



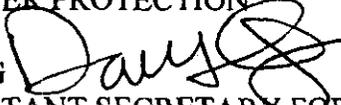
Department of Energy
Washington, DC 20585

AUG 04 2006

MEMORANDUM FOR ROY SCHEPENS
MANAGER

OFFICE OF RIVER PROTECTION

FROM:

DAE Y. CHUNG 
DEPUTY ASSISTANT SECRETARY FOR
SAFETY MANAGEMENT AND OPERATIONS

SUBJECT: Office of River Protection Integrated Safety Management
System Assessment Report

Attached for your use is the Office of River Protection (ORP) Integrated Safety Management (ISM) System Assessment Report. This report has been reviewed by the ORP for factual accuracy and comments have been incorporated as appropriate.

This assessment focused on the ORP's ISM system, its oversight program (with an emphasis on the role of Facility Representatives, Safety System Oversight, and Safety Management Programs), issues management, and feedback and improvement. The assessment team concluded that the ORP possesses a well defined ISM system and clear safety objectives. The team also concluded that ORP staff is involved in well-defined and rigorous training and qualification programs. There were two findings, seven observations, and eight strengths identified during this assessment. The two findings were:

- ISMS.1-F-1: Procedural non-compliances to several ORP internal procedures were noted for: SSO back-up designations, SSO qualification interview documentation, management walk-through documentation, and APC designation were unclear.
- ISMS.2-F-1: The primary procedures used by personnel performing and documenting oversight activities within the Waste Treatment and Immobilization Plant Project (ORP M 432.1 and ORP M 243.1) are draft documents.

Corrective Action Plans should be developed for these findings and submitted to my office for review and approval within 30 days of the date of this correspondence. It is also recommended that the ORP consider the observations detailed in the attached report as areas for improvement, but these items do not require the submittal of corrective action plans.



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AUG 04 2006

DOE-ORP/ORPCC

The eight strengths noted in the assessment report provide evidence of a strong safety culture and a commitment to continuous improvement. The ORP management and staff are commended for this accomplishment. In addition, I would like to thank the ORP for their cooperation and support to the assessment team. Your responsiveness to the team's requests were noted and greatly appreciated.

If you have any questions, please call me at (202) 586-5151 or have your staff call Ed Westbrook at (303) 966-7074.

Attachment

cc:

C. Anderson, EM-2
I. Triay, EM-3
S. Olinger, ORP
R. Barr, ORP
J. Eschenberg, ORP
T. Smith, ORP
R. Goldsmith, EM-62
E. Westbrook, CBC
D. Rack, CBC
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OFFICE OF RIVER PROTECTION
INTEGRATED SAFETY MANAGEMENT SYSTEM
ASSESSMENT REPORT



Department of Energy
Office of Environmental Management

JUNE 2006

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List of Acronyms

| | |
|-------|--|
| AMTF | Assistant Manager for Tank Farms |
| AMWTP | Assistant Manager for Waste Treatment and Immobilization Plant Project |
| APC | Assessment Program Committee |
| BNI | Bechtel National, Inc. |
| CARS | Consolidated Action Reporting System |
| CRAD | Criteria and Review Approach Document |
| CSE | Contractor System Engineer |
| DOE | Department of Energy |
| DNFSB | Defense Nuclear Facilities Safety Board |
| DSA | Documented Safety Analysis |
| ECP | Employee Concerns Program |
| EM | Office of Environmental Management |
| EMCBC | Environmental Management Consolidated Business Center |
| ESE | Energy, Science, and Environment |
| ES&H | Environmental, Safety and Health |
| FRAM | Functions, Responsibilities, and Authorities Manual |
| FTCP | Federal Technical Capabilities Program |
| HPI | Human Performance Initiative |
| HQ | Headquarters (Department of Energy) |
| IAP | Integrated Assessment Plan |
| IDP | Individual Development Plan |
| IEEE | Institute of Electrical and Electronics Engineers |
| IP | Implementation Plan |
| IPP | Individual Performance Plan |
| ISM | Integrated Safety Management |
| ISMS | Integrated Safety Management System |
| KSA | Knowledge, Skills, and Abilities |
| LL | Lessons Learned |
| LLPOC | Lessons Learned Point of Contact |
| MAP | Master Assessment Plan |
| NNSA | National Nuclear Security Administration |
| NRC | Nuclear Regulatory Commission |
| NTS | Noncompliance Tracking System |
| OA | Operational Awareness |
| OCT | Operations and Commissioning Team |
| OE | Operating Experience |
| ORP | Office of River Protection |
| PAAA | Price Anderson Acts Amendments |
| PERS | Problem Evaluation Request System |
| POMC | Performance Objectives, Measurements, and Commitments |
| PSAR | Preliminary Safety Analysis Report |
| QA | Quality Assurance |
| QAP | Quality Assurance Plan |

| | |
|-------|--|
| RL | Richland Operations Office |
| SC/SS | Safety Class/Safety Significant |
| SE | System Engineering |
| SME | Subject Matter Expert |
| SMP | Safety Management Program |
| SRD | Safety Requirements Document |
| SO | Safety Oversight |
| SSO | Safety System Oversight |
| STSM | Senior Technical Safety Manager |
| TF | Tank Farms |
| TFC | Tank Farms Contractor |
| TOD | Tank Farms Operations Division |
| TQP | Technical Qualification Program |
| VSS | Vital Safety System |
| WED | Waste Treatment Plant Engineering Division |
| WTP | Waste Treatment and Immobilization Plant Project |

EXECUTIVE SUMMARY

This assessment was performed to satisfy commitment 27 of the Department of Energy's (DOE) Implementation Plan for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2004-1. Recommendation 2004-1 was issued as a result of a series of public hearing conducted by the DNFSB, and cited examples of breakdowns in the Integrated Safety Management (ISM) Systems at several DOE sites. The Implementation Plan developed by the DOE is directly focused on reinvigorating both DOE and its contractor's ISM systems, and enhancing DOE oversight processes. Commitment 27 required the conduct of comprehensive assessment of ISM systems at two major DOE sites: one from NNSA and one from ESE. The Office of River Protection (ORP) was selected as the ESE site to satisfy this commitment.

The focus of this assessment was the ORP's ISMS, its implementation, and its contractors' issues management systems. An assessment plan was prepared and included seven Criteria and Review Approach Documents (CRADs) defining the objectives and criteria for this assessment. The CRADs were created from a variety of sources, including DOE-HDBK-3027-99, *Integrated Safety Management Systems (ISMS) Verification Team Leader's Handbook*, and draft Criteria Review and Approach Documents developed as part of the aforementioned Implementation Plan. The topics addressed by the CRADs were: the ORP ISMS, ORP Oversight Program, Facility Representative Program, Safety System Oversight Program, Safety Management Program, ORP Feedback and Improvement Programs, and the contractors' Issues Management Programs.

The review was led by an EM-62 employee (detailed from the EMCBC), assisted by another EM-62 employee, one Richland (RL) Facility Representative Team Lead, and an RL Safety System Oversight (SSO). All of the CRAD objectives were met, and the review resulted in the identification of two Findings, seven Observations, and eight Strengths, which are summarized as follows:

Findings

ISMS.1-F-1: Procedural non-compliances to several ORP internal procedures were noted for: SSO back-up designations, SSO qualification interview documentation, management walk-through documentation, and APC designation were unclear.

ISMS.2-F-1: The primary procedures used by Waste Treatment and Immobilization Plant Project (WTP) Facility Representatives and Assessment Inspectors for performing and documenting oversight activities within the WTP (ORP M 432.1 and ORP M 243.1) are draft documents.

Observations

ISMS.2-O-1: The use of multiple oversight and issue tracking programs and systems is inefficient, results in inconsistent terminology, and hampers oversight planning, trending, and analysis.

ISMS.2-O-2: The results of all operational awareness activities (WTP Facility Representatives OA database entries, TF Facility Representative weekly reports, safety system oversight, and management walkthroughs) do not appear to be provided to or utilized by the Assessment Program Committee or other ORP management systems.

FR.1-O-1: Weaknesses in oral examinations are not addressed in ORP Facility Representative Instructions.

FR.1-O-2: A continuing training program has not been established for the WTP Facility Representatives per DOE-STD-1063-2006 and ORP M 420.2C.

FR.1-O-3: WTP Facility Representatives do not have periodic, formal meeting with contractor management to discuss major issues, recurring events, or leading indicators.

CE.1-O-1: A discrepancy exists between the contractor's list of System Engineers/VSS and the ORP system assignments to the Tank Farms SSO personnel. It is unclear that ORP SSO personnel will evaluate the implementation of the contractors system engineer program for those contractor identified VSS that are not classified as SC/SS.

IM.1-O-1: ORP/BNI should evaluate the falling object operational awareness data generated by WTP Facility Representatives to determine if corrective actions have been effective for falling object protection.

Strengths

ISMS.1-S-1: Safety is a clear priority within the ORP and is a fundamental component of the management process.

ISMS.1-S-2: ORP maintains a comprehensive ISMS Description that clearly identifies processes and procedures important to safety, and Performance Objectives, Measures, and Commitments.

ISMS.2-S-1: The ORP management team has demonstrated a high level of commitment and involvement to the Integrated Assessment Program.

FR.1-S-1: The overall quality of the Facility Representative program and individual

Facility Representative skills and abilities are a significant ORP strength.

SMP.1-S.1: The Safety Management Program (SMP) Qualification Standards created by the ORP provide increased rigor and a nuclear safety focus to the qualification of SMP Subject Matter Experts.

F&I.1-S-1: The ORP commitment to Human Performance Improvement leadership is noteworthy.

F&I.1-S-2: There is a strong management commitment to the Management Assessment and Lessons Learned programs.

IM.1-S-1: The Tank Farm contractor's use of a computerized system to allow ORP continuous monitoring of issues management processing and automated corrective action closure verification.

CONCLUSIONS

The assessment team concluded that the ORP possesses a well defined ISM system and clear safety objectives. ORP staff is involved in well-defined and rigorous training and qualification programs that ensure they possess the necessary skills to perform their oversight responsibilities effectively. The infrastructure established by the ORP, the weaknesses identified in this report notwithstanding, is sound and effectively implemented. In addition, improvements in the Feedback and Improvement area have been made to satisfy previous assessment results indicating management's commitment to continuous improvement.

INTRODUCTION/BACKGROUND

In response to proposed changes in the Department of Energy's (DOE) methods of ensuring safety at its defense nuclear facilities, the Defense Nuclear Facility Safety Board (DNFSB) conducted a series of eight public hearings, and these hearing provided the impetus for the development and issuance of DNFSB Recommendation 2004-1. This Recommendation deals with Oversight of Complex, High-Hazard Nuclear Operations, and was accepted by the DOE in July, 2004. The DOE accepted the DNFSB recommendation and developed an Implementation Plan to reinvigorate Integrated Safety Management within the DOE complex. This Implementation Plan was accepted by the DNFSB.

The DOE's 2004-1 Implementation Plan (IP) identified 29 actions, referred to as commitments in the IP, that would be completed in order to achieve the level of safety assurance required by the Recommendation. Commitment 27 required NNSA and ESE to each complete a comprehensive ISM review at one of its major sites. The Office of River Protection (ORP) was selected as the ESE site to be assessed due to its size and the complexity of its mission. This ISM assessment is intended to satisfy the ESE portion of Commitment 27.

PURPOSE

The purpose of this assessment was to evaluate the Integrated Safety Management System at the ORP to verify its effectiveness. ISM has been the cornerstone of the DOE's safety program for approximately ten (10) years. DOE contractors have been required to develop and implement ISM systems and pass rigorous assessments validating the effectiveness of their programs. Despite these achievements there is concern that the energy that went into creating these programs has dissipated, and that DOE ISM systems need to be reinvigorated. The DOE's Implementation Plan for DNFSB Recommendation 2004-1 is poised to achieve this objective. One of the primary focus areas of the 2004-1 Implementation Plan is the DOE's role in safety management. Multiple commitments address DOE oversight improvements and are designed to ensure an enhanced safety focus by Headquarters and Field Elements.

This assessment focused on the DOE ORP's ISMS. The 2004-1 Implementation Plan included commitments to improve DOE's Safety Management Programs, stimulate ISM leadership, and foster a safety based culture. This assessment is intended to determine the programmatic health of the ORP's ISMS, and the level of implementation of their overall safety management program.

SCOPE

The scope of this assessment was defined in the Assessment Plan. The focus was on the DOE ORP ISM system, its implementation, and its contractors' issues management systems. The team developed seven (7) Criteria and Review Approach Documents (CRADs) to perform this assessment. The CRAD objectives are as follows:

Integrated Safety Management System (ISMS)

The assessment focused on the ORP's ISMS infrastructure, with an emphasis on the processes to implement the Core ISMS functions, and the staff's understanding of these elements.

DOE Oversight Program

The oversight processes developed and implemented by the ORP to ensure its contractors have robust ISM systems and perform work safely were evaluated.

Facility Representative Program

The assessment evaluated the Facility Representative qualification program to ensure that personnel assigned these positions have experience and training commensurate with the responsibilities of the positions. The effectiveness of the Facility Representative program was also evaluated.

Conduct of Engineering

The Conduct of Engineering program was assessed with an emphasis on Engineering oversight and the Safety System Oversight program. Qualification requirements were reviewed to determine that assigned personnel have sufficient training and experience to fulfill their assigned responsibilities.

Safety Management Program Oversight

The training and qualification of Safety Management Program (SMP) Subject Matter Experts (SMEs) was evaluated. The oversight of contractor activities performed by SMPs was also evaluated.

Feedback and Improvement

The Feedback and Improvement processes were evaluated to determine their level of development and implementation. This area was added as a result of past assessment concerns in this area. The Lessons learned program was a specific focus area.

Issues Management

Issues Management refers to the processes used to capture and prioritize findings, deficiencies, observations, and opportunities for improvement. The focus of this portion of the assessment was on ORP contractor programs for managing issues.

TEAM COMPOSITION AND ASSIGNMENTS

The review team was comprised of DOE employees possessing extensive safety management system experience, and strong backgrounds in nuclear facility operations, Facility Representative Programs, Safety System Oversight experience, and safety basis document preparation and implementation. A listing of team members and their areas of responsibility is shown below.

| Team Member | Office | CRAD Lead | CRAD Support |
|-------------------------|---------------|------------------|--------------------------|
| Ed Westbrook, Team Lead | EMCBC | ISMS.1, SMP.1 | ISMS.2, F&I.1 |
| Mat Irwin | RL | IM.1, F&I.1 | ISMS.1, ISMS.2, FR.1 |
| Don Rack | EMCBC | ISMS.2, FR.1 | ISMS.1, F&I.1 |
| Mark Hahn | RL | CE.1 | ISMS.1, ISMS.2, F&I.1 |

DISCUSSION OF RESULTS

Field work for this assessment was performed at the ORP June 19 -22, 2006, and included extensive review of program descriptions, procedures, reports (an other items of objective evidence), as well as interviews with a significant percentage of ORP staff. Due to the nature of this review field work was limited and consisted primarily of observing ORP meetings. Preparatory work was performed by the team prior to arrival and included a review of relevant ORP programmatic documents and procedures in order to develop Lines of Inquiry. Following the completion of field work, an exit briefing with ORP management was conducted; however, paperwork reviews continued to ensure the completeness and thoroughness of the assessment. The seven CRADs included in the Assessment Plan identified specific assessment objectives and criteria that would be used to determine whether or not those objectives were met. A brief discussion for each CRAD is provided below, and more detailed information on the Assessment Forms in Appendix A of this report.

ISMS.1: Integrated Safety Management System

This objective was met and focused on the top-tier infrastructure pertaining to the ISMS, as well as the overall safety culture being fostered within the ORP. The ORP ISMS is clearly defined and reflects the vision of its management team: to incorporate safety into the work practices at all levels of the ORP, and to pursue an accident-free work place. The processes identified in the ISMS Description and implemented throughout the organization provide the infrastructure to achieve these objectives. It was noted by the assessment team that a strong safety culture exists within the organization. The ORP management team has demonstrated a commitment to safety, and ORP staff has recognized that commitment and believe safety issues that are identified will receive priority over other potentially conflicting concerns (i.e., cost or schedule). It was also

noted that ORP staff are knowledgeable of their roles within the ISMS and their responsibilities for ensuring the safe performance of work.

Findings

ISMS.1-F-1: Procedural non-compliances to several ORP internal procedures were noted for: SSO back-up designations, SSO qualification interview documentation, management walk-through documentation, and APC designation were unclear.

Observations

None

Strengths

ISMS.1-S-1: Safety is a clear priority within the ORP and is a fundamental component of the management process.

ISMS.1-S-2: ORP maintains a comprehensive ISMS Description that clearly identifies processes and procedures important to safety, and Performance Objectives, Measures, and Commitments.

ISMS.2: ISMS DOE Oversight Program

The objective of this CRAD had been met. The Office of River Protection (ORP) has committed a high level of resources into implementing its Integrated Assessment Program. The Program would be more efficient if driven by one process, but each individual process currently in place is adequate. Incorporation of all Operational Awareness data into ORP management systems would be beneficial in ORP's efforts to integrate Human Performance Initiatives into its oversight processes, primarily in identification of leading indicators and error likely conditions.

Findings

ISMS.2-F-1: The primary procedures used by Waste Treatment and Immobilization Plant Project (WTP) Facility Representatives and Assessment Inspectors for performing and documenting oversight activities within the WTP (ORP M 432.1 and ORP M 243.1) are draft documents.

Observations

ISMS.2-O-1: The use of multiple oversight and issue tracking programs and systems is inefficient, results in inconsistent terminology, and hampers oversight planning, trending, and analysis.

ISMS.2-O-2: The results of all operational awareness activities (WTP Facility Representatives OA database entries, TF Facility Representative weekly reports, safety system oversight, and management walkthroughs) do not appear to be provided to or utilized by the Assessment Program Committee or other ORP management systems.

Strengths

ISMS.2-S-1: The ORP management team has demonstrated a high level of commitment and involvement to the Integrated Assessment Program.

FR.1: Facility Representative Program

The objective of this CRAD was met. The DOE-ORP has established a very strong Facility Representative program (particularly the TF Facility Representative program) which results in effective oversight of ORP facilities. The WTP Facility Representatives were not considered to be less competent than their TF peers, but their program effectiveness can be increased by incorporation of a continuing training program and establishment of formal, periodic meetings with BNI senior management to discuss major issues, recurring events, or leading indicators.

Findings

None

Observations

FR.1-O-1: Weaknesses in oral examinations are not addressed in ORP Facility Representative Instructions.

FR.1-O-2: A continuing training program has not been established for the WTP Facility Representatives per DOE-STD-1063-2006 and ORP M 420.2C.

FR.1-O-3: WTP Facility Representatives do not have periodic, formal meeting with contractor management to discuss major issues, recurring events, or leading indicators

Strengths

FR.1-S-1: The overall quality of the Facility Representative program and individual Facility Representative skills and abilities are a significant ORP strength.

CE.1: Conduct of Engineering

The objective of this CRAD was met. The conduct of engineering portion of this assessment focused on the implementation of the Safety System Oversight Program. The assessment team verified the SO Program implemented the requirements of the DOE M 426.1-1A, Federal Technical Capabilities Manual for SSO personnel. The ORP SO Program Plan establishes a robust qualification program and specifies expectations for safety system and contractor system engineer (CSE) program oversight.

The Tanks Farms SSO personnel were qualified on assigned systems. The WTP SSO personnel were assigned qualification cards, schedules have been established and are being tracked. This is viewed as appropriate, as WTP is in the design and early

construction phase. Safety system assessments are being scheduled, planned and conducted by SSO personnel for the system design, operability and performance (where applicable) for their assigned systems. Evaluation of effective implementation of the CSE program is planned. An observation was noted to clarify the expectations that implementation will be reviewed for all safety systems including the contractor identified VSS not designated as safety class and/or safety significant.

Several minor program requirements were not being fully implemented. Since these exceeded the requirements established in DOE M 426.1-1A, they were viewed as an issue with following internal procedures (See ISMS.1-F-1).

Findings

None

Observations

CE.1-O-1: A discrepancy exists between the contractor's list of System Engineers/VSS and the ORP system assignments to the Tank Farms SSO personnel. It is unclear that ORP SSO personnel will evaluate the implementation of the contractors system engineer program for those contractor identified VSS that are not classified as SC/SS.

Strengths

None

SMP.1: Safety Management Program Oversight

The assessment of the SMPs determined that this objective has been satisfied. The SMPs at ORP are performing oversight consistent with expectations management expectations, existing schedules and plans and internal ORP procedures. Routine oversight is being performed, documented, and identified issues are tracked to closure. In addition, SMPs are identifying and monitoring contractor performance against a variety of metrics and indicators suitable to their individual programs.

The ORP has generated Qualification Standards that exceed 93-3 qualifications, and will ensure the assigned Subject Matter Experts possess an increased understanding of nuclear safety and the importance of their programs to nuclear safety implementation. It was noted that none of the SMPs have completed their qualification, and several indicated that finding sufficient time to complete the qualification process presents difficulty. Despite this it appears that minimum staffing of SMPs is being maintained.

Findings

None

Observations

None

Strengths

SMP.1-S.1: The SMP Qualification Standards created by the ORP provide increased rigor and a nuclear safety focus to the qualification of SMP Subject Matter Experts.

F&I.1: Feedback and Improvement

The Feedback and Improvement portion of this assessment looked at the ORP processes for Lessons Learned, Management Assessment, and a sampling of oversight of contractor Feedback and Improvement processes. The objective of this CRAD was met, and the ORP feedback and improvement processes are considered to be sound. Two strengths were noted as a result of the ORP management commitment to improving feedback and improvement processes, and their leadership in implementing Human Performance Improvement principles.

Findings

None

Observations

None

Strengths

F&I.1-S-1: The ORP commitment to Human Performance Improvement leadership is noteworthy.

F&I.1-S-2: There is a strong management commitment to the Management Assessment and Lessons Learned programs.

IM.1: Issues Management

The objective of this CRAD has been met. Both ORP prime contractors have adequate processes to support identification, evaluation, resolution, and verification of issues. Mechanisms are in place to periodically evaluate feedback information for recurring events and performance trends. Personnel have received training to support causal analysis and processes appear to be adequately implemented.

Findings

None

Observations

IM.1-O-1: ORP/BNI should evaluate the falling object operational awareness data generated by WTP Facility Representatives to determine if corrective actions have been effective for falling object protection.

Strengths

IM.1-S-1: The Tank Farm contractor's use of a computerized system to allow ORP continuous monitoring of issues management processing and automated corrective action closure verification.

CONCLUSIONS

The assessment team concluded that the ORP possesses a well defined ISM system and clear safety objectives. ORP staff is involved in well-defined and rigorous training and qualification programs that ensure they possess the necessary skills to perform their oversight responsibilities effectively. The infrastructure established by the ORP, the weaknesses identified in this report notwithstanding, is sound and effectively implemented. In addition, improvements in the Feedback and Improvement area have been made to satisfy previous assessment results indicating management's commitment to continuous improvement.

APPENDIX A

ASSESSMENT

FORMS

| | |
|--|---|
| FUNCTIONAL AREA: Integrated Safety Management System | OBJECTIVE: ISMS.1 DATE: June 19-23, 2006 |
|--|---|

OBJECTIVE

ISMS.1: DOE has developed and implemented an Integrated Safety Management System that provides a robust framework for achieving the safe performance of all work activities.

CRITERIA

1. An Integrated Safety Management System has been developed and is adequately defined in Site Office policies, program documents or procedures.
2. Program documents or procedures establish clear roles and responsibilities for safety.
3. Program documents or procedures ensure that personnel who review or oversee the performance of work have competence commensurate with the responsibilities to which they are assigned.
4. Program documents or procedures ensure that priorities are balanced so that safety is not circumvented in lieu of cost or schedule.
5. Field Office Senior Management provides ISM leadership.
6. DOE personnel are knowledgeable of their responsibilities within the ISMS.

REFERENCES

- DOE Policy 450.4, Safety Management System Policy
- DOE Guide 450.4-1B, Integrated Safety Management System Guide
- DOE Policy 226.1, Department of Energy Oversight Policy
- DOE Order 226.1, Implementation of Department of Energy Oversight Policy

APPROACH

Record Review:

- ISM System Description
- Functions, Responsibilities and Authorities Manual
- Organization Chart
- Site Office Policies and Procedures
- Technical Qualification Program Manual

Office of River Protection Integrated Safety Management System Assessment Report

Interviews:

- ORP Manager or Deputy Manager
- Tank Farms Federal Project Director (2)
- WTP Federal Project Director (2)
- ESHQ Manager

RECORDS REVIEWED

- ORP M 450.4, Rev 2, *Integrated Safety Management System Description*, 9/13/05
- ORP M 220.1, Rev 4, *Integrated Assessment Program*, 1/3/06
- ORP M 411.1-1, Rev 6, *Safety Management Functions, Responsibilities, and Authorities Manual for the U.S. Department of Energy Office of River Protection*, 6/6/06
- ORP 414.1, Rev 2, *ORP Quality Assurance Program Description*, 10/27/05
- ORP Line Management Oversight Assessment Report and associated ORP CAR, 11/10/05 and 6/20/06
- ORP M 411.1-1, *Safety Management Functions, Responsibilities and Authorities Manual for the U.S. Department of Energy Office of River Protection*, 3/7/05, Revision 5
- ORP M 420.2C, *Facility Representative Program*, 11/7/04
- FRI-009, *ORP Facility Representative Instruction Master Assessment Plan*, Revision 3
- FRI-010, *ORP Facility Representative Instruction Conduct of Performance Reviews*
- FRI-011, *ORP Facility Representative Instruction Reports*, Revision 3
- ORP All Hands Meeting Agendas, 11/05 to 6/06
- ORP Memorandum 05-TED-091, *USDOE, ORP Annual Workforce Analysis and Staffing Plan Report*, dated 12/29/05
- ORP SO-DI-002 R2, *Qualification Evaluation Methods*, dated 12/15/04
- ORP PD 420.3, *Safety Basis Management*, dated 07/22/03
- ORP M 220.1 R4, *Integrated Assessment Program*, dated 01/03/06
- ORP SO-DI-001 R2, *Safety Oversight Qualification Process*, dated 12/15/04
- ORP DI 220.1 R1, *Conduct of Design Oversight*, dated Draft
- ORP Safety Oversight Program Plan, Revision 2, dated October 2005
- ORP, *Technical Qualification Program Plan*, dated September 2004
- Document, *ORP TQP Status*, dated 6/16/05
- Document, *FY06 ORP Annual Assessment Plan*, May 31, 2006
- Draft ORP M 432.1, *WTP Project Construction Oversight Manual*

INTERVIEWS CONDUCTED

- ESHQ Director
- Verification and Confirmation Team Lead
- Federal Project Directors (2)

- ORP Lessons Learned Point of Contact
- Federal Sub-Project Directors (2)
- Facility Representatives (2)
- TOD Director
- OCT Team Lead

DISCUSSION OF RESULTS

1. An Integrated Safety Management System has been developed and is adequately defined in Site Office policies, program documents or procedures.

The Office of River Protection's (ORP) approach to Integrated Safety Management System (ISMS) is documented in its ISMS Description. This document begins with a clearly stated objective ("Systematically integrate safety into management and work practices at all levels of the ORP"), and proceeds to describe the management systems used by the ORP and the work activities performed to implement the principles of ISM. In addition, the ISMS Description is used to document and status a suite of ORP Performance Objectives, Measures and Commitments (POMCs) to measure ISM effectiveness. Including the POMCs into the ISMS Description has resulted in a "living" document that must be accessed by ORP staff and management personnel to status their progress against published objectives. In addition, the ORP Manager made the ISMS Description "required reading" for all ORP staff and evidence of completion was provided to the assessment team. (ISMS.1-S-2)

Many ORP procedures were reviewed during this assessment and found to support the ISM principles stated in the ISMS Description. In addition, these documents were appropriately cross referenced to other ORP infrastructure documents such as the Safety Management Functions, Responsibilities, and Authorities Manual (FRAM), and the Quality Assurance Plan. Assessment procedures were also noted to reference the ORP ISMS and indicate that they are implementing documents. Personnel interviewed throughout the assessment were able to identify procedures relevant to their positions that implemented the ORP ISMS.

It was noted during a review of various ORP procedures and documentation that ORP procedures often contain more rigorous requirements than the DOE Orders or Standards that they are implementing. While this is a positive approach, and in most cases would be identified as a strength, it was not during this assessment since several examples of non-compliance to these procedures were noted as follows:

- Safety System Oversight (SSO) back-ups were not formally designated for all systems (discussed in CRAD CE.1).
- SSO qualification interviews lacked interview records or documentation (discussed in CRAD CE.1).
- Management Walk-throughs were not documented on the forms specified in the Integrated Assessment Program procedure (discussed in CRAD ISMS.2).

- Members of the Assessment Program Committee were not formally designated and at least one member of the APC was not certain they were an official member (discussed in CRAD ISMS.2).
- FRI-006 lists monthly meeting with senior contractor management as a typical Facility Representative routine, but these meetings are not being performed with BNI senior management.

These non-compliances were combined in a single finding. (ISMS.1-F-1)

2. Program documents or procedures establish clear roles and responsibilities for safety.

The programmatic document for establishing roles and responsibilities within the ORP ISMS is the Safety Management Functions, Responsibilities, and Authorities Manual (FRAM). The FRAM identifies the key safety responsibilities (as well as other types of responsibilities) down to the division level. However, stop work authority is clearly assigned to all ORP employees “based on the determination or observation of conditions that are immediately dangerous to the life or health of the workers, the public, or the environment . . .” The FRAM first appendix cites individual DOE FRAM requirements and identifies the lead organization(s) within the ORP. Another FRAM appendix lists relevant DOE Policies, Orders, Manuals, Notices, and Guides and identifies the responsible ORP organization.

ORP procedures reviewed during this assessment were all formatted to include a section discussing responsibilities, and these sections clearly identified the individual or organization responsible for performing activities covered by the procedure or responsibility for maintaining the procedure. During interviews with ORP management and staff personnel were able to discuss their individual responsibilities within ORP procedures and the general responsibilities for safety.

3. Program documents or procedures ensure that personnel who review or oversee the performance of work have competence commensurate with the responsibilities to which they are assigned.

The ORP was determined to possess a comprehensive Training and Qualification Program addressing four distinct groups with safety oversight responsibilities: Facility Representatives, Safety System Oversight personnel (SSOs), Safety Management Program Subject Matter Experts (SMPs), and Senior Technical Safety Managers (STSMs). The Training and Qualification Programs for the first three groups are discussed in greater detail under position specific CRADs in this report. The STSM Program was clearly defined by procedures, and the individuals required to meet this Qualification were identified and determined to have satisfied the relevant training requirements. Based upon interviews with personnel not in one of the identified four groups (i.e., Contracting Officers, Federal Project Directors, etc.), they are also required to obtain qualification or certification for their respective positions.

4. Program documents or procedures ensure that priorities are balanced so that safety is not circumvented in lieu of cost or schedule.

The first expectation for Federal staff in the ISMS Description states that “Safety is the dominant characteristic and value of the ORP. Safety comes first and is valued above production, budget, and schedule. Safety overrides every other priority.” This theme continues throughout the ISMS Description. The Safety Management Functions, Responsibilities, and Authorities Manual (FRAM) describes the wide range of functions that the ORP must perform, and its first function cites is “ensuring the health and safety of employees, the public and protection of the environment.” To evaluate the extent that this philosophy has been accepted by ORP management and staff interview questions included requests for examples of its implementation. Without exception, all ORP personnel stated that this philosophy towards safety reflects management’s priorities. Examples were provided and included issues with the potential for hydrogen gas in Waste Treatment Plant (WTP) piping, WTP seismic concerns, implementation of safety pauses and financial penalties levied against ORP contractors due to safety issues. (ISMS.1-S-1)

5. Field Office Senior Management provides ISM leadership.

Evaluation of this criteria consisted of interviews with ORP management and staff, and reviewing documents, agendas, and presentations pertaining to safety management. Interviewees were asked questions regarding the safety management objectives and expectations of ORP management. Personnel were able to identify the goals of performing work safely and achieving an accident-free work place. When asked to identify management’s expectations of employees most were able to identify specific items cited in the ISMS Description. Also, employees stated that the ORP Manager has a strong safety focus and mentioned all employee meetings as examples of this commitment. Agenda from the all employee meetings were subsequently provided (upon request) and were noted to always contain some type of safety presentation. The presentations varied from Lessons Learned at other DOE sites or other industries to specific safety topics relevant to ORP activities (i.e., electrical safety, fall protection, etc.). It was also noted that the ORP Manager conducts a daily morning meeting with his senior staff and safety issues and performance are routinely discussed.

6. DOE personnel are knowledgeable of their responsibilities within the ISMS.

As mentioned above, interviews were relied upon to assess the safety culture within the ORP. This included assessing individual employees’ awareness of their role within the ORP ISMS. In general, personnel were able to identify activities that they performed that were specified in the ISMS Description. The ORP Manager had made the ISMS Description required reading for all ORP staff, and this appears to have reinforced individual knowledge of their roles and responsibilities. Most of the staff

Office of River Protection Integrated Safety Management System Assessment Report

interviewed had direct safety oversight responsibilities, due to the nature of this assessment, and they were quick to state that their routine work (direct oversight of work, document reviews, etc.) was an ISMS responsibility. In addition, although no one interviewed stated that they had personally issued a "stop work" order, most of the staff members interviewed recognized that they possessed that authority.

CONCLUSIONS

The ORP ISMS is clearly defined and reflects the vision of its management team: to incorporate safety into the work practices at all levels of the ORP, and to pursue an accident-free work place. The processes identified in the ISMS Description and implemented throughout the organization provide the infrastructure to achieve these objectives. Although several findings were identified by the assessment team during the course of this review, it was noted that a strong safety culture exists within the organization. The ORP management team has demonstrated a commitment to safety, and ORP staff has recognized that commitment and believe safety issues that are identified will receive priority over other potentially conflicting concerns (i.e., cost or schedule). It was also noted that ORP staff are knowledgeable of their roles within the ISMS and their responsibilities for ensuring the safe performance of work.

Findings

ISMS.1-F-1: Procedural non-compliances to several ORP internal procedures were noted for: SSO back-up designations, SSO qualification interview documentation, management walk-through documentation, and APC designation were unclear.

Observations

None

Strengths

ISMS.1-S-1: Safety is a clear priority within the ORP and is a fundamental component of the management process.

ISMS.1-S-2: ORP maintains a comprehensive ISMS Description that clearly identifies processes and procedures important to safety, and Performance Objectives, Measures, and Commitments.

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| Reviewer  Ed Westbrook | Team Leader  8/14/06 Ed Westbrook |
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| FUNCTIONAL AREA: DOE OVERSIGHT PROGRAM | OBJECTIVE: ISMS.2 DATE: June 19-23, 2006 |
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OBJECTIVE

ISMS.2: The DOE field office has a comprehensive oversight program that ensures the effective implementation of DOE and contractor integrated safety management systems, and identifies opportunities for improvement or deficiencies in DOE and contractor processes and activities.

CRITERIA

1. DOE line management has established a baseline line management oversight program that ensures that DOE line management maintains sufficient knowledge of site and contractor activities to make informed decisions concerning hazards and risks, and evaluate contractor performance.
2. DOE line oversight program includes assessments, operational awareness activities, performance monitoring and improvement, and assessment of contractor assurance and integrated safety management systems. Annual schedules of planned assessments and focus areas for operational awareness are maintained.
3. Operational awareness activities are documented either individually or in periodic (e.g., weekly or monthly) summaries.
4. Deficiencies in programs or performance identified by oversight activities are documented, and communicated to the contractor for resolution through a structured process.
5. DOE line management verifies that corrective actions are complete and sufficient to prevent recurrence before findings identified by DOE assessments or reviews are closed.
6. Line management periodically reviews established performance measures to ensure performance objectives and criteria are challenging and focused on improving performance in known areas of weakness.
7. DOE line management has established effective processes for communicating line oversight results and other issues up the DOE line management chain. Established processes include provisions for communicating and documenting dissenting opinions. Contractual actions are taken as necessary in response to significant safety issues.
8. An effective employee concerns program been established and implemented in accordance with DOE Directives that encourages the reporting of employee concerns and provides thorough investigations and effective corrective actions and recurrence controls.

REFERENCES

- DOE Order 414.1C "Quality Assurance."
- DOE P 226.1, Department of Energy Oversight Policy
- DOE O 226.1, Implementation of Department of Energy Oversight Policy

APPROACH

Record Reviews:

- ORP M 450.4, *Integrated Safety Management System Description*
- ORP M 220.1, Rev 4, *Integrated Assessment Program*
- Draft ORP M 432.1, *WTP Project Construction Oversight Manual (DRAFT)*
- ORP M 420.2C, *Facility Representative Program*
- FRI-001, *ORP Facility Representative Instruction Implementation of the ORP Facility Representative Program*
- FRI-006, *ORP Facility Representative Instruction Facility Representative Responsibilities and Routine Activities*
- FRI-008, *ORP Facility Representative Instruction Event Response, Investigation, and Reporting*
- FRI-009, *ORP Facility Representative Instruction Master Assessment Plan*
- FRI-010, *ORP Facility Representative Instruction Conduct of Performance Reviews*
- FRI-011, *ORP Facility Representative Instruction Reports*
- ORP Integrated Assessment Plan
- ORP M 411.1-1, Rev 6, *Safety Management Functions, Responsibilities, and Authorities Manual for the U.S. Department of Energy Office of River Protection*
- ORP 414.1, Rev 2, *ORP Quality Assurance Program Description*
- Consolidated Action Reporting System report for open management assessment actions, 6/20/06
- ORP Assessment Analysis for FY2006 First Quarter, 1/23/06
- ORP Assessment Analysis for FY2006 Second Quarter, 4/17/06
- ORP M 210.1, Rev. 0, *ORP Operating Experience and Lessons Learned Program*
- ORP Line Management Oversight Assessment Report and associated ORP CAR, 11/10/05 and 6/20/06
- ORP Issue PER Status Report
- Tank Farm Contractor Performance Indicators, March 2006
- 06-ESQ-040, *ORP FEOSH Management Assessment*
- 06-ESQ-066, *ORP Fire Protection Program Self-Assessment*
- ORP M 243.1, *Operational Awareness Oversight Database (DRAFT)*
- Desk Instruction ESQ 3.1, *ORP Employee Concerns Program*, October 2005, Revision 0
- 06-WTP-038, *Inspection Notes Transmittal letter, Schepens to Henschel*
- Notice of Findings for Contract No. DE-AC27-01RV14136, for period 1/2/06 to 3/31/06
- On-Location Inspection Report for Period 1/2/06 to 3/31/06
- Assessment files

Interviews:

- Waste Treatment and Immobilization Plant (WTP) Project Manager
- Tank Farms Project Assistant Manager (AMTF)
- Environmental Safety and Quality Division Director
- Assessment Coordinator
- Operations and Commissioning Team (OCT) Lead
- Tank Farms Operations Division (TOD) Director
- Facility Representative (6)
- Tank Farm Engineer or SSO
- WTP Engineer of SSO
- SMP Owner/SME (4)
- ORP Employee Concerns Manager

DISCUSSION OF RESULTS

- 1. DOE line management has established a baseline line management oversight program that ensures that DOE line management maintains sufficient knowledge of site and contractor activities to make informed decisions concerning hazards and risks, and evaluate contractor performance.**

The Office of River Protection (ORP) has established its oversight program through three different processes: ORP M 220.1, Draft ORP M 432.1, and a combination of ORP Facility Representative Instructions. ORP M 220.1 applies to all ORP personnel conducting oversight of contractor activities except Facility Representatives. This procedure establishes requirements for annual assessment plans, assessor qualifications, independent assessment of contractor activities, management (self) assessment of ORP activities, and management walkthroughs. Additionally, ORP M 220.1 provides for an APC to approve the annual Integrated Assessment Plan, ensure assessment results are shared within ORP, and identify common areas of weakness based upon assessment results and recommend changes needed to address these areas. ORP M 220.1 requires the designation of APC members, but formal designation has not been completed. **(ISMS.1 F-1 example)**

The primary procedures used by personnel performing and documenting oversight activities within the Waste Treatment and Immobilization Plant Project (WTP), ORP M 432.1 and ORP M 243.1 are draft documents. **(ISMS.2 F-1)** These draft procedures were reviewed and found to be adequate. Findings are documented in Inspection Reports which are discussed during daily conference calls with ORP-WTP line management, addressed during quarterly APC meetings, and incorporated into a quarterly report that is formally transmitted from ORP management to BNI.

Tank Farm Facility Representatives use a combination of ORP Facility Representative Instructions. These Instructions were reviewed and found to be adequate. Facility Representatives discuss issues during daily conference calls with

OPR-AMTF line management and prepare weekly and quarterly reports which are transmitted to AMTF and TFC management. Issues are also discussed weekly with TFC line management, monthly with TFC senior management, and quarterly with both AMTF and TFC senior management.

Noted consequences of using multiple procedures to implement the ORP oversight program included only one of four personnel interviewed correctly defining and explaining the intended use of the ORP M 220.1 term "Assessment Follow-up Item" and BNI quality control personnel using three spreadsheets to track ORP identified findings. The use of multiple oversight and issue tracking programs and systems is inefficient, results in inconsistent terminology, and hampers oversight planning, trending, and analysis. (ISMS.2-O-1)

- 2. DOE line oversight program includes assessments, operational awareness activities, performance monitoring and improvement, and assessment of contractor assurance and integrated safety management systems. Annual schedules of planned assessments and focus areas for operational awareness are maintained.**

The Annual Assessment Plan identifies formal assessments, surveillances (focus areas), and self-assessments for each organization within ORP. Change control for the Plan is administered through the APC. The APC meets quarterly or as needed to review completed assessment activities and evaluate the need for change to the plan based upon assessment results. While the APC adequately captures the results of formal, structured oversight activities, the results of all operational awareness activities (WTP Facility Representatives OA database entries, TF Facility Representative weekly reports, safety system oversight, and management walkthroughs) do not appear to be provided to or utilized by the APC (or other ORP management systems). Procedure ORP 220.1 requires AMs and Directors to provide the APC with "trends indicated in ORPS reports, PAAA NTS reports, assessment findings, and other sources of performance information." It is not clear that the "other sources" of information, which would include operational awareness data, is being provided to the APC as intended. (ISMS.2 O-2)

The ORP management team is very involved in the oversight program. The ORP Deputy Manager chairs the APC, senior line management has daily conference calls to discuss issues, and oversight personnel feel that their management supports them on safety issues. The ORP management team has demonstrated a high level of commitment and involvement to the Integrated Assessment Program. (ISMS.2-S-1)

- 3. Operational awareness activities are documented either individually or in periodic (e.g., weekly or monthly) summaries.**

Operational awareness activities are primarily performed by Facility Representatives. The TF Facility Representatives use weekly reports to document operational awareness activities, but See FR.1 Discussion of Results for Criterion 6 for discussion

of Facility Representative operational awareness activities. An additional form of operational awareness activity is provided by the management walkthrough process. These walkthroughs are first-hand observations of operations or field activities by Direct Reports to the ORP Manager, Division Directors, and other Senior Technical Advisors. ORP M 220.1 requires these walkthroughs to be documented on an attachment to the manual. While the walkthroughs are being completed, they are being documented on a different form than the one required by ORP M 220.1 (ISMS.1 F-1 example)

4. Deficiencies in programs or performance identified by oversight activities are documented, and communicated to the contractor for resolution through a structured process.

The ORP has several mechanisms for documenting and transmitting oversight results to their contractors. One of the primary vehicles used for accomplishing these actions is the through the use of Inspection Reports (this is applicable to WTP oversight). Inspection Reports provide a well-defined and consistent mechanism for documenting the results of oversight performed by the ORP. Several completed reports were reviewed and found to be comprehensive, documenting a spectrum of oversight activities (both safety and non-safety related), and requiring the contractor to formally respond to identified findings. In addition, it was noted that numerous technical procedures have been developed to facilitate the inspections performed at the WTP. These procedures provide guidance and criteria for evaluating a variety of areas including welding, structural steel, electrical equipment installation, piping system construction, etc. This appears to be a mature system.

See Criterion 5 for additional discussion related to this criterion.

5. DOE line management verifies that corrective actions are complete and sufficient to prevent recurrence before findings identified by DOE assessments or reviews are closed.

The ORP uses two different techniques to verify corrective action closure. For findings identified against the Tank Farm Contractor (TFC), corrective action closure is administered through the TFC's Problem Evaluation Request System (PERS). Tank Farm Facility Representatives have the ability to access PERS, evaluate corrective action adequacy, and close findings. For findings identified against the Waste Treatment Plant contractor, Inspection Reports are written. These findings are entered into the ORP Consolidated Action Reporting System (CARS) and BNI's corrective action tracking system. Review of corrective actions and finding closure are documented in the ORP-CARS. In May 2005, a DOE assessment team identified significant issues with BNI's falling object protection program. These issues were summarized in a report and transmitted to BNI for corrective action. While these corrective actions have been completed, the ORP did not generate a CARS entry for corrective action verification as required by its process. (ISMS.1-F-1 example)

Since January 2006, WTP Facility Representatives have identified at least ten non-compliances with BNI's falling object protection program. These non-compliances have been entered into the OA database and were the basis for an ORP assessment that identified a finding against BNI's falling object protection program. Continued non-compliance with this program demonstrates that BNI corrective actions have been ineffective in preventing recurrence. This issue is discussed further under the Issues Management CRAD (IM.1). The assessment team could not find a documented transmittal (either formal or informal) of these OA entries to BNI.

6. Line management periodically reviews established performance measures to ensure performance objectives and criteria are challenging and focused on improving performance in known areas of weakness.

Interviews with Federal Project Directors and Sub-Project Directors established that ORP line management performs periodic reviews of a wide range of performance indicators. As expected there are numerous performance measures associated with project performance in terms of cost and schedule. However, more relevant to this assessment, performance measures were presented that focus on project safety. Performance measures that are tracked routinely include: Time to Resolve PERS items, Regulatory Compliance Issues, Management and Independent Assessment Performance, Clothing and Skin Contamination Events, Radiological Exposure Data, DART Cases, Total Recordable Cases, Lost Work Days, Technical Safety Requirement Violations, Maintenance Backlogs, etc. In addition, ORP management has worked with its contractors to develop ES&H goals that are submitted to DOE Headquarters on an annual basis. These goals are focused on improving overall safety performance.

7. DOE line management has established effective processes for communicating line oversight results and other issues up the DOE line management chain. Established processes include provisions for communicating and documenting dissenting opinions. Contractual actions are taken as necessary in response to significant safety issues.

As discussed previously, ORP has implemented several mechanisms to ensure oversight results are communicating up through line management. Significant safety issues or continued poor performance are considered for contract action. Since February 2005, the DOE-ORP has exercised the Conditional Payment of Fee clause of its contract with the WTP contractor, Bechtel National, Inc. for identified safety and/or quality issues.

During interviews with Federal Project Directors (non-Assistant Manager level) and Contracting Officers it was noted that neither group was aware that ORP conducted a quarterly APC or had periodic meetings with contractor senior management to discuss safety issues and oversight results. Involvement of these personnel in such meetings would keep them more aware of potential need for contractual action.

- 8. An effective employee concerns program been established and implemented in accordance with DOE Directives that encourages the reporting of employee concerns and provides thorough investigations and effective corrective actions and recurrence controls.**

The Employees Concerns Program (ECP) procedure was reviewed and determined to be in accordance with DOE requirements. In addition, the ECP Manager was interviewed and provided additional insight into ORP's ECP process. ORP Employee Concerns can be reported in numerous ways: by phone, by email, or in person. The process strives to achieve confidentiality and anonymity. Once a report is received it is entered into a tracking database, and then assigned to an investigator. ORP has a sufficient cadre of investigators to support their ECP workload. The database was demonstrated and found to be a very useful and user friendly system. A quick review of open and closed concerns in the tracking system failed to identify any that were repeat occurrences indicating that the resolution of events was successful. In addition, assessments of ORP contractors' EC Programs were reviewed and found to be of sufficient scope and depth to ensure those programs satisfy requirements.

CONCLUSION

The objective of this CRAD had been met. The Office of River Protection (ORP) has committed a high level of resources into implementing its Integrated Assessment Program. The Program would be more efficient if driven by one process, but each individual process currently in place is adequate. Incorporation of all Operational Awareness data into ORP management systems would be beneficial in ORP's efforts to integrate Human Performance Initiatives into its oversight processes, primarily in identification of leading indicators and error likely conditions.

Findings

ISMS.2-F-1: The primary procedures used by Waste Treatment and Immobilization Plant Project (WTP) Facility Representatives and Assessment Inspectors for performing and documenting oversight activities within the WTP (ORP M 432.1 and ORP M 243.1) are draft documents.

Observations

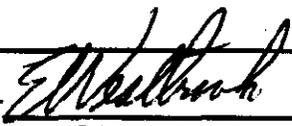
ISMS.2-O-1: The use of multiple oversight and issue tracking programs and systems is inefficient, results in inconsistent terminology, and hampers oversight planning, trending, and analysis.

ISMS.2-O-2: The results of all operational awareness activities (WTP Facility Representatives OA database entries, TF Facility Representative weekly reports, safety system oversight, and management walkthroughs) do not appear to be provided to or utilized by the Assessment Program Committee or other ORP management systems.

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Strengths

ISMS.2-S-1: The ORP management team has demonstrated a high level of commitment and involvement to the Integrated Assessment Program.

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| Reviewer  Don Rack | Team Leader  8/4/06 Ed Westbrook |
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| FUNCTIONAL AREA: FACILITY REPRESENTATIVE PROGRAM | OBJECTIVE: FR.1 DATE: June 19-23, 2006 |
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OBJECTIVE

FR.1: A Facility Representative program is established that results in well-trained and qualified Facility Representatives, ensures sufficient staffing, and effective oversight of facilities.

CRITERIA

1. A formal qualification and requalification process has been developed for the Facility Representatives. The process sufficiently challenges candidates to verify the proper level of knowledge of all qualification areas and facilities, and it tests the Facility Representative's technical understanding of facility processes, judgment and decision-making ability, and ability to communicate expectations to the contractor. Training and qualification records are maintained for Facility Representatives.
2. An adequate continuing training program has been established and implemented.
3. A current Facility Representative staffing and coverage analysis has been developed in accordance with DOE-STD-1063-2006, and Facility Representatives are staffed to the level indicated in the analysis. Coverage deficiencies are addressed by management in a timely manner.
4. Facility Representatives spend 40% of their time in the field and 65% of their time conducting oversight activities.
5. Facility Representatives have unencumbered access to their assigned facilities, and possess stop work authority.
6. Facility Representatives perform operational awareness activities, and accomplish facility assessments, surveillances, and audits as scheduled. Facility Representatives adequately document findings that are meaningful and consistent with the facility's performance.
7. Facility Representatives reviews of occurrence reports are accomplished in a timely manner while ensuring that the root cause has been determined and effective action proposed.
8. Based on a sample of deficiencies identified by Facility Representatives during reviews, Facility Representatives have evaluated the overall effectiveness of the operating contractor in implementing corrective actions.
9. Facility Representatives report findings, trends, or areas of concern (formally and informally) to the ORP and contractor.
10. Facility Representatives track, follow-up and close findings from assessments, surveillances, and walkthroughs using an established process.
11. Facility Representatives have established mechanisms for communications between DOE and the facility operating contractor and communication is effective.

REVIEW APPROACH

References:

- DOE O 5480.19, Conduct of Operations Requirements for DOE Facilities
- DOE M 426.1-1A, Federal Technical Capability Manual
- DOE-STD-1063-2006, Facility Representatives
- DOE-STD-1151-2002, Facility Representative Functional Area Qualification Standard
- DOE-STD-1146-2001, General Technical Base Qualification Standard
- DOE P 226.1, Department of Energy Oversight Policy
- DOE O 226.1, Implementation of Department of Energy Oversight Policy

RECORDS REVIEWED

- ORP M 420.2C, *Facility Representative Program*
- ORP M 220.1, *Integrated Assessment Program*
- Draft ORP M 432.1, *WTP Project Construction Oversight Manual*
- Draft ORP M 243.1, *Operational Awareness Oversight Database*
- FRI-001, *ORP Facility Representative Instruction Implementation of the ORP Facility Representative Program*
- FRI-002, *ORP Facility Representative Instruction Preparation, Revision, & Control of Administrative Instructions*
- FRI-003, *ORP Facility Representative Instruction Staffing and Coverage of Facility Representatives*
- FRI-004, *ORP Facility Representative Instruction Facility Representative Qualification*
- FRI-005, *ORP Facility Representative Instruction Stop Work*
- FRI-006, *ORP Facility Representative Instruction Facility Representative Responsibilities and Routine Activities*
- FRI-008, *ORP Facility Representative Instruction Event Response, Investigation, and Reporting*
- FRI-009, *ORP Facility Representative Instruction Master Assessment Plan*
- FRI-010, *ORP Facility Representative Instruction Conduct of Performance Reviews*
- FRI-011, *ORP Facility Representative Instruction Reports*
- Memorandum Brown to Evans, *Office of River Protection Facility Representative Program Performance Indicator Quarterly Report, 1/24/06*
- Memorandum Brown to Evans, *Office of River Protection Facility Representative Program Performance Indicator Quarterly Report, 4/17/06*
- Memorandum Smith to Pizzuto, *U.S. Department of Energy, Office of River Protection (ORP) Tank Farms Division (TOD) Quarterly Report Covering Tank Farm Contractor (TFC) Operations During First Quarter Fiscal Year (FY) 2006, 2/2/06*
- Memorandum Smith to Spears, *U.S. Department of Energy, Office of River Protection (ORP) Tank Farms Division (TOD) Quarterly Report Covering Tank*

Farm Contractor (TFC) Operations During Second Quarter Fiscal Year (FY) 2006, 5/18/06

- Cross-Site Transfer Review Plan, 1/06
- Facility Representative Training and Qualification Records
- Facility Representative Qualification Written and Oral Examinations
- Facility Representative Staffing Analysis
- Tank Farm Facility Representative weekly reports (4)
- Waste Treatment Plant Facility Representative Operational Awareness Reports (17)
- Occurrence Report EM-RP--CHG-TANKFARM-2006-0009, *Contamination Discovered In 2713-WB Radioactive Material Area*
- Occurrence Report EM-RP--CHG-TANKFARM-2006-0014, *Vehicle Impact Barriers Do Not Meet Documented Safety Analysis Performance Criteria*
- PER-2005-3747
- PER-2005-3770
- PER-2005-4140

INTERVIEWS CONDUCTED

- Waste Treatment and Immobilization Project Plant (WTP) Project Manager
- Tank Farms Project Assistant Manager (AMTF)
- Operations and Commissioning Team (OCT) Lead
- Tank Farm Operations Division (TOD) Director
- Facility Representatives (6)
- Facility Representative Training Coordinator

OBSERVATIONS

- Tank Farm Morning Conference Call, 6/20/06
- Waste Treatment Plant Morning Conference Call, 6/20/06

DISCUSSION OF RESULTS

- 1. A formal qualification and requalification process has been developed for the Facility Representatives. The process sufficiently challenges candidates to verify the proper level of knowledge of all qualification areas and facilities, and it tests the Facility Representative's technical understanding of facility processes, judgment and decision-making ability, and ability to communicate expectations to the contractor. Training and qualification records are maintained for Facility Representatives.**

The Office of River Protection (ORP) has implemented its Facility Representative qualification, requalification, and cross-qualification processes through FRI-004, *ORP Facility Representative Instruction Facility Representative Qualification*. This FRI was reviewed and determined to adequately incorporate DOE STD 1063-2006

requirements for program. Qualification standards, written examination, and oral examinations were reviewed and determined to adequately evaluate Facility Representative Candidate level of knowledge prior to achieving qualification as a Facility Representative. All Facility Representatives assigned to the Tank Farms (TF) are qualified including facility specific qualifications. Each Facility Representative assigned to the Waste Treatment Plant (WTP) has qualified previously at a different facility. A WTP facility specific qualification standard was approved in February 2006, and each assigned Facility Representative is currently cross-qualifying on the WTP. Training and qualification records for 5 Facility Representatives were reviewed and found to be adequate. During review of oral examination records, it was noted that a candidate passed their final oral examination with a list of identified weaknesses that were required to be addressed before the candidate's final walkthrough with the ORP Manager which must be completed before a candidate is certified as a Facility Representative. FRI-004 does not address weaknesses for final oral examinations; it only discussed passing or failing the examination. Weaknesses in oral examinations are not addressed in ORP Facility Representative Instructions. **(FR.1-O-1)**

During interviews with the ORP Facility Representatives, it was noted that they are technically competent, very familiar with facility conditions, and are providing value-added oversight. The overall quality of the Facility Representative program and individual Facility Representative skills and abilities are a significant ORP strength. **(FR.1-S-1)**

2. An adequate continuing training program has been established and implemented.

DOE-STD-1063-2006 states that Field Element Managers should establish a continuing training program for Facility Representatives and ORP M 420.2C, *Facility Representative Program* states that the Director, TOD and Team Lead, OCT are responsible to ensure continuing training is available to FRs. An adequate continuing training program has been established for the TF Facility Representatives. Continuing training is provided to the TF Facility Representatives on a monthly basis and covers topics appropriate for maintaining and enhancing Facility Representative required level of knowledge. A continuing training program has not been established for the WTP Facility Representatives per DOE-STD-1063-2006 and ORP M 420.2C. **(FR.1-O-2)** During interviews with the TOD Director and WTP Facility Representative, it was noted that this issue had also been identified by the ORP during the week preceding this assessment, and that WTP Facility Representatives would participate in continuing training provided to the TF Facility Representatives if applicable. Additional continuing training applicable to construction would be developed and provided to the WTP Facility Representatives. Although this issue is non-compliant to a DOE Standard expectation and ORP Manual requirement and could be categorized as a finding, it has been categorized as an observation since it was also identified by the ORP and corrective actions had been initiated.

- 3. A current Facility Representative staffing and coverage analysis has been developed in accordance with DOE-STD-1063-2006, and Facility Representatives are staffed to the level indicated in the analysis. Coverage deficiencies are addressed by management in a timely manner.**

The current analysis was completed in December 2005 and meets the expectations of DOE-STD-1063-2006. The analysis calls for 14 Facility Representatives between the TF and WTP. Due to two Facility Representatives being promoted to other positions within ORP, two vacancies exist. ORP management has requested permission from EM-HQ to fill these vacancies.

- 4. Facility Representatives spend 40% of their time in the field and 65% of their time conducting oversight activities.**

During review of the two most recent Facility Representative Program Performance Indicator Quarterly Reports and during interviews with Facility Representatives, it was noted that each of these goals has been exceeded. During the last two quarters, Facility Representatives have averaged 48.5% of their time in the field and 75% of their time conducting oversight activities.

- 5. Facility Representatives have unencumbered access to their assigned facilities, and possess stop work authority.**

During interviews and review of training records it was noted that Facility Representatives were current in required training for facility access. Per ORP M 420.2C and FRI-005, ORP Facility Representatives have been granted stop work authorization. During interviews, Facility Representatives demonstrated adequate knowledge of their stop work responsibilities.

- 6. Facility Representatives perform operational awareness activities, and accomplish facility assessments, surveillances, and audits as scheduled. Facility Representatives adequately document findings that are meaningful and consistent with the facility's performance.**

ORP Facility Representatives perform operational awareness activities and formal assessments and surveillances per FRI-001, FRI-009, and the draft ORP M 432.1 and ORP M 243.1 procedures. The TF Facility Representatives document their operational awareness activities in weekly reports to the TOD Director. During interviews with TF Facility Representatives, it was noted that they did not document all minor individual issues (e.g. individual not wearing safety glasses, etc) in their weekly reports. WTP document their operational awareness activities in the OA database. The draft OA procedure requires the OCT Lead to ensure these entries are reviewed for tracking and trending purposes, but this is currently not being performed. (ISMS.1-F-1 and ISMS.2-O-1 example)

The assessments and surveillances identified on the Facility Representative Master Assessment Plan are incorporated in the ORP Integrated Assessment Plan. During review of the Plan it was noted that all scheduled Facility Representative assessments were completed as scheduled from October 2005 through April 2006.

- 7. Facility Representatives reviews of occurrence reports are accomplished in a timely manner while ensuring that the root cause has been determined and effective action proposed.**

The only two Significance Category 2 or above occurrence reports this calendar year were reviewed. Currently, only Significance Category 2 or above occurrence reports require Facility Representative approval. Each report was approved by an ORP Facility Representative within the time requirements of DOE M 231.1-2, *OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION* and adequately identified cause and corrective actions.

- 8. Based on a sample of deficiencies identified by Facility Representatives during reviews, Facility Representatives have evaluated the overall effectiveness of the operating contractor in implementing corrective actions.**

Corrective action closure was reviewed for TF and WTP Facility Representatives. Findings identified by TF Facility Representatives can not be closed in the TFC PERs without Facility Representative approval through the E-STARS system. TF Facility Representatives review the corrective actions in PERs and provide approval via E-STARS. Corrective actions for three findings were reviewed and found to be adequate.

Findings identified by WTP Facility Representatives are discussed weekly with BNI quality control personnel. For each finding, the WTP Facility Representatives develop a history folder including the finding and corrective actions. WTP Facility Representatives document the adequacy of corrective action and finding closure in the ORP Consolidated Action Reporting System. Corrective action for two findings were reviewed and found to be adequate.

- 9. Facility Representatives report findings, trends, or areas of concern (formally and informally) to the ORP and contractor.**

Issues identified by TF Facility Representatives are brought to the attention of TFC first line supervision and/or the shift manager. Significant issues are elevated through both the contractor and ORP line management chain. The TOD Director develops weekly and quarterly reports based upon input from Facility Representative oversight activities. These reports are sent to both DOE-ORP and TFC management. The TF Facility Representatives meet weekly with contractor project personnel, monthly with contractor vice presidents and key support personnel, and quarterly with TFC senior management.

Issues identified by WTP Facility Representatives are brought to the attention of Bechtel National, Inc.'s (BNI) first line supervision and safety personnel. Significant issues are identified as findings in Inspection Notes and elevated through both the contractor and ORP line management chain. The WTP Facility Representatives meet weekly with BNI quality control personnel to discuss status of finding corrective actions and closure. The OCT Lead meets weekly with the BNI Construction Manager to discuss recent issues, safety items, and schedule. WTP Facility Representatives do not attend this meeting. Findings are incorporated into a quarterly report which is sent to DOE-ORP and contractor management. Unlike the TF Facility Representatives, WTP Facility Representatives do not have periodic, formal meeting with contractor management to discuss major issues, recurring events, or leading indicators. **(FR.1-O-3)**

FRI-006 lists monthly meeting with senior contractor management as a typical Facility Representative routine, but these meetings are not being performed with BNI senior management. **(ISMS.1-F-1 example)**

10. Facility Representatives track, follow-up and close findings from assessments, surveillances, and walkthroughs using an established process.

See ISMS.2 Criterion 6 for discussion on closure of findings.

11. Facility Representatives have established mechanisms for communications between DOE and the facility operating contractor and communication is effective.

See discussion in FR.1 criterion 9.

CONCLUSION

The objective of this CRAD was met. The DOE-ORP has established a very strong Facility Representative program (particularly the TF Facility Representative program) which results in effective oversight of ORP facilities. The WTP Facility Representatives were not considered to be less competent than their TF peers, but their program effectiveness can be increased by incorporation of a continuing training program and establishment of formal, periodic meetings with BNI senior management to discuss major issues, recurring events, or leading indicators.

Findings

None

Observations

FR.1-O-1: Weaknesses in oral examinations are not addressed in ORP Facility

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Representative Instructions.

FR.1-O-2: A continuing training program has not been established for the WTP Facility Representatives per DOE-STD-1063-2006 and ORP M 420.2C.

FR.1-O-3: WTP Facility Representatives do not have periodic, formal meeting with contractor management to discuss major issues, recurring events, or leading indicators

Strengths

FR.1-S-1: The overall quality of the Facility Representative program and individual Facility Representative skills and abilities are a significant ORP strength.

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| Reviewer <i>Don Rack</i> Don Rack | Team Leader <i>Ed Westbrook 8/4/06</i> Ed Westbrook |
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| FUNCTIONAL AREA: Conduct of Engineering (CE) | OBJECTIVE: ORP ISMS, CE.1 DATE: June 19-22, 2006 |
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OBJECTIVE

CE.1: The Site Office has established and implemented an effective program to perform oversight activities of the contractor's engineering program. The Site Office has assigned personnel with competence commensurate with their responsibility to manage and oversee the contractor's engineering program.

CRITERIA

1. A formal qualification process has been developed for the engineers and SSOs. The process sufficiently challenges candidates to verify the proper level of knowledge of all qualification areas. Training and qualification records are maintained for engineers and SSOs.
2. An adequate continuing training program has been established and implemented.
3. Site Office oversight activities of the contractor's engineering program are effectively performed and include regularly scheduled reviews of performance test results, system configuration documentation, and facility walk downs. (DOE O 420.1A).
4. The Site Office oversight activities include assessments and surveillance of ongoing nuclear safety SSC design, procurement, construction, and acceptance testing activities and include activities to verify effective implementation of the contractor System Engineer program and Configuration Management process. SSO personnel conduct periodic assessments of contractor program implementation, configuration management of safety SSCs, and operability of safety SSCs. (DOE O 420.1A).
5. Site Office is staffed with an adequate number of technically competent, experienced, and fully qualified personnel performing oversight of the contractor's engineering program. (DOE P 226.1)
6. Site Office processes and procedures ensure that for nuclear facility capital projects and major modifications to the nuclear safety design criteria selected for safety SSCs identified in the DSA are consistent with the requirements of DOE O 420.1A and that deviations from these requirements are formally approved (DOE O 420.1A).
7. The Site Office has established formal expectations for identification and performance of engineering functions such as safety system design reviews and Safety System Oversight (SSO) duties and tasks identified in the Federal Technical Capabilities Program (FTCP) manual (DOE M 426.1).
8. Issues are identified, tracked and resolved in a manner to ensure satisfactory correction and prevent reoccurrence.

REVIEW APPROACH

References:

- DOE M 426.1-1A, Federal Technical Capability Manual
- DOE-STD-1146-2001, General Technical Base Qualification Standard
- DOE P 226.1, Department of Energy Oversight Policy
- DOE O 226.1, Implementation of Department of Energy Oversight Policy
- DOE O 5480.19, Conduct of Operations Requirements for DOE Facilities
- DOE O 420.1A, Facility Safety

RECORDS REVIEWED

- ORP Memorandum 05-TED-091, *USDOE, ORP Annual Workforce Analysis and Staffing Plan Report*, dated 12/29/05
- ORP Memorandum 05-TED-087, *USDOE ORP Designation of Qualifying Officials for Safety Oversight (SO) Program Site-Specific Qualification Cards*, dated 12/02/05
- ORP Memorandum 05-TED-074, *USDOE ORP Safety Oversight (SO) Program Personnel List, Revision 2*, dated 11/4/05
- ORP SO-DI-002 R2, *Qualification Evaluation Methods*, dated 12/15/04
- ORP PD 420.3, *Safety Basis Management*, dated 07/22/03
- ORP M 220.1 R4, *Integrated Assessment Program*, dated 01/03/06
- ORP SO-DI-001 R2, *Safety Oversight Qualification Process*, dated 12/15/04
- ORP DI 220.1 R1, *Conduct of Design Oversight*, dated Draft
- ORP Safety Oversight Program Plan, Revision 2, dated October 2005
- ORP, *Technical Qualification Program Plan*, dated September 2004
- *Independent Review of the ORP Safety System Oversight (SSO) Program Implementation*, dated November 2005
- Tank Farms SSO Individual Performance Plan (IPP), current period
- WTP SSO Individual Performance Plan (IPP), current period
- Tank Farms SSO Individual Development Plan (IDP), current period
- ORP Safety System Oversight Qualification Standard, Double Shell Tank Primary Tank Ventilation System, dated April 2004
- RPP-13033 Rev 1, *Tank Farms Documented Safety Analysis*, dated May 31, 2006 Section 3.3.2.3.2 Defense-in-Depth
- Email Modification of VSS Status 3-31-06.xls for ORP, dated 5/4/06
- Document, *ORP TQP Status*, dated 6/16/05
- Document, *SSO Phase I Qualification Sign-Off Progress*, dated June 2006
- Document, FY06 ORP Annual Assessment Plan, May 31, 2006
- Document, Current CARS report for ORP-WED division
- Document, CHG System Engineer Assignment List, Vital Safety System (VSS),

dated 2/16/06

- A-06-AMTF-TankFarm-003, *Tank Farm Contractor Replacement Cross-Site Transfer System leak Detection Assessment Report*, dated June 2006
- A-06-AMTF-TankFarm-003, *Tank Farm Contractor Aboveground Transfer System Vehicle Barriers Assessment Report*, May 2006
- Example, WPT SSO Design Review Report
- 24590-WTP-SRD-ESH-01-001-02 Rev 3, *Safety Requirements Document Vol II*
- Document, Cognizant System Engineer (CSE) Program CRADs

INTERVIEWS CONDUCTED

- SSO Training Coordinator
- ORP FTCP Agent
- Tank Farms Engineering Supervisor
- Tank Farms Engineer and SSO (3)
- WTP Engineering Supervisor
- WTP Engineers (3)

OBSERVATIONS

- None

DISCUSSION OF RESULTS

- 1. A formal qualification process has been developed for the engineers and SSOs. The process sufficiently challenges candidates to verify the proper level of knowledge of all qualification areas. Training and qualification records are maintained for engineers and SSOs.**

The qualification program for engineers and SSOs is described in the ORP Technical Qualification Program (TQP) Plan. The TQP Plan describes the broad requirements for the training and qualification program for ORP technical staff. Specific qualification requirements for assigned SSO personnel are described in the ORP SO Program Plan document and corresponding desk instructions. The qualification process, including qualification standards, meets or exceeds the requirements specified in the DOE M 426.1-1A, Federal Technical Capability Manual. The qualification standards consist of the DOE-STD-1146-2001, General Technical Base Qualification Standard, one of the Functional Area Qualification Standards (e.g. Mechanical Systems, etc.) and a Site Specific Standard which includes the KSAs identified in DOE M 426.1 Chapter III, Section 1, paragraph 5. The Site Specific qualification covers the contractor cross-cutting processes as well as safety system specific competencies. In addition to the competencies, the qualification standard requires Performance Demonstrations that include; walkthrough performance, assessment performance, a written exam, an 80% and 100% oral board and a final certification. Review of Qualification cards, written test and oral board results appears to sufficiently challenge the candidates to demonstrate an adequate level of

knowledge and skills to provide engineering and safety system oversight. The training and qualification records reviewed appear to be complete, well documented and controlled. The only exception is that the TQP Plan states for Conduct of Oral Evaluations "...results of interview should be documented and forwarded to the FTCP Agent (for inclusion in the candidate's training file)." No evidence was provided that this requirement is being implemented. However, this is viewed as above the FTCP Manual requirements and common expectations and is addressed in ISMS.1-F-1 for non-compliance to internal procedures. Qualifying officials have been designated for Safety Oversight Program site specific qualification cards.

2. An adequate continuing training program has been established and implemented.

The ORP TQP Plan requires continuing training to maintain their technical proficiencies for personnel qualified in the TQP. This requirement is reflected in the SO Qualification process, where stated "DOE personnel who attain SSO Qualification shall participate in continuing education and training as necessary to improve their performance and proficiency...". Although not identified as an observation, interviews and document reviews, indicate that the application is inconsistent. Most of the SSOs' IDPs did not have any continuing training identified (it is recognized that most are recently qualified, but the TQP does not make that distinction a determining factor for continuing training). Since use of assignments is recognized in the FTCP manual to maintain current qualifications, this is viewed as weakness.

3. Site Office oversight activities of the contractor's engineering program are effectively performed and include regularly scheduled reviews of performance test results, system configuration documentation, and facility walk downs. (DOE O 420.1A).

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4. The Site Office oversight activities include assessments and surveillance of ongoing nuclear safety SSC design, procurement, construction, and acceptance testing activities and include activities to verify effective implementation of the contractor System Engineer program and Configuration Management process. SSO personnel conduct periodic assessments of contractor program implementation, configuration management of safety SSCs, and operability of safety SSCs. (DOE O 420.1A).

The SSO Program plan defines the SSO personnel responsibilities which include monitoring the performance of the contractors' System Engineering (SE) Program and performing assessments evaluating equipment configuration, material condition, design status and technical adequacy. It specifically requires that SSO personnel, "once qualified, lead one SSO assessment and participate as a team member on at least one SSO assessment each fiscal year." The SSO personnel IPPs reflect this

assigned responsibility. Assessments are planned and scheduled in accordance with the Integrated Assessment Program (ORP M 220.1). All qualified SSOs interviewed, had either conducted, or have scheduled on the Integrated Assessment Plan, an assessment of one of their assigned safety systems. Additionally, the FTCP Manual requires that SSO personnel monitor performance of the contractor's Cognizant System Engineer Program. ORP has scheduled a review of the Tank Farms contractor system engineer (SE) program. Although the SSO personnel reviewed the implementation of the SE program for their assigned systems, they reported they were not conducting oversight of the contractor identified VSS that were not classified as safety class or safety significant. It was not evident if these systems will receive any oversight. The SSO Program Lead provided the CRADs for an upcoming Tank Farms SE Program assessment and indicated that SSO personnel will be assigned to the assessment team. The SE Program CRAD included a SE program implementation objective with criteria applying the program to the systems "... as designated by the established program." It wasn't clear if the applicability of the CRAD to systems identified by the contractor as VSS that are not designated as SC/SS. The assessment team lead indicated that the SE Program assessment will evaluate a sampling of the SE implementation for VSS identified by the contractor that are not designated as SC/SS and not specifically assigned to the SSO personnel. (CE.1-O-1)

ORP SSO personnel which are not qualified (those assigned the WTP project) conduct assessments of safety system design. The SO Program Plan specifies that WTP SSOs participate in design oversight. The reporting process specified in the Program Plan is not being utilized by the SSO personnel. Instead, ORP has developed a desk instruction (ORP DI 220.1, Conduct of Design Oversight) to define the oversight strategy, planning, process and responsibilities for oversight of the WTP design. Since this meets the expectation, the conflicting direction is viewed as an example of non-compliance to internal procedures [See ISMS.1-F-1]. The design assessments are formally planned and the results are formally sent to the contractor for resolution.

In addition, all SSO personnel are required to perform informal periodic facility walkthroughs or surveillances of facility activities. These walkthroughs/surveillances are identified in the SSO personnel's IPP and are being tracked by the SSO supervisors.

5. Site Office is staffed with an adequate number of technically competent, experienced, and fully qualified personnel performing oversight of the contractor's engineering program. (DOE P 226.1)

ORP has conducted a workforce analysis that included evaluating engineering and SSO staffing. The evaluation concluded that there is sufficient staff on board to meet the technical staffing needs for engineering and SSO. It is noted that while 8.3 SSO personnel are required and onboard, only 4 are qualified. The 4 qualified are assigned

to the tank farm safety systems. The remaining are assigned to the WTP project where the project is in design and early construction phase such that only portions of any of system are installed and contractor system engineers have not yet been assigned. ORP has assigned SSOs to functional areas to oversee design, assist in safety basis review and prepare for operations and future system assignment. SSOs assigned to WTP facilities have completed a TQP Functional Area Qualification and have been assigned a qualification standard that has been tailored to design oversight as part of a phased qualification. Schedules have been developed and progress is being tracked for SSO qualification. The FTCP Manual recommends that backups for SSO be considered to ensure departing staff members are replaced in a timely manner. The ORP SO Program Plan requires that backups be identified and either be qualified or in the process of attaining qualification. Backups were only identified for a few of the assigned SSO's. Since, this is not required by the FTCP Manual, this was only viewed as a non-compliance with an internal procedure and captured in [See ISMS.1-F-1].

- 6. Site Office processes and procedures ensure that for nuclear facility capital projects and major modifications to the nuclear safety design criteria selected for safety SSCs identified in the DSA are consistent with the requirements of DOE O 420.1A and that deviations from these requirements are formally approved (DOE O 420.1A).**

In general the SSO personnel are responsible to conduct oversight of safety system design. The SO Program Plan establishes requirements for SSO personnel knowledge of design and for performance of safety system design assessments. The Tank Farms SSO personnel perform design oversight as part of the periodic vital safety system (VSS) assessments. The VSS assessments are conducted in accordance with the Integrated Assessment Plan. These assessments include a criterion for system design that includes DOE O 420.1A and DOE G 420.1 as specific criteria. Since WTP is in a design and early construction phase, design reviews are the primary SSO personnel safety system oversight. ORP utilized an acquisition strategy for WTP design which specified commercial design requirements in lieu of DOE O 420.1. The design requirements and criteria are established in the contract by the Safety Requirements Document (SRD). While specific sections of DOE O 420.1A and DOE G 420.1 are cited in the SRD, the criteria primarily consists of commercial codes and standards used in commercial nuclear industry. ORP has developed a desk instruction (ORP DI 220.1, Conduct of Design Oversight) to define the oversight strategy, planning, process and responsibilities for oversight of the WTP design. The SRD and the Basis of Design are listed as potential criterion in the desk instruction and typically are the source of the design requirements established by the design oversight review plans. The listing of codes and standards are formally controlled by the ORP contract change control process.

- 7. The Site Office has established formal expectations for identification and performance of engineering functions such as safety system design reviews and**

Safety System Oversight (SSO) duties and tasks identified in the Federal Technical Capabilities Program (FTCP) manual (DOE M 426.1).

The ORP SO Program Plan implements the requirements identified in DOE M 426.1 for SSO personnel. The duties and responsibilities identified in the SO Program Plan are consistent with those established by DOE M 426.1. With respect to safety system design and operability review, the Program Plan requires that SSO personnel, once qualified, lead one assessment and participate as a team member on at least one assessment each year. Participation (lead for tank farm) in formal assessment of a safety system is documented in each of the SSO personnel's IPP. Formal assessments are conducted in accordance with the ORP procedure Integrated Assessment Program. The Integrated Assessment Program provides requirements for the conduct of the assessment as well as the planning. The resulting product is the Annual Assessment Plan which is an integrated schedule of ORP assessments. All SSO personnel interviewed provided evidence that they either performed a safety system assessment or were scheduled to performed one this fiscal year. Although, all systems have been assessed in the past few years, one weakness noted was that there is not a specific requirement for a periodicity for reviewing all of the assigned safety systems. Participation in informal oversight is also expected and required in the SO Program Plan. Tank Farms SSO personnel must review the contractor's quarterly system health reports and operability evaluations. In addition, all SSO personnel are required to perform period facility walkthroughs or surveillances of facility activities. These walkthroughs/surveillances are identified in the SSO personnel's IPP and are being tracked by the SSO supervisors.

8. Issues are identified, tracked and resolved in a manner to ensure satisfactory correction and prevent reoccurrence.

Issues identified as a result of the formal assessments are tracked and closed in a manner depending upon which organization the SSO is assigned. Tank Farms SSO personnel issues are tracked using the contractor's Problem Evaluation Request (PER) system. SSO personnel have access to the database for tracking, but not writing. This system allows the contractor to close issues at the request/concurrence of the SSO personnel, which can be accomplished with an email. Informal reviews may also use the PER system, but require the SSO to notify the contractor to enter the issue. SSO personnel assigned to WTP use formal correspondence with the contractor to document and close issues. Tracking is accomplished with the ORP Consolidated Action Reporting System (CARS). The CARS has the capacity to add supporting documentation for closure.

CONCLUSION

The review of conduct of engineering found that the ORP program has met this objective. The conduct of engineering portion of this assessment focused on the implementation of

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the Safety System Oversight Program. The assessment team verified the SO Program implemented the requirements of the DOE M 426.1-1A, Federal Technical Capabilities Manual for SSO personnel. The ORP SO Program Plan establishes a robust qualification program and specifies expectations for safety system and contractor system engineer (CSE) program oversight.

The Tanks Farms SSO personnel were qualified on assigned systems. The WTP SSO personnel were assigned qualification cards, schedules have been established and are being tracked. This is viewed as appropriate, as WTP is in the design and early construction phase. Safety system assessments are being scheduled, planned and conducted by SSO personnel for the system design, operability and performance (where applicable) for their assigned systems. Evaluation of effective implementation of the CSE program is planned. An observation was noted to clarify the expectations that implementation will be reviewed for all safety systems including the contractor identified VSS not designated as safety class and/or safety significant.

Several minor program requirements were not being fully implemented. Since these exceeded the requirements established in DOE M 426.1-1A, they were viewed as an issue with following internal procedures [See ISMS.1-F-1]

Findings

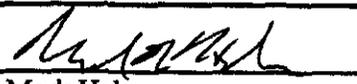
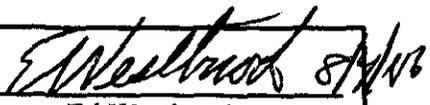
None

Observations

CE.1-O-1: A discrepancy exists between the contractor's list of System Engineers/VSS and the ORP system assignments to the Tank Farms SSO personnel. It is unclear that ORP SSO personnel will evaluate the implementation of the contractors system engineer program for those contractor identified VSS that are not classified as SC/SS.

Strengths

None

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| Reviewer  Mark Hahn | Team Leader  Ed Westbrook |
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| FUNCTIONAL AREA: Safety Management Program Oversight | OBJECTIVE: SMP.1 DATE: June 19-23, 2006 |
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OBJECTIVE

SMP.1: The Site Office has established and implemented an effective program to perform oversight of the contractors' Safety Management Programs (SMPs), including (but not limited to): Fire Protection, Nuclear Safety, Criticality Safety, Occupational Safety, Industrial Hygiene, Quality Assurance, Radiological Protection. The Site Office has assigned personnel with competence commensurate with their responsibility to manage and oversee these programs.

CRITERIA

1. A formal process has been developed and implemented for the subject matter experts tasked with oversight of contractor Safety Management Programs (SMPs) that verifies they possess sufficient knowledge and experience in assigned areas. Training and qualification records are maintained for positions requiring formal qualification.
2. Site Office oversight activities of the contractors' SMPs are effectively performed and include regularly scheduled reviews of their assigned SMP's performance indicators, meetings with contractor counterparts, and evaluation of contractor reports.
3. The Site Office oversight activities include assessments and surveillance of ongoing contractor activities to verify effective implementation of the contractor SMPs. DOE SMEs conduct periodic assessments of contractor program implementation.
4. Site Office is staffed with an adequate number of technically competent, experienced, and fully qualified personnel performing oversight of the contractor's SMPs.
5. SMP issues and deficiencies are identified, tracked and resolved in a manner to ensure satisfactory correction, prevent reoccurrence, and improve performance.

REFERENCES

- DOE M 426.1-1A, Federal Technical Capability Manual
- DOE-STD-1146-2001, General Technical Base Qualification Standard
- DOE P 226.1, Department of Energy Oversight Policy
- DOE O 226.1, Implementation of Department of Energy Oversight Policy
- DOE Order 420.1A, Facility Safety
- DOE Order 440.1

APPROACH

Record Review:

- ES&H Procedures
- ES&H training and qualification records
- ES&H Staffing Analysis
- ES&H Oversight Schedules
- ES&H Oversight Results and Corrective Action Reviews

Interviews:

- Training Coordinator
- ESH&Q Manager
- SMP Owners (4)

RECORDS REVIEWED

- ORP M 450.4, Rev 2, *Integrated Safety Management System Description*, 9/13/05
- ORP M 220.1, Rev 4, *Integrated Assessment Program*, 1/3/06
- ORP M 411.1-1, Rev 6, *Safety Management Functions, Responsibilities, and Authorities Manual for the U.S. Department of Energy Office of River Protection*, 6/6/06
- ORP 414.1, Rev 2, *ORP Quality Assurance Program Description*, 10/27/05
- Consolidated Action Reporting System report for open management assessment actions, 6/20/06
- ORP Assessment Analysis for FY2006 First Quarter, 1/23/06
- ORP Assessment Analysis for FY2006 Second Quarter, 4/17/06
- ORP Line Management Oversight Assessment Report and associated ORP CAR, 11/10/05 and 6/20/06
- ORP Issue PER Status Report, 6/12/06
- 06-ESQ-040, *ORP FEOSH Management Assessment*, 4/26/06
- 06-ESQ-066, *ORP Fire Protection Program Self-Assessment*, 6/13/06
- ORP Memorandum 05-TED-091, *USDOE, ORP Annual Workforce Analysis and Staffing Plan Report*, dated 12/29/05
- ORP Memorandum 05-TED-087, *USDOE ORP Designation of Qualifying Officials for Safety Oversight (SO) Program Site-Specific Qualification Cards*, dated 12/02/05
- ORP SO-DI-002 R2, *Qualification Evaluation Methods*, dated 12/15/04
- ORP PD 420.3, *Safety Basis Management*, dated 07/22/03
- ORP SO-DI-001 R2, *Safety Oversight Qualification Process*, dated 12/15/04
- ORP, *Safety Oversight Program Plan, Revision 2*, dated October 2005
- ORP, *Technical Qualification Program Plan*, dated September 2004

- WTP SMP Individual Performance Plan (IPP), current period
- Tank Farms SMP Individual Development Plan (IDP), current period
- Document, *ORP TQP Status*, dated 6/16/05
- Office of Assistant Manager for Tank Farms Safety Management Program Qualification Standard, *Environmental Program*, March 2005, Revision 0
- Office of Assistant Manager for Tank Farms Safety Management Program Qualification Standard, *Emergency Management Program*, May 2005, Revision 0
- Office of Assistant Manager for Tank Farms Safety Management Program Qualification Standard, *Nuclear Criticality Safety Program*, November 2005, Revision 0
- Office of Assistant Manager for Tank Farms Safety Management Program Qualification Standard, *Industrial Hygiene Program*, February 2005, Revision 0
- Office of Assistant Manager for Tank Farms Safety Management Program Qualification Standard, *Radiological Protection Program*, April 2006, Revision 0, Draft 1
- Office of Assistant Manager for Tank Farms Safety Management Program Qualification Standard, *Fire Protection Program*, March 2005, Revision 0
- Document, FY06 ORP Annual Assessment Plan, May 31, 2006

INTERVIEWS CONDUCTED

- SMP Subject Matter Experts (SMEs) (4)
- Deputy Manager
- Director, ESQ
- Director, Tank Farms Engineering Director
- Team Lead, Verification and Confirmation Team
- Team Lead, Safety and Authorization Basis Team

DISCUSSION OF RESULTS

- 1. A formal process has been developed and implemented for the subject matter experts tasked with oversight of contractor Safety Management Programs (SMPs) that verifies they possess sufficient knowledge and experience in assigned areas. Training and qualification records are maintained for positions requiring formal qualification.**

DOE Manual 426.1-1A identifies specific requirements for Facility Representative and Safety System Oversight (SSO) qualifications, but only mentions SMPs. The ORP has decided that SMPs specifically credited in a Documented Safety Analysis (DSA) or Preliminary Safety Analysis (PSAR) will receive "SSO-like" oversight from a Subject Matter Expert (SME). These SMP SMEs, referred to as "SMPs", are required to complete a qualification process similar to the SSOs. Eight (8) Qualification Standards have been developed for SMPs, and all but one of these

(Radiological Protection Program) is currently approved. The Qualification Standards were reviewed and found to exceed the requirements typically established for a "93-3" qualification. The standards are clearly focused on nuclear safety oversight and require candidates to understand how their programs are credited in safety basis documents. (SMP.1-S-1)

Although the creation of the SMP Qualification Standards are considered to be a noteworthy strength it was recognized by the assessment team that no one has yet completed the qualification process. Consequently, there were no records to review regarding the quality of execution of the qualification process. In addition, several SMP designees were interviewed that were uncertain of their ability to set aside sufficient time to complete the standard for their position. It is also recognized by the assessment team that these individuals are all 93-3 qualified. ORP management will have to prioritize individual work assignments to ensure sufficient time is available for SMP designees to complete their required qualifications.

- 2. Site Office oversight activities of the contractors' SMPs are effectively performed and include regularly scheduled reviews of their assigned SMP's performance indicators, meetings with contractor counterparts, and evaluation of contractor reports.**

SMP owners were interviewed to determine the type(s) and scope of their oversight activities. All of the SMPs were able to effectively describe their routine oversight activities, including routine meetings with their contractor counterparts. In addition, the assessment team was provided with copies of performance metrics/indicators used by the SMPs to evaluate the health of their programs. SMPs perform walk-downs of work areas and/or facilities (depending upon their particular SMP) and provided documentation of these activities. In addition, the SMPs were able to provide evidence of their review of contractor submitted documents, including: authorization basis submittals, corrective action plans, and updates to programmatic documentation.

- 3. The Site Office oversight activities include assessments and surveillance of ongoing contractor activities to verify effective implementation of the contractor SMPs. DOE SMEs conduct periodic assessments of contractor program implementation.**

The Annual Assessment Schedule identifies all of the formal assessments to be performed by the ORP. The current schedule (FY06) includes assessments for: Radiation Safety Training, Radioactive Source Control, Emergency Preparedness, Quality Assurance Program, Fire Protection Program, Industrial Safety, Radcon Implementation, Environmental Management (this is not a complete list. A number of these assessments have already been completed and copies of the assessment reports were made available to the assessment team. The reports reviewed were completed in accordance with the requirements of the Integrated Assessment Program.

- 4. Site Office is staffed with an adequate number of technically competent, experienced, and fully qualified personnel performing oversight of the contractor's SMPs.**

Currently, ORP has twelve (12) individuals assigned as SMPs including one that is a Richland Operations Office employee performing a collateral duty with ORP (Criticality Safety). This number does not appear to be unreasonable considering that the ORP has approximately 100 employees. However, not all of the SMPs have back-ups assigned and this could present difficulties if there is attrition within the office. As mentioned earlier, although the SMPs are all 93-3 qualified, none of them have completed the SMP qualifications. ORP management is aware of this situation and remains intent on having the SMPs achieve full qualification.

- 5. SMP issues and deficiencies are identified, tracked and resolved in a manner to ensure satisfactory correction, prevent reoccurrence, and improve performance.**

SMPs interviewed during the course of this assessment were able to provide examples of their concerns and the tracking mechanisms in place to monitor their associated corrective actions. The Comprehensive Action Tracking System (CARS) is the primary method for monitoring corrective action status and closure. The CARS is specified in the Integrated Assessment Program as the method to track closure and a print of the CARS was obtained during the review. Outstanding actions were identifiable in the CARS, but the CARS was noted to be a global database for assigning, tracking, and monitoring all work assignments: not just corrective actions. The CARS works in this capacity, but retrieving specific data on corrective actions did not appear to be a simple task. The SMP deficiencies reviewed were adequately documented and tracked, and efforts by the SMPs should be sufficient to ensure improved performance.

CONCLUSIONS

The assessment of the SMPs determined that this objective has been satisfied. The SMPs at ORP are performing oversight consistent with expectations described in the criteria cited above and with internal ORP procedures. Routine oversight is being performed, documented, and identified issues are tracked to closure. In addition, SMPs are identifying and monitoring contractor performance against a variety of metrics suitable to their individual programs.

The ORP has generated Qualification Standards that exceed 93-3 qualifications, and will ensure the assigned Subject Matter Experts possess an increased understanding of nuclear safety and the importance of their programs to nuclear safety implementation. It was noted that none of the SMPs have completed their qualification, and several indicated that finding sufficient time to complete the qualification process presents difficulty. Despite this it appears that minimum staffing of SMPs is being maintained.

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Findings

None

Observations

None

Strengths

SMP.1-S.1: The SMP Qualification Standards created by the ORP provide increased rigor and a nuclear safety focus to the qualification of SMP Subject Matter Experts.

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| Reviewer  Ed Westbrook | Team Leader  8/1/06 Ed Westbrook |
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| FUNCTIONAL AREA: Feedback and Improvement | OBJECTIVE: F&I.1 DATE: June 19-23, 2006 |
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OBJECTIVE

F&I.1: An effective feedback and improvement process is functioning with routine performance indicators and records that provide evidence that effective systems and processes are in place. Feedback information on the adequacy and effectiveness of ISMS is gathered, opportunities for improving safe work performance are identified and implemented. Lessons are learned, shared, and acted upon.

CRITERIA

1. Procedures and/or mechanisms ensure continuous improvement through a lessons learned program. Lessons learned from local events as well as events at other sites are gathered, analyzed and acted upon to improve safety.
2. Procedures and/or mechanisms are established to enable performance feedback from all levels of the organization to help ensure that the safety management system is properly implemented. Performance indicators are used to monitor the effectiveness of work processes and procedures.
3. Operational awareness activities of contractor Feedback and Improvement processes are performed and documented. Weaknesses or deficiencies in processes are documented, communicated, and corrective actions are developed and tracked to closure.
4. A robust self-assessment program has been developed and implemented to identify individual and programmatic weaknesses, and those weaknesses are acted upon to drive improvement.

REVIEW APPROACH

REFERENCES

- DOE P 226.1, Department of Energy Oversight Policy
- DOE O 226.1, Implementation of Department of Energy Oversight Policy
- DOE Order 440.1A "Federal Employee Occupational Safety and Health Program."
- DOE Order 231.1A "Occurrence Reporting and Processing of Operations Information."
- DOE Order 414.1C "Quality Assurance."
- DOE Order 442.1A "DOE Employee Concerns Program"
- 10 CFR 830, Nuclear Safety Management

RECORDS REVIEWED

- ORP M 450.4, Rev 2, *Integrated Safety Management System Description*, 9/13/05
- ORP M 220.1, Rev 4, *Integrated Assessment Program*, 1/3/06
- ORP M 411.1-1, Rev 6, *Safety Management Functions, Responsibilities, and Authorities Manual for the U.S. Department of Energy Office of River Protection*, 6/6/06
- ORP 414.1, Rev 2, *ORP Quality Assurance Program Description*, 10/27/05
- Consolidated Action Reporting System report for open management assessment actions, 6/20/06
- ORP Assessment Analysis for FY2006 First Quarter, 1/23/06
- ORP Assessment Analysis for FY2006 Second Quarter, 4/17/06
- ORP M 210.1, Rev. 0, *ORP Operating Experience and Lessons Learned Program*, 6/9/06
- Recent ORP Lessons Learned information and distribution (9)
- 06-ESQ-011, Final Feedback and Improvement (F&I) Site Action Plan, 2/8/06
- ORP Line Management Oversight Assessment Report and associated ORP CAR, 11/10/05 and 6/20/06
- ORP Issue PER Status Report, 6/12/06
- 06-ESQ-040, *ORP FEOSH Management Assessment*, 4/26/06
- 06-ESQ-066, *ORP Fire Protection Program Self-Assessment*, 6/13/06
- Draft ORP M 432.1, *WTP Project Construction Oversight Manual*

INTERVIEWS CONDUCTED

- ESQ Director
- Verification and Confirmation Team Lead
- Federal Project Directors (2)
- ORP Lessons Learned Point of Contact
- Federal Sub-Project Directors (2)
- Facility Representatives (5)
- TOD Director
- OCT Team Lead

OBSERVATIONS

- WTP Morning Conference Call, 6/20/06

DISCUSSION OF RESULTS

- 1. Procedures and/or mechanisms ensure continuous improvement through a lessons learned program. Lessons learned from local events as well as events at other sites are gathered, analyzed and acted upon to improve safety.**

ORP has recently issued a new process for identifying, documenting and distributing lessons learned (LL) from a variety of sources. Mechanisms have been established to allow ORP staff to document recommended lessons learned for LL Point of Contact (LLPOC) consideration. LL Coordinators have been established in the line organization to review contractor LL databases and recommend distribution. The LLPOC routinely reviews a variety of sources (e.g. Operating Experience (OE), Site LL database) and coordinates with contractor LL staff to ensure awareness of applicable LL between the complex and prime contractors. The new process includes mechanisms for periodic management assessment of ORP LL program implementation and was tailored to support DOE O 210.x implementation. Finally, nine recent examples (i.e. locally generated, contractor generated, OE, Accident Investigations, IEEE, NRC spill, vendor notices) of LL distributed to ORP staff and contractors were provided to demonstrate program implementation and action.

- 2. Procedures and/or mechanisms are established to enable performance feedback from all levels of the organization to help ensure that the safety management system is properly implemented. Performance indicators are used to monitor the effectiveness of work processes and procedures.**

The ORP ISMS description describes a variety of mechanisms used to capture feedback and drive continuous improvement within ORP and its prime contractors. Processes have been established (e.g. LL, Management Assessment, Integrated Assessment, Performance Indicators, Consolidated Action Reporting System (CARS)) to foster continuous improvement. Interviews with ORP staff indicate a generally high level of knowledge of the feedback and improvement processes and how they are applied. Furthermore, ORP staff generally understands roles and responsibilities for feedback and improvement as defined in the ISMSD, FRAM, and QA Program. Broad Performance Objectives, Measures and Commitments (POMCs), quarterly evaluations of contractor performance across ORP, and the process for Integrated Assessment planning provide good examples of processes that are used to monitor the effectiveness of work processes. Recent ORP oversight to support DNFSB 2004-1 and a November 2005 EM assessment further reinforce that ORP has functioning Feedback and Improvement processes. The recent ORP leadership to implement Human Performance Improvement is considered to be a strength that should result in further continuous improvement in ORP practices and processes (F&I.1-S-1).

- 3. Operational awareness activities of contractor Feedback and Improvement processes are performed and documented. Weaknesses or deficiencies in**

processes are documented, communicated, and corrective actions are developed and tracked to closure.

ORP performs routine operational awareness and formal oversight of contractor Feedback and Improvement processes through a variety of vehicles (assessments, FR focus areas, Inspection Notes, ORP CARS actions, PERS). ORP staff interviews indicate awareness of contractor processes and routine monitoring of contractor program implementation. Weaknesses or deficiencies are documented in ORP oversight and addressed through both formal and informal means. Tank Farms FRs are able to monitor the progress of issues throughout the process using the contractor PERs system. This system also allows for automatic notification of completed actions, electronic copies of objective evidence, and electronic closure of ORP verification actions. For the Waste Treatment FRs, routine meetings with the contractor and manual tracking of issues are used to monitor the progress of FR issues within the contractor processes. The FRs and contractor are working to allow for FR read access of contractor corrective action management electronic databases, however this has not been accomplished to date and inhibits efficient FR monitoring of contractor corrective action progress and general oversight of feedback and improvement data.

- 4. A robust self-assessment program has been developed and implemented to identify individual and programmatic weaknesses, and those weaknesses are acted upon to drive improvement.**

In response to an EM assessment of ORP oversight, ORP has strengthened self-assessment processes and implementation. Multiple management assessments have been completed in FY06 and additional topical areas have been scheduled for the balance of the year (F&I.1-S-2). Senior management indicated a commitment to critical self-assessment, and interviews of staff indicate most are aware of the increased commitment to self-assessment. The ORP Integrated Assessment Plan procedure contains the minimum requirements for ORP management assessment. Review of ORP reports and CARs indicate that the minimum requirements are being met with a number of quality management assessments completed in FY06. As currently implemented, the ORP Management Assessment program contains no requirements for the frequency, volume, and functional areas that require ORP management assessment, so continued maturation of the process will require ORP management attention to ensure continued scheduling and performance of management targeted assessments to drive ORP continuous self-improvement.

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CONCLUSION

The Feedback and Improvement portion of this assessment looked at the ORP processes for Lessons Learned, Management Assessment, and a sampling of oversight of contractor Feedback and Improvement processes. The objective of this CRAD was met with generally sound ORP feedback and improvement processes. Two strengths were noted for the ORP management commitment to improving feedback and improvement processes and leadership in implementing Human Performance Improvement principles.

Findings

None

Observations

None

Strengths

F&I.1-S-1: The ORP commitment to Human Performance Improvement leadership is noteworthy.

F&I.1-S-2: There is a strong management commitment to the Management Assessment and Lessons Learned programs.

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| Reviewer <u><i>Mat Irwin</i></u> 8/4/06 Mat Irwin | Team Leader <u><i>Ed Westbrook</i></u> 8/4/06 Ed Westbrook |
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| FUNCTIONAL AREA: Issues Management | OBJECTIVE: IM.1 DATE: June 19-23, 2006 |
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OBJECTIVE

IM.1: The Contractor has developed and implemented a formal process to evaluate and prioritize findings, deficiencies, opportunities for improvement, and other performance feedback. The process(es) ensure that corrective actions that are developed, tracked to closure, and verified are sufficient to prevent recurrence.

CRITERIA

1. Performance deficiencies, regardless of their source, are captured in a system or systems that provides for effective analysis, resolution, and tracking. Issues management system elements include structured processes for determination of risk, significance, and priority of deficiencies; evaluation of scope and extent of condition; identification of root causes; identification of corrective actions and to prevent recurrence; identification of individuals/organizations responsible for corrective action implementation; establishment of milestones based on significance and risk for completion of corrective actions; tracking progress; verification of corrective action completion; and validation of corrective action implementation and effectiveness.
2. Processes for communicating issues up the management chain to senior management have been established and based on a graded approach that considers hazards and risks. Line management receives periodic information on the status of identified deficiencies and corrective actions and holds organizations and individuals accountable for timely and effective completion of actions.
3. Results of various feedback systems are integrated and collectively analyzed to identify repeat occurrences, generic issues, trends, and vulnerabilities at a lower level before significant problems result.
4. Individuals or teams responsible for corrective action development are trained in analysis techniques to evaluate significant problems using a structured methodology to identify root and contributing causes and corrective actions to prevent recurrence.

REVIEW APPROACH

References:

- DOE Order 414.1C, Quality Assurance
- DOE Policy 226.1, Department of Energy Oversight Policy
- DOE Order 226.1, Implementation of Department of Energy Oversight Policy
- DOE Policy 450.4, Safety Management System Policy

- DOE Guide 450.4-1B Integrated Safety Management System Guide

RECORDS REVIEWED

- 06-WTP-038, Inspection Report A-06-AMWTP-RPP-WTP-001 – On-location inspection report for the period January 2, 2006, through March 31, 2006, 4/17/06
- CCN:138411, Response to Inspection Report A-06-AMWTP-RPP-WTP-001 On-location inspection report for the period January 2, 2006, through March 31, 2006, 6/9/06
- 05-ESQ-078, Assessment Report A-05-ESQ-RPPWTP-009 – Bechtel National, Inc. Quality Issues, for the period September 26, 2006 through October 12, 2005, 12/8/05
- CH2MHill Performance Analysis Report for Quarter Ending March 31, 2006
- 24590-WTP-GPP-QA-201, Rev 16, Corrective Action, 1/30/06
- 24590-WTP-GPP-MGT-017, Rev 0, Lessons Learned, 6/8/05
- 24590-WTP-GPP-CON-1202, Rev 2, Construction Lessons Learned, 2/24/05
- CCN: 129921, Assessment Report A-05-ES1-RPPWTP-007, Assessment of OSHA Injury/Illness Recordkeeping Requested Response, 4/11/06
- 06-ESQ-056, Assessment Report A-05-ESQ-RPPWTP-006 – Assessment of the Bechtel National Inc. (BNI) Corrective Action Management Program, 11/30/05
- 06-TED-013, Assessment Report A-06-AMTF-TANKFARM-002, Tank Farm Contractor Criticality Safety Program, 3/24/06
- 06-ESQ-038, Assessment Report A-06-TANKFARM-003 – Radioactive Source Control Program, March 20 through 28, 2006, 5/11/06
- CCN: 138826, Hanford Tank Waste Treatment and Immobilization Plant Project “WTP Quality Assurance Trend Report – First Quarter 2006”, 3/22/06
- 05-WTP-227, Inspection Report A-05-AMWTP-RPPWTP-003-On Location Inspection report for the Period July 1, 2005, through September 30, 2005, 10/19/05
- CCN: 132488, Response to Inspection Report A-05-AMWTP-RPPWTP-003-On Location Inspection report for the Period July 1, 2005, through September 30, 2005, 12/20/05
- 06-ESQ-033, Assessment Report A-06-ESQ-RPPWTP-001 Fire Protection Program Implementation, February 6 through 17, 2006, 4/17/06
- BNI Corrective Action Report number 24590-WTP-CAR-QA-06-066, Rev 0, 6/12/06
- 24590-WTP-GPP-SIND-001, Rev 7, Reporting Occurrences in Accordance with DOE M 231.1-2, 1/20/06
- 24590-WTP-GPP-MGT-015, Rev 2, Root Cause Analysis, 2/28/06
- 24590-WTP-GPP-MGT-004, Rev. 0, Root Cause Analysis Guide, 5/28/06
- 24590-WTP-GPP-MGT-002, Rev 6, Management Assessment, 2/7/06
- Sample BNI Recommendations Tracking System Report, 6/20/06
- Root Cause Analysis training records (2)
- 24590-WTP-RCA-ENG-0002, Rev 0, Root Causes Analysis – Deficiencies Found with Structural Steel Design for the LAB Building and associated Corrective Action Report, 10/18/06
- 24590-WTP-RCA-MGT-002, Rev 2, Root Cause Analysis for Quality Level Implementation and associated Corrective Action Report, 9/8/05

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- RPP-MP-003, Rev 5, CH2M Hill ISMS Description Feedback and Improvement Sections, 12/22/05
- ATL-MP-1009, Rev 0, ATL ISMS Description Feedback and Improvement Sections, 2/2/306
- CCN: 138410, Response to Assessment Report A-06-ESQ-RPPWTP-001 Fire Protection Program Implementation, 5/17/06
- BNI ORP (ESQ, FR, Design) issue tracking status spreadsheet, 6/20/06
- 06-ESQ-034, Assessment Report – A-06-ESQ-RPPWTP-002, Industrial Health and Safety Program, 5/15/06
- 05-WTP-216, US DOE ORP Corrective Action Plan for Gravity Related Events at the Hanford Site, 10/27/05
- 05-WTP-127, Request for CAP on Gravity Events, 7/12/05
- CCN: 124229, Request for Extension of Due Date to Submit CAP for Gravity Events, 7/19/05
- CCN: 124098, Request for CAP on Gravity Events, 8/19/05
- 05-WTP-191, Rejection of BNI CAP on Gravity Events, 9/7/05
- CCN: 124104, Response to Rejection of BNI CAP on Gravity Events, 9/16/06
- 05-WTP-223, Acceptance of BNI CAP on Gravity Events, 10/7/06
- CAR and email traffic for ORP tracking and closure of 05-WTP-223 commitments, 6/23/06
- 17 operational awareness reports (4 positive) documenting oversight of work involving falling object operations and/or barricading
- PER-2005-3961, C-200 Hazards Analysis issues from TF ISMS, status as of 6/22/06
- PER-2005-3965, Inadequate Compliance with Sharp Object JHA Controls during insulation removal of CLO-WO-05-001346, status as of 6/22/06
- PER Ad-hoc reports for DOE-ORP originated items, status as of 6/26/06

INTERVIEWS CONDUCTED

- ESQ Director
- Verification and Confirmation Team Lead
- Federal Project Directors (2)
- ORP Lessons Learned Point of Contact
- Federal Sub-Project Directors (2)
- Facility Representatives (6)
- TOD Director
- OCT Team Lead
- CH2M Hill Corrective Action Management Program Manager
- BNI QA Manager
- BNI Senior QA Engineer

OBSERVATIONS

- None

DISCUSSION OF RESULTS

- 1. Performance deficiencies, regardless of their source, are captured in a system or systems that provides for effective analysis, resolution, and tracking. Issues management system elements include structured processes for determination of risk, significance, and priority of deficiencies; evaluation of scope and extent of condition; identification of root causes; identification of corrective actions and to prevent recurrence; identification of individuals/organizations responsible for corrective action implementation; establishment of milestones based on significance and risk for completion of corrective actions; tracking progress; verification of corrective action completion; and validation of corrective action implementation and effectiveness.**

Both ORP prime contractors' have established processes to support the identification, tracking, and evaluation of performance deficiencies. Review of procedures and interview of key contractor staff validate the processes contain all necessary attributes to support effective issues management. Evaluation of a small sampling of completed issues management packages indicate that the processes are followed and are supportive of continuous improvement. Interface to support ORP tracking and verification of corrective actions appear to be effective.

- 2. Processes for communicating issues up the management chain to senior management have been established and based on a graded approach that considers hazards and risks. Line management receives periodic information on the status of identified deficiencies and corrective actions and holds organizations and individuals accountable for timely and effective completion of actions.**

Both ORP prime contractors' demonstrate processes for communicating issues and their associated progress throughout the system to contractor and DOE line management. The Tank Farm (TF) contractor utilizes an automated computer system that allows for real-time tracking of issues throughout the process and further provides automated notification of ORP staff for closure verification including electronic copies of objective evidence to support closure verification actions. The closure process is electronically captured and is viewed by ORP staff as an exceptional tool (IM.1-S-1). The status of issues is kept within the database with processes in place to authorize extensions and hold individuals accountable for action completion.

The Bechtel National Inc. (BNI) process for communication uses a computerized database for internal communications and routine meetings with ORP to ensure issues

are graded and communicated appropriately. The BNI QA organization was particularly supportive to this assessment team in that they had prepared numerous reports and examples of issues management performance to support this review. BNI QA personnel also described an ongoing initiative to consolidate issue origination through the use of a single form and allowing ORP access to the BNI issues management database. Completion of these actions is expected to improve the efficiency of the communication process and confusion that may result from periodic verbal and written communications.

3. Results of various feedback systems are integrated and collectively analyzed to identify repeat occurrences, generic issues, trends, and vulnerabilities at a lower level before significant problems result.

Quarterly performance analysis by both ORP prime contractors were reviewed and found to meet minimum requirements to collectively review feedback data to identify recurring events and trends. Performance indicators have been established and lower level deficiencies are integrated within the analysis to support trend identification and completion of proactive actions to correct issues. Evaluation of the BNI response to the Gravity Investigation and subsequent ORP operational awareness data indicate a noncompliance with ORP compliance to capturing verification actions in ORP CARs (ISMS.2-F-2). In addition, the operational awareness data challenges whether the BNI falling object protection corrective actions were effective in preventing recurrence. Discussion with ORP FRs indicates the recent issues were related to poor performance by a specific BNI subcontractor, and that recently performance improvement has been witnessed. This is not a finding against BNI because the assessment team found no documented transmittal (formal or informal) of the ORP operational awareness data to them. However, based upon the significance of the BNI falling object past events and investigation results, it would be appropriate for ORP and BNI to perform a collective evaluation of both ORP and BNI operational awareness data, possibly in the form of the quarterly performance analysis, to ensure no adverse trends in falling object protection are not indicated by this precursor information (IM.1-O-1).

4. Individuals or teams responsible for corrective action development are trained in analysis techniques to evaluate significant problems using a structured methodology to identify root and contributing causes and corrective actions to prevent recurrence.

A sampling of ORP prime contractor training records indicates that individuals participating in causal analysis have received appropriate training to demonstrate competence commensurate with responsibility. Furthermore, a sampling of issue evaluation and resolution documentation indicates that the graded approach is applied per established processes and formal causal analysis is performed using a structured methodology.

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CONCLUSION

The objective of this CRAD has been met. Both ORP prime contractors have adequate processes to support identification, evaluation, resolution, and verification of issues. Mechanisms are in place to periodically evaluate feedback information for recurring events and performance trends. Personnel have received training to support causal analysis and processes appear to be adequately implemented.

Findings

None

Observations

IM.1-O-1: ORP/BNI should evaluate falling object operational awareness data generated by WTP Facility Representatives to determine if corrective actions have been effective for falling object protection

Strengths

IM.1-S-1: The Tank Farm contractor's use of a computerized system to allow ORP continuous monitoring of issues management processing and automated corrective action closure verification.

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| Reviewer <u><i>Mat Irwin</i> 8/4/06</u> Mat Irwin | Team Leader <u><i>Ed Westbrook</i> 8/4/06</u> Ed Westbrook |
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