
Energy Facility Contractors Group Integrated Safety Management Working Group

**Annual Report
Fiscal Year 2007**



November 15, 2006



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**Energy Facility Contractor Group (EFCOG)
Integrated Safety Management (ISM) Working Group
Annual Report to the Directors
Fiscal Year 2007**

I. Vision and Purpose

The Vision of the Integrated Safety Management (ISM) Working Group (WG) is to be recognized by both the Department of Energy (DOE) and EFCOG, as a driving force for complex-wide performance improvement throughout the full spectrum of Integrated Safety Management activities.

The purpose of the ISM Working Group remains to promote excellence in the development, implementation and validation of ISM programs and processes by sharing information and lessons learned, and by facilitating the application of ISM information, techniques, and best practices at DOE sites.

II. Membership

During the first half of FY 2007, the ISM Working Group was composed of six Subgroups focusing on specific ISM topical areas. These Subgroups included Environmental Management, Quality Assurance, Occupational Safety & Health, Feedback and Improvement, Radiation Protection and ISM Program Management. Task Groups in the areas of Chemical Management, Electrical Safety, Human Performance Improvement, Occurrence Reporting System, Occupational Medicine, Industrial Hygiene/Industrial Safety, Quality Engineering, Supply Chain Quality, QA Policy and Program Requirements and Training, Development and Communication were also very active.

At the EFCOG Strategic Planning meeting in March 2007, it was decided that the ISM Working Group should become two working groups due to the overall size and number of subgroups and task groups assigned to it. Therefore, the Environmental Management, Occupational Safety & Health and Radiation Protection subgroups along with the Chemical Management, Occupational Medicine, Industrial Hygiene / Industrial Safety and Electrical Safety task groups were joined together to form the Environmental Safety and Health Subgroup. This action was completed in July 2007. The ISM Working Group now includes the Quality Assurance, Feedback and Improvement and ISM Program Management subgroups, along with their associated task groups.

Membership on the Working Group and Subgroups includes representatives from the majority of DOE sites and approximately 40 EFCOG Member Companies. Participation at the semi-annual Working Group meetings averaged approximately 150 personnel.



To ensure the Working Group continued to include a focus on industry best practices and lessons learned, liaison membership has been established with the Institute of Nuclear Power Operations (INPO), the Defense Nuclear Safety Board (DNFSB), and the National Laboratories Improvement Council (NLIC). The Working Group has also established effective horizontal communications with the other key EFCOG Working Groups.

III. Status, Objectives, Goals and Achievements

Objectives and Goals

The primary objectives of the Working Group are to:

Promote, coordinate and facilitate the active exchange of successful programs, practices, procedures, lessons learned and other pertinent information of common interest to ISM.

Promote ISM awareness and understanding by sharing management and technical information.

Facilitate integration of existing ISM and quality-related processes and work practices.

Identify streamlined techniques and best practices that enable cost-effective and accelerated implementation of validated ISM processes and programs.

Facilitate coordinated contractor input to DOE on ISM-related issues.

Provide an efficient mechanism for interfacing between DOE and senior contractor executives and subject matter experts responsible for development, implementation and continuous improvement of ISM.

Working Group Achievements in 2007

Semi-Annual ISM Working Group meetings were held at the Atlanta Airport Marriott, Atlanta, GA from May 1-4, 2007 and at the DOE NNSA Nevada Site Office facilities in Las Vegas, NV from October 23-25, 2007. Key external customer and subject matter expert participation ensured the meetings were addressing current DOE and industry issues. Attendance at the semi-annual meetings averaged approximately 150 personnel.

Periodic conference calls were held to discuss priority ISM issues and share lessons learned.

Key EFCOG corporate objectives were supported to ensure that ISM was properly addressed as a critical focus area. Examples of this were:

Supporting the implementation of the new orders on oversight and operating experience review programs, DOE O 226.1 and DOE O 210.2 respectively.



Maintenance of an EFCOG “Best Practices” web site which provides a single reference point for all Contractors and the DOE.

Continuing liaisons with the Institute of nuclear Power Operations (INPO), the Defense Nuclear Facility Safety Board (DNFSB), and the National Laboratory Improvement Council (NLIC).

Subgroup Status and Achievements in FY 2007

A. Feedback and Improvement Subgroup

The Feedback and Improvement Subgroup (FI) met at both of the Working Group meetings. A new Vice-Chair for the subgroup, Patricia (Trish) Allen was selected. Activities or accomplishments during 2007 included addressing:

- DNFSB Recommendation 2004-1
 - DOE Corporate Operating Experience, DOE Order 210.2, Implementation Status
 - Role of DOE Office of Analytical Studies
 - Contractor Assurance System Elements and Implementation
 - Implementation of DOE Oversight Policy, DOE O 226.1
 - EFCOG Guide on Performance Analysis
 - Dealing With the Past, Protecting the Future Nuclear Decommissioning
 - Status of ISM System Implementation
 - Nuclear Facility Readiness
 - Readiness Review processes
 - QA, HPI, Causal Analysis, Electrical Safety Handbook, 851 Rule Development, Welding Issue Resolution EFCOG Alert
 - Office of Independent Oversight Updates
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- ISM Champions Workshop Support
 - Issued Contractor Guides on Performance Analysis and Extent of Condition Reviews
 - Supported the ISM Program Safety Culture Initiatives
 - Refocused the effort on EFCOG Best Practices Program

B. ORPS Task Group

The ORPS task group met at both of the Working Group meetings and supported presentations on a wide variety of topics to include:

- Contractor Performance Analysis Guide
- ORPS Guidance Document
- Update to the ORPS Training Class



- Quality of ORPS Reporting
- Definitions and Criteria Clarification
- Assessment-driven versus Event-driven Culture
- Work Planning & Control for DOE O 226.1 and 10 CFR 851 Metrics
- NTS System and 10 CFR 851 Reporting Thresholds
- Electrical Safety Task Group – Analysis Tool/Criteria
- DOE 231.1-2 Interpretation/Guidance
- Guidance on Near Misses
- Sharing for Performance Excellence
- HPI Basics and Concepts Around Accident Investigations

At the October meeting, in addition to the regular meeting discussions, an 8-hour HPI workshop was conducted for the Task Group participants with a special focus on causal analysis

C. ISM Program Management / Human Performance Improvement (HPI)

Activities and accomplishments for the ISM Program Management Subgroup and Human Performance Task Group included:

- After discussion on aspects and best practices of HPI implementation, the ISM Program Manager chair reorganized the HPI Task Group under a Project Plan approved by the EFCOG Chair and the DOE Project Sponsor. The Project Plan is designed to provide specific project deliverables to enable EFCOG members to more easily implement HPI.
- The HPI Task Group sponsored an HPI and Causal Analysis Workshop at LANL in March 2007. The workshop was hosted by John Tseng in the LANL Contract Assurance Office. The workshop solicited best practices from across the DOE complex relating HPI with causal analysis. Approximately 40 Contractor and DOE personnel attended the workshop. Additionally, workshop attendees received briefings on the advantages of STREAM analysis..
- The HPI Task Group sponsored HPI training for the EFCOG ORPS and QA Task Groups. The training, conducted by Gary Grant (CH2 Hanford/HPI Task Group Chair) was well received, and the ORPS Task Group requested additional training more specific to causal analysis at the next EFCOG ISM meeting. Approximately 45 people attended the training.
- The HPI Project Manager (John McDonald) conducted conference calls between the Atlanta and the Las Vegas EFCOG meetings to track ongoing project activity.
- During the Las Vegas EFCOG ISM meeting in October, the HPI Task Group met for two days to review deliverables required by the Project Plan. The Task Group split into three teams focusing on HPI



Implementation Strategy, HPI training, and HPI Potential Applications. The three teams produced products that will be posted on the EFCOG web site. The intent is to provide a good road map on HPI implementation to contractors that have not implemented HPI. CH2 Hanford led the discussions relying on their Lessons Learned from their DOE HPI Pilot experience. Both CH2 Hanford and the participating contractors agreed that the INPO model for HPI implementation could generally be used as a model for DOE implementation.

- The HPI Task Group sponsored and led training for the EFCOG ORPS Task Group in a full day of training focusing on understanding the links between HPI and Causal Analysis. 30 people, principally from the ORPS Task Group received the training. The training, conducted by Todd Conklin (LANL/ Past HPI Task Group co-Chair) and Bill Rigot (WSRC/ HPI Task Group co-Chair), was well received.
- Both Earl Carnes (DOE HSS) and George Mortensen (INPO) were active participants with the HPI Task Group.
- Best practices for HPI implementation were identified at the Las Vegas EFCOG ISM meeting including Implementation Plans, training for managers, workers, planners and engineers, procedure development checklists, and Safety Conscious Work Environment.

D. Quality Assurance

The QA Subgroup is comprised of four task groups. These task groups are the QA Policy and Requirements group; the Training, Development and Communications group; the Supply Chain Quality group; and the Quality Engineering group. Collectively the QA Subgroup was able to initiate, develop and complete a variety of activities itemized below. The Subgroup met two times during the course of the year, once the end of April in Atlanta, GA and a second time in October in Las Vegas, NV.

QA Policy and Requirements Task Group

This task group has worked on identifying those attributes of a QA program that are valid and add value. This effort included a matrix for each of the criteria identified in CFR 830.122 and DOE O 414.1. This product was completed this year and is currently in the EFCOG approval process. It also was added to the DOE guide for federal project directors through DOE O 413.3A, Project Management.

The other tasks that were initiated and will be completed in FY 2008 are included in Section IV below.



- Training, Development and Communications Task Group

Training sessions were held in each of the semi-annual EFCOG QA Subgroup meetings. The topics presented were Human Performance Indicators, Lessons Learned and observations from EM 60 Assist Visits, Issues Management and implementation, the Current and Future State of QA throughout the complex, and incorporating HPI, ISM, and QA.

We also discussed Training as a separate subgroup, and developed a list of hot topics that would span all the ISM groups and serve as a springboard to cross train other subgroups. These rolled up into four main areas, QA education/training program; training senior leadership on the value added of QA; training performance indicators for effectiveness; and establishing consistent best practices for delivering effective implementation of QA/training. Pending direction from the ISM leadership, we will continue to refine our training topics for our next session.

- Supply Chain Quality Task Group
- This task group has worked on the following:
 - Identified a lead auditor and audit team members to participate in conducting a joint audit of Air Techniques International (ATI) per DOE HQ's request. ATI is the DOE subcontractor who manages the Filter Test Facility in Maryland. The joint audit is scheduled to be completed by September 2008. An EFCOG procedure for conducting joint audits of common Suppliers is currently under development.
 - Updated the commodities listing of safety-class, safety-significant commodities that are commonly purchased by Contractors and potential suppliers of the commodities. A standard checklist for each of the commodities that can be used for evaluating the suppliers is under development; this will ensure evaluation criteria is adequate for most Contractors to be able to use the audit results.
 - The task team (Contractors) is continuing to pilot the use of the Integrated Supplier Information System (ISIS) for sharing supplier evaluation information on a limited basis for common suppliers. To date, 20 Contractors have been given access to the ISIS supplier evaluation information.
 - The status of the Integrated Contractor's Purchasing Team (ICPT) Basic Ordering Agreements (BOA) for waste containers and the Packaging Management Council's (PMC's) role in evaluating suppliers that have submitted proposals for the BOA was presented.



The PMC's supplier evaluation information of container and waste boxes supplier is being shared among the EFCOG Supply Chain Quality task team members and entered into ISIS.

- A poll was taken among the task team members present at the Spring meeting regarding participant's sites' process for assigning procurement quality levels – the results identified commonalities among the sites and also the need for providing guidance to ensure consistency across the DOE Complex. This information was used as a baseline for the EFCOG QA Consistency Task Team that is charged with developing an EFCOG Guidance Document for describing quality-level determination and quality control application.
- Quality Engineering (QE) Task Group

The QE Task Group has worked on three activities this year – development and submittal of the "Suspect / Counterfeit Item Guidance Document"; development of a draft paper discussing guidance for Hold / Witness Point Usage; and initiated development of a description document on "QA Engineer Roles and Responsibilities".

The following are recent assignments for the task group:

- Reviewing the Commercial Grade Dedication process for best practice
- Developing a Construction Quality Assurance best practice guide for nuclear work.



IV. Expected Achievements for 2008

Working Group Expected Achievements for 2008

Conduct two semi-annual working meetings in the spring and fall to coordinate and facilitate Subgroup interaction and involvement.

Continue to support initiatives in the following areas:

- ISM Reinvigoration (2004-1)
- --Operating Experience Program Implementation Support
- --Human Performance Guide Development
- --New Oversight Policy / Order Implementation (226.1)
- ISM Program / Safety Culture Initiatives
- Issue VPP/ISM Integration White Paper
- Support ISM related tasks and the EFCOG Critical Few in areas such as:
 - Working with DOE and member companies in the implementation of Line Oversight and Contractor Assurance Systems
 - Development of a recommended set of criteria to assess supplier evaluation and qualification processes
 - Supporting EFCOG productivity initiatives
 - Supporting the final development and implementation of the DOE ISM Manual
 - Supporting the DOE Human Performance Initiatives and,
 - Hosting Workshops in support of key DOE and Contractor areas of concern.

Subgroup Expected Achievements for 2008

A. Feedback and Improvement

- The ORPS TG will be working on updating the ORPS training program



- The F&I SG and the QA SG will work jointly on guidance to better integrate QA and ISM assessments.
- Work closely with the new EFCOG WG on Contractor Assurance in areas of potential overlap with Feedback and Improvement.
- Support DOE HQ Occurrence Reporting Program Manager through the Occurrence Reporting Task Group activities.
- Continue support of DOE in the implementation of DNFSB Recommendation 2004-1 and DOE O 210.2.
- Support the ISM Program Safety Culture Initiatives

B. ISM Program Managers Subgroup

- The HPI Task Group will be working in the next year principally to finalize and publish key deliverables on the EFCOG Web Site. This will include Implementation Plans, Training material, and other HPI applications.
- The HPI Task Groups will continue to provide training to key groups of stakeholders throughout the year. Working with DOE HSS HPI leadership (Earl Carnes), the committee will support training sessions at future DOE ISM Champions Conferences to include both HPI Fundamentals and HPI for Engineers.
- Members of the HPI Task Group will provide several presentations on HPI implementation at their respective sites for the DOE ISM Champions conference.
- Members of the HPI Task Group will continue development of HPI Tools for implementation.
- The ISM Program Manager committee has initiated a task to establish a joint DOE/Contractor team to review the subject of safety culture. This effort will attempt to define common safety culture attributes within the DOE complex similar to what INPO established for the commercial nuclear industry.

C. Quality Assurance

- Identify quality program matrices that compare and contrast existing program standards and posting on the EFCOG web site
- Prepare a white paper description of the DOE lessons learned program within HSS and prepare a power point presentation to provide as a training session at the next EFCOG meeting.
- Develop a proposed EFCOG position on the use of NQA-1 Part 2.
- Develop a procedure for conducting joint DOE/Contractor audits
- Conduct joint audit of the DOE contracted HEPA filter test facility



- Develop a guide to assist the Contractor community in managing the commercial grade dedication process
- Develop a guide to assist the Contractor community in identifying the process for establishing hold and witness points
- Develop a white paper defining the qualifications, roles and responsibilities of the Quality Engineer
- Develop a guide addressing the best practices for QA/QC during the construction phase of DOE projects
- Develop a guideline for use by DOE and the Contractor community addressing graded application of QA to non-safety software
- Develop a guideline for use by DOE and the Contractor community addressing the application of quality levels to the procurement and design processes
- Develop cross-training opportunities and effective deliveries of training on emerging QA/ISM program issues
- Establish consistent best practices for delivering effective implementation of QA/training
- Develop foundation for complex-wide trainer certification
- Gather operation experience world-wide (construction) and incorporate it for training
- Coalesce EFCOG trainings for lessons learned

V. Estimated Duration (Sunset Clause)

The role of the ISM Working Group is projected to continue expanding in both scope and membership during 2007 and beyond. The Working Group will become the institutional group that promotes and sponsors ISM across the DOE complex and among EFCOG Member Companies.

VI. Cost/Benefit Determination

During this year, the positive impact of the Working Group to the customer was continued through the various participating contractor operations. Sharing of ISM processes and practices, which were made available for implementation at the various DOE locations resulted in cost savings to all Member Companies. Activities are focused around two central meetings where all members of the Subgroups can assemble at one place at one time. Use of DOE facilities has minimized meeting costs. Focused workshops will also continue to be held at locations and in facilities convenient to the business and in a cost effective manner to the customer in accordance with EFCOG operational requirements.

Individual subgroup activities and sharing of Operating Experiences and Best Practices which filter back to each member company continues to be seen as a “cost savings.”



VII. Issues

Succession planning for the Working Group Chair/Vice Chair positions and other leadership roles within the Subgroups will need to be managed such that the relationships with our DOE sponsors / customers, as well as Critical Few items being worked under the ISM WG, do not suffer from any 2008 leadership transitions.

VIII. Lessons Learned / Operating Experience

Continued coordination of Subgroup meetings at the same location and concurrent with the Working Group meetings is better for member company representatives who participate on more than one task team or subgroup. In the future, more attention will be placed on scheduling workgroup and subgroup meetings that better accommodate fewer member company representatives needing to attend meetings at multiple locations if possible. The only on-going limitation is related to available meeting space at central DOE facilities. Additional locations are currently being evaluated by the Working Group's leadership.

IX. Recommendations

The ISM Working Group and Subgroups as currently organized should continue during FY 2008.

All information relative to the operation and on-going activities of the ISM Working Group are accessible through the EFCOG Website at the following address:

www.efcog.org