performance of safety systems in meeting

established safety and mission requirements (DOE M 426.1-1A, Chapter III, Section 1, 2.b (5)).

Approach

Record Review: Review documentation (e.g., site technical qualification program documents, SSO Program Plan, SSO Program procedures, qualification cards and/or standards, internal memorandums, Documented Safety Analyses, etc.) which establish the SSO Program and describe its implementation to determine that the program is complete and comprehensive.

Interviews: Interview management personnel with responsibilities for implementing and executing the SSO program to determine if they are familiar with the role of SSO personnel relative to the Facility Representatives and the contractor's cognizant system engineers, if they provide adequate resources for training, qualification, future staffing, and performance of SSO personnel, and if they appropriately qualified to perform their assigned role in the SSO program. Interview qualifying officials to determine if they are familiar with their role and responsibility, they are currently qualified, and they are performing their assigned role.

Field Observation: Evaluate any process used by or directed by the Field Element Manager to determine the effectiveness of SSO Program Performance.

TRAINING AND QUALIFICATION (TQ)

OBJECTIVE

TQ.1 SSO personnel and supervisors with responsibilities for SSO personnel are appropriately trained and qualified, or are in the process of achieving qualification.

Criteria

TQ.1.1 Supervisors with responsibilities for SSO personnel maintain Senior Technical Safety Manager (STSM) qualification (DOE M 426.1-1A, Chapter III, Section 1, 2.c (1)).

TQ.1.2 Site-specific qualification standards and cards have been developed and a documented process is implemented to assure that SSO candidates meet, at a minimum, the SSO knowledge, skills, and abilities specified in the *Federal Technical Capability Manual* DDOE 426.1-1A, Chapter III, Section 1, 5.a & 5.b)

TQ.1.3 All SSO personnel have completed or are completing the General Technical Base Qualification Standard (DOE-STD-1146-2001) and one or more Functional Area Qualification Standard(s) in a technical area linked to their individual job descriptions (DOE M 426.1-1A, Chapter III, Section 1, 4.a).

TQ.1.4 All SSO personnel have completed or are completing the site-specific qualification standard associated with assigned safety systems (DOE M 426.1-1A, Chapter III, Section 1, 4.a).

TQ.1.5 SSO Supervisors have established methods to assign initial qualification dates, track progress toward qualification, and ensure retraining/requalification occurs as required for each SSO candidate in the qualification process (DOE M 426.1-1A, Chapter III, Section 1, 2.c (4) through (6)).

Approach

Record Review: Review qualification records to establish that supervisors and managers of SSO are qualified as an STSM and that SSO personnel are trained and qualified. Review qualification and requalification schedules, staffing plans, training plans, travel funding, etc. to determine that sufficient resources are provided for training, retraining, qualifying, and requalifying SSO personnel.

Interviews: Interview supervisors, training coordinators, SSO personnel, and budget personnel to establish that training and qualification plans and schedules are being executed as planned and that sufficient resources are provided to meet the schedules.

Field Observation: Observe activities associated with the qualification process, such as qualification boards, exams, walk throughs to determine that the training and qualification process is implemented and functioning effectively.

MANAGEMENT (MG)

OBJECTIVE

MG.1 SSO Supervisors effectively perform their SSO program responsibilities.

Criteria

MG.1.1 Site-specific SSO qualification standards and cards are developed (DOE M 426.1-1A, Chapter III, Section 1, 2.c (2)).

MG.1.2 Supervisors have identified and approved SSO candidate selection (DOE M 426.1-1A, Chapter III, Section 1, 2.c (3)).

MG.1.3 Supervisors of SSO personnel have established SSO personnel qualification schedules and are tracking progress (DOE M 426.1-1A, Chapter III, Section 1, 2.c (4)).

MG.1.4 Supervisors facilitate SSO qualification (e.g., ensure sufficient time and training are provided to complete qualification tasks) (DOE M 426.1-1A, Chapter III, Section 1, 2.c (5)).

MG.1.5 Supervisors ensure SSO personnel are trained and qualified to perform assigned duties (DOE M 426.1-1A, Chapter III, Section 1, 2.c (6)).

MG.1.6 SSO responsibilities are included and measured in Individual Performance Plans (DOE M 426.1-1A, Chapter III, Section 1, 2.c (7)).

MG.1.7 Ensure SSO qualifications are maintained current by training and assignments planned in Individual Development Plans (DOE M 426.1-1A, Chapter III, Section 1, 2.c (8)).

MG.1.8 SSO Supervisors periodically evaluate program effectiveness and implement corrective actions in a timely manner (DOE M 426.1-1A, Chapter III, Section 1, 2.c (9)).

Approach

Record Review: Review qualification cards, Individual Performance Plans, and other SSO program documents and procedures to establish that managers and supervisors are effectively performing their responsibilities as defined in the SSO program. Review other documentation used by supervisors to establish SSO program effectiveness and implementation of corrective actions.

Interviews: Interview supervisors and managers to establish that they are familiar with their assigned roles, they perform their assigned duties, monitor the effectiveness of the SSO program and ensure any identified corrective actions are implemented.

Field Observation: Observe any activities associated with SSO program effectiveness evaluations and/or corrective action implementation.

OVERSIGHT PERFORMANCE (OP)

OBJECTIVE

OP.1 Collectively, SSO personnel provide oversight of the Contractors' System Engineer Program.

Criteria

OP.1.1 Oversight performed by SSO personnel establishes that the contractor System Engineer Program is effectively implemented with goals, objectives, and performance measures (DOE M 426.1-1A, Chapter III, Section 1, 2.a (1)).

OP.1.2 SSO personnel maintain communication with the contractor's cognizant System Engineer (DOE M 426.1-1A, Chapter III, Section 1, 2.a (1)).

OP.1.3 SSO personnel monitor performance of the contractor's cognizant System Engineer Program (DOE M 426.1-1A, Chapter III, Section 1, 2.a (1)).

OP.1.4 SSO personnel attend selected contractor meetings with Facility Representatives and contractor personnel responsible for system performance (e.g., cognizant System Engineers, design authorities, and program managers) (DOE M 426.1-1A, Chapter III, Section 1, 2.a (3)).

Approach

Record Review: Review oversight documentation, such as SSO assessment reports, SSO walk throughs, correspondence, SSO activity records or logs, corrective action documents, etc. to establish that SSO personnel are overseeing implementation and execution of the contractor system engineer program. Review the contractor's system engineer program to determine whether there are any program weaknesses or deficiencies that have not been identified by SSO personnel.

Interviews: Interview SSO personnel, Facility Representatives, and contractor system engineers to establish the level of interface between SSO personnel and the contractor's cognizant system engineers.

Field Observation: Observe any oversight activities of the contractor's system engineer program performed by SSO personnel.

OBJECTIVE

OP.2 SSO personnel are knowledgeable and familiar with assigned safety systems and/or programs.

Criteria

OP.2.1 A qualified SSO is, in fact, knowledgeable of the system status, performance, maintenance, operations, design, and vulnerabilities of their assigned systems or programs. This is evidenced by:

- OP.2.1.1 SSO personnel regularly and routinely review periodic system health/status reports (DOE M 426.1-1A, Chapter III, Section 1, 2.a (2)).
- OP.2.1.2 SSO personnel review test results, investigation reports, root cause analyses, etc (DOE M 426.1-1A, Chapter III, Section 1, 2.a (2)).
- OP.2.1.3 SSO personnel interface with external organizations that can provide insights on performance (DOE M 426.1-1A, Chapter III, Section 1, 2.a (2)).
- OP.2.1.4 SSO personnel perform assessments, periodic evaluations of equipment configuration and material condition and safety management program implementation (DOE M 426.1-1A, Chapter III, Section 1, 2.a (3)).
- OP.2.1.5 SSO personnel evaluate the effects of aging on system equipment and components, the adequacy of work control and change control processes, and consider the appropriateness of system maintenance and surveillance activities with respect to reliable performance of safety function(s) (DOE M 426.1-1A, Chapter III, Section 1, 2.a (3)).
- OP.2.1.6 SSO personnel identify technical issues and participate actively in the resolution of the issues.

OP.2.2 Safety systems and safety management programs have established goals, objectives, and performance measures

OP.2.3 SSO personnel perform evaluations of contractor troubleshooting, investigations, root cause evaluations, and selection and implementation of corrective actions, in conjunction with Facility Representatives (DOE M 426.1-1A, Chapter III, Section 1, 2.a (4)).

OP.2.4 SSO personnel provide support to other Federal employees, as appropriate. (DOE M 426.1-1A, Chapter III, Section 1, 2.a (5))

OP.2.5 SSO personnel assess contractor compliance with relevant DOE regulations, industry standards, contract requirements, safety basis requirements, and other system requirements (DOE M 426.1-1A, Chapter III, Section 1, 2.a (6)).

OP.2.6 SSO personnel confirm configuration documentation, procedures, and other sources of controlling information are current and accurate (DOE M 426.1-1A, Chapter III, Section 1, 2.a (7)).

OP.2.7 SSO personnel report potential or emergent hazards immediately to DOE line management and Facility Representatives (DOE M 426.1-1A, Chapter III, Section 1, 2.a (8)).

OP.2.8 SSO personnel stop tasks, if required, to prevent imminent impact to the health and safety of workers and the public, to protect the environment, or to protect the facility and equipment and immediately notify the on-duty or on-call Facility Representative (DOE M 426.1-1A, Chapter III, Section 1, 2.a (8)).

OP.2.9 SSO personnel serve, when assigned, as qualifying officials in the development or revision of Functional Area Qualification Standards, mentor assigned backups, and qualify other candidates to the Functional Area Qualifications Standards needed to achieve Safety System oversight qualification (DOE M 426.1-1A, Chapter III, Section 1, 2.a (9)).

OP.2.10 SSO personnel maintain cognizance of the appropriate funding and resources to maintain and improve safety systems (DOE M 426.1-1A, Chapter III, Section 1, 2.a (10)).

OP.2.11 Methods have been established for SSO personnel to routinely communicate system/program performance information and issues with STSMs and the Field Office Manager (DOE M 426.1-1A, Chapter III, Section 1, 2.a (1)).

Approach

Record Review: Review oversight documentation, such as SSO assessment reports, SSO walk throughs, correspondence, SSO activity records or logs, corrective action documents, etc. to establish that SSO personnel are performing required oversight. Review contract requirements and their flow down through the contract to the safety systems and safety management programs to establish the effectiveness of SSO personnel oversight that the contractor complies with all requirements relative to safety systems and programs. Review a sample of the safety system health reports, safety system test reports, safety system investigation reports, safety system root cause analyses, etc. to determine the effectiveness of SSO personnel knowledge and familiarity with this information.

Interviews: Interview SSO personnel to determine their knowledge of and familiarity with assigned safety systems and safety management programs, and the reports that the contractor may generate in relation to the systems and programs.

Field Observation: Observe SSO personnel walk downs and other activities in the field to establish the level of SSO personnel knowledge and familiarity of safety systems.

Corrective Actions for 2005 DOE-RL Review of DOE-ID SSO Program (Training, Qualification, and Staffing Issues)

OPPORTUNITY FOR IMPROVEMENT (OFI)	ACTION	PERSON(S) RESPONSIBLE FOR ACTION	ACTION COMPLETION DATE	STATUS
PGM-OFI-1 An SSO qualification program and standard has been developed which meets the requirements of DOE-M-426.1-1A. Although many of the SSO candidates have qualified under a previous program (SSME), they have not yet qualified under the SSO qualification program.	**PGM-OFI-1.1** Qualify all designated SSOs under the new qualification standard by August 13, 2006.	Rick Provencher Roger Wilbur Bob Green	8/13/06	Memo from ID Manager sent to AMs requiring them to qualify SSOs within six months from February 13, 2006. Memo requires AMs to report to FTCP Agent progress at the end of every month until all SSOs are qualified.
TQ-OFI-4 A process has not been established to track the progress of candidates in the qualification program.	**TQ-OFI-4.1** Issue a memo from ID Manager to Assistant Managers requiring qualification of all SSOs on a schedule acceptable to the FTCP Agent and reporting progress to the FTCP Agent quarterly.	Tom Elias	2/13/06	**Action completed.**
PGM-O-1 Succession planning was not evident to ensure future SSO staffing needs can be met.	Succession planning for SSOs done as a part of the current staffing analysis for DOE-ID.	Rick Provencher	3/31/06	**Action completed.**
PGM-O-2 Review of the SSO qualification program and SSO qualification standard led to confusion over who may sign off the competencies.	**PGM-O-1.1** Modify OD-103 to clearly define who may sign off the SSO competencies.	Tom Elias	3/31/06	**Action completed.**

May 4, 2006

DOE-Idaho Environmental Management (EM) SSO Personnel Qualification Status: All three SSO engineers are 90% Complete with their qualifications. There names are: Craig Enos, Bill McQuistion, and Arnie Preece

DOE-Idaho Vital Safety System Assessment Program Description

DOE-Idaho has established a formal Vital Safety System (VSS) Assessment Program and institutionalized it through the issuance of a Program Description Document. The document is posted on the DOE-Idaho Intranet. This program applies to the vital safety systems at all Hazard Categories 1, 2, and 3 nuclear facilities at the Idaho National Laboratory (INL) site including those owned and managed by EM through our contractors. The program applies to all EM contractors.

The VSS Program at Idaho ensures that a sufficient number of qualified DOE-Idaho personnel are effectively overseeing contractor-managed VSSs. The assigned personnel provide accurate, objective feedback to ID line managers on the performance of VSS as delineated in applicable DOE directives and the associated effectiveness of contractor work performance and practices, including the Cognizant System Engineer Program and fulfillment of the facility safety basis. VSS are identified and an assessment schedule is established. Each month the Assistant Manager reviews the schedule and status of completing the assessments. The SSO personnel must be qualified in accordance with the SSO Qualification Program, described in the ID Training Manual.

POC: Bill Leake, 208-526-1713