EFCOG’S MISSION
Promote excellence in all aspects of the operation, management, and integration of DOE facilities in a safe, environmentally sound, efficient and cost-effective manner.

VALUE PROPOSITION FOR EFCOG CUSTOMERS
EFCOG is committed to the achievement of DOE’s goals through performance excellence by partnering with DOE and its stakeholders in a collaborative and trusting environment. We provide an integrated, forward-looking contractor view on topics of common interest. We facilitate multiple forums for open communication, provide constructive feedback, and propose solutions that result in continuous improvement.

VALUE PROPOSITION FOR EFCOG MEMBERS
EFCOG offers members a leveraged opportunity for involvement with DOE leadership through a relationship of mutual trust. We provide a forum for sharing lessons learned, solving cross-cutting problems, and creating best practices. Our goal is to enhance mission accomplishment through continuous improvement of performance and productivity.

Cover photo:
Thomas P. D’Agostino, Under Secretary of Energy for Nuclear Security, and Administrator, National Nuclear Security Administration, delivers the opening plenary speech at the 2011 DOE Integrated Safety Management Champions Workshop held September 2011 in Kennewick, Washington

This annual report will be posted on the EFCOG website. For additional hard copies of the report, please contact the EFCOG Administrator at (703)-836-0396.
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The fiscal year (FY) ending September 30, 2011 was one of outstanding accomplishment for the Energy Facility Contractors Group (EFCOG), thanks to strong support from the Department of Energy (DOE) and our member companies. EFCOG continued to focus on both broad-based support to key DOE policy initiatives and on providing support to individual programs in key areas. In 2011, EFCOG addressed mission critical issues in the DOE complex in areas related to safety, security, waste management, project management, infrastructure management, contractor performance assurance, energy efficiency, quality assurance, decontamination and decommissioning (D&D), engineering, and human capital.

Our membership increased to 102 companies by the end of FY 2011, and to 108 as of early calendar year 2012, providing an extensive resource base to address issues and share lessons learned across the DOE complex. We welcome the following new companies who joined EFCOG since the beginning of FY 2011: AECOM, Alliant Corporation, American DND, Inc., Associated Container Sales, ATC Nuclear, Black & Veatch Special Projects Corporation, Breckenridge Institute, Colleague Consulting LLC, Container Products Corporation, Curtiss Wright Flow Control Nuclear, Dekker, Ltd., Federal Engineers and Constructors, Firewater Associates, LLC, GEL Laboratories, Greenberry Fabrication, McCarthy Building Companies, New World Environmental, Inc., Omega Technical Services, Potomac Communications Group, Project Time & Cost, Quail Nuclear Specialty Services, Sapere Consulting, Inc., Strata-G, LLC, Sullivan International Group, Inc., Tecolote Research, Waste Control Specialists, and Wastren-EnergX Mission Support, LLC. We look forward to their positive contributions and participation in the years ahead.

As stated in its charter, EFCOG’s objectives are to promote, coordinate, and facilitate the active exchange of successful programs, practices, procedures, lessons learned, and other pertinent information of common interest which have been effectively utilized by DOE contractors in order to enhance operational excellence and cost effectiveness. EFCOG’s primary goal continues to be to foster safe and cost-effective work accomplishment throughout the DOE complex. EFCOG continually benchmarks operating performance in related industries (e.g., the commercial nuclear and chemical industries) and maintains a close working relationship with other groups such as the Institute of Nuclear Power Operations, the Project Management Institute, and the Nuclear Energy Institute. The positive impact of EFCOG contributions can be magnified by sharing experiences and information through our broad membership of DOE contractors.

2011 ACCOMPLISHMENTS

The majority of EFCOG’s activity is conducted by its Working Groups. The 13 Working Groups chartered during 2011 are comprised of representatives from EFCOG member companies working in cooperation with DOE counterparts to address critical issues throughout the complex. Background information, activities, FY 2011 accomplishments, and FY 2012 plans for the Working Groups are described in this report. The 13 current Working Groups in FY 2011 are shown in Table 1. Demonstrating the level of EFCOG activity, more than 1,500 subject matter experts participated in a range of activities through the various EFCOG groups (i.e., Task Teams and Groups, Subgroups, Working Groups, Steering Committees, Board of Directors, etc.) throughout 2011.
A comprehensive listing of activities, accomplishments, and future plans for each Working Group is contained in the "Working Group Reports" section of this document. Some of the major accomplishments of the Working Groups during FY 2011 included:

- Served as a catalyst for the growing attention within DOE on safety culture, with a focus on safety culture training, interfaced with DOE in the development of its Implementation Plan in response to Defense Nuclear Facilities Safety Board (DNFSB) recommendation 2011-1, “Safety Culture at the Waste Treatment and Immobilization Plant,” and updating the EFCOG website and guidance documents based on lessons learned and DNFSB 2011-1 activities.
- Continued supporting the DOE Corrective Action Plan developed to address remaining two systemic project management deficiencies (identified in the 2008 Root Cause Analysis study) that have resulted in DOE remaining on the Government Accountability Office “High Risk” agency list. EFCOG continues to work closely with DOE’s Office of Engineering and Construction Management and program offices to provide input on the corrective measures from the contractor perspective and support the implementation plan.
- Coordinated the development of a contractor training course for effectively managing Federal Acquisition Regulations Part 15 contract changes to parallel the training DOE is conducting for its employees in the Environmental Management program.
- Posting of 24 new best practices on the EFCOG website in the areas of D&D, energy and infrastructure, enforcement coordination, human capital, environment/safety/health, engineering practices, integrated safety management, safeguards and security, and waste management.
- Continued to support the efforts of the update of DOE Order 435.1, “Radioactive Waste Management,” with the DOE Office of Environmental Management, serving on specific Order
requirement rewrite teams and preparing drafts for acceptance by DOE; developed a position,
draft requirement, and guidance for consolidation of radioactive waste (leading to worker risk
reduction and reduced disposal costs) and worked with DOE to include this position and
requirement in the update of DOE Order 435.1.

- Supported and contributed to the successful 2011 DOE Integrated Safety Management
  Champions Workshop in Kennewick, Washington, and the Achieving Excellence in Facilities
  Management and Sustainability Workshop in Albuquerque, New Mexico.

- Continuing to provide a forum through the EFCOG American Recovery and Reinvestment Act
  of 2009 (ARRA) Project Team for contractors to discuss implementation of ARRA, including
  contract matters, waste disposition, safety practices and worker training, and accelerated
demolition techniques on excess facilities.

- Continued to work with the DOE National Training Center to form a partnership for developing
  commercial grade dedication, configuration management, cognizant system engineer, and
general engineering standards training courses.

- Supported development and implementation of an expert-based unreviewed safety question
  (USQ) process across the DOE complex, based on the successful pilot study at the Y-12
  National Security Complex. Feedback and lessons learned were applied to the Y-12 process,
  and data thus far for the second year indicate improved utilization of expert-based USQ
determinations. Two other sites implemented the expert-based USQ determination process
based on the EFCOG Y-12 pilot study.

- Contributed resources for contractor assurance system peer reviews and material control &
  and accountability independent assessments at several DOE and NNSA sites.

- Completed support of the development and aggressive implementation of revision B to DOE
  Order 413.3, “Program and Project Management for the Acquisition of Capital Assets,”
  continued to provide implementation support for earned value management systems (EVMS)
  and the development of the DOE 413.3B EVMS Guide, and continued support in the conduct
  of DOE peer reviews at critical projects across the DOE complex.

- Continued to broaden a partnership with the California Polytechnic University at San Luis
  Obispo fire protection engineering program to establish a career pipeline/mentoring
  relationship with the DOE and contractor companies.

- Established the Behavior Based Safety/Human Performance Improvement Project, whose
  scope is to maximize value of behavior-based safety (BBS) and human performance by
effectively expanding the BBS observation to include a determination regarding human
  performance improvement causal factors.

- Supported DOE’s revision of key guidance documents such as: Guide 421.1-2, “Implementation
  Guide for Use in Developing Documented Safety Analyses to Meet Subpart B
  of 10CFR830”; DOE-STD-3009, “Nonreactor Nuclear Facility Documented Safety Analyses”;
  DOE G 433.1, “Nuclear Facilities Maintenance Management Guide”; and, the implementation
  guidance of Low Specific Activity and Surface Contaminated Objects Department of
  Transportation requirements for packaging of radioactive waste for transportation.

- Collaborated with DOE Environmental Management and Florida International University to
develop the D&D Knowledge Management Information Tool, a web-based knowledge platform
that provides single-point access into the “collective knowledge base” of the D&D community,
within and outside of DOE.

- Supported DOE’s Office of Environmental Management in reviewing issues/problems with
  processing requests for equitable adjustments and the relationship to contract modifications
  and baseline changes.

- Completed efforts to identify and document root-cause analysis improvements for Incidents of
  Security Concern and the evaluation of associated corrective actions.
- Continued to support the DOE Office of Health, Safety, and Security in development of the monthly DOE Electrical Safety Report and in the directives reform initiative for safety and health.
- Held the annual Safety Basis Workshop to discuss and disseminate information and training on safety-basis related activities, applications, and documentation.
- Continued to work with NNSA and the Office of Environmental Management on the Work Planning & Control Improvement Initiative Project Plan, as well as on the Joint Supplier Evaluation Program to improve worker and facility safety and quality.
- Developed and posted a white paper on leading indicators, which provides general guidance in using leading indicators and describes an approach for developing leading indicators that is broadly applicable across sites and helps managers to manage their operations.

**FUTURE VISION**

In 2012, EFCOG will continue to work in partnership with DOE, focusing on mission critical items in all program areas and striving to improve our performance in the areas of safety, project management, security, enforcement coordination, engineering, energy usage, acquisition management, human capital, performance assurance, quality assurance, waste management, and infrastructure management. EFCOG’s partnership with DOE helps to assure that issues are identified and prioritized for action. For example, the EFCOG Board of Directors has begun a dialogue with the Associate Deputy Secretary and the Special Assistant to the Secretary for Operations to ensure alignment with DOE priorities and new management initiatives. Also, at the start of FY 2010, EFCOG developed an ARRA Project Team jointly with DOE’s Office of Environmental Management that allowed a focused effort through FY2011 to aid ARRA project execution and also developed an “ARRA Hot News” link which contains ARRA-related documents and presentations and additional links to DOE and other federal web sites. EFCOG encourages recommendations from DOE and our members on areas where EFCOG might add value. EFCOG has established and will continue close collaboration with DOE’s Office of Engineering and Construction Management in the months ahead as that office continues to take the lead in completing the DOE multi-pronged efforts to address contract and project management weaknesses. For example, recently EFCOG conducted a survey commissioned by DOE in support of the Contract and Project Management Improvement initiative. We were asked to provide EFCOG member feedback on the effectiveness of performance evaluation and measurement plans, award fee plans and the supporting development and evaluation processes. Responses to the EFCOG survey include recommendations, best practices, and opportunities for improvement in the processes DOE uses to develop performance plans, the content of those plans, and methods used to monitor performance and provide performance feedback.

Close dialogue with oversight/regulatory organizations, including the DNFSB and DOE’s Office of Health, Safety, and Security, will be maintained to assure that our members are aware of emerging safety and regulatory issues. In addition, EFCOG will continue to exercise our collaborative relationship with other industry groups, such as with the Project Management Institute and the Association for Advancement of Cost Engineering, for new opportunities for information exchange, lessons learned, and training.

Finally, we will continue to focus on how EFCOG might be made more valuable to DOE and our member companies. To help ensure that EFCOG is providing value to its member companies and to DOE, the EFCOG Board of Directors established a set of performance metrics in early FY 2011 for each of the Working Groups. With “a determination of value added” being the primary thrust behind these metrics, the metrics are comprised of four measures relying on participant feedback from Working
Group meetings and activities (utilizing the Survey Monkey tool) and three additional measures tied to the number of best practices posted to the EFCOG website, of white papers to DOE, and of review/comment sets to DOE. These metrics are reported in each Working Groups’ Effectiveness Evaluation section of this annual report. The overwhelming majority of responses regarding Working Group meetings and activities indicate that the Working Groups are tackling relevant issues, are creating solutions for challenges being faced, are improving practices, and are adding value for their project or company. EFCOG’s goal in the months and years ahead is to continually strive for improvement in activities to deliver even more value for its member companies and for DOE.

CONCLUDING REMARKS

The year ahead is certain to continue bringing changes and new challenges throughout this Administration, Congress, and the DOE complex. As the DOE culture on safety and regulatory oversight, project execution, contracting, and management evolves, EFCOG must evolve as well to best serve DOE and the contractor community. You have my commitment that EFCOG will continue to remain strongly aligned with DOE to assure maximum value to DOE and to meet any and all new challenges. We remain steadfast in our focus on continuously improving our performance.

I encourage all EFCOG members and DOE counterparts to actively participate in EFCOG initiatives. EFCOG’s ability to improve performance within the DOE complex is directly related to the active and positive participation of our members and DOE counterparts.

This past year, EFCOG celebrated its 20th year of supporting DOE. EFCOG’s Board of Directors and membership look forward to working with you throughout this coming year to continue the achievement of operational excellence across the DOE complex.

Sincerely,

Joseph R. Yanek
Chair, Energy Facility Contractors Group
INTRODUCTION AND OPERATIONS

Over the past 20 years, Department of Energy (DOE) contractors have worked together through EFCOG to disseminate common solutions to problems (along with lessons learned and best practices), improving operations throughout the DOE complex. The benefits derived from this approach include: improvements in safety and security; lower costs by sharing data and other resources; direct cost savings or cost avoidance by sharing successful processes, procedures, and technical information; and effective execution of programs and project results when common problems are addressed jointly. As its operations have matured, EFCOG continues to seek opportunities to work with DOE to address critical issues as they evolve.

Executive direction for EFCOG comes from an 18-person Board of Directors elected from the Executive Council. The Executive Council is comprised of an appointed representative from each of the member companies. The work of EFCOG is most frequently carried out by subject matter experts in Working Groups formed and chartered by the Board with specific objectives and deliverables. Each Working Group has an EFCOG Board Sponsoring Director and one or more DOE counterpart Sponsors.

Working Groups may create Subgroups or Task Groups/Teams to concentrate on a specific aspect of the Working Group’s overall purpose. Subgroups have a charter and operate for an indefinite period of time to cover a major subject area within the purview of the sponsoring Working Group. Task Groups/Teams are usually formed within a Working Group to address a single issue in a defined timeframe with clearly prescribed deliverables. Each Working Group provides an annual report to the Board of Directors, which is then incorporated as part of this report. EFCOG and its Working Groups do not engage in lobbying or take public positions regarding DOE issues, regulations, Orders, etc.

In 2011, EFCOG achieved tangible results in the areas of acquisition management, contractor assurance, decontamination and decommissioning (D&D)/facility engineering, energy efficiency and infrastructure management, regulatory enforcement coordination, engineering practices, environment/safety/health, human capital, integrated safety management/quality assurance, project management, safety analysis, safeguards and security, and waste management. There was significantly increased participation in the development of EFCOG best practices due to increased focus by the Board of Directors. Since 2002, the number of best practices posted per year averaged between eight and nine. In FY 2010, that number doubled to 17, and in FY 2011 tripled to 24 with contributions from about three-fourths of the Working Groups. During FY 2012, the 13 Working Groups have committed to prepare as many as 34 additional best practices.

At the start of FY 2010, EFCOG established a Project Team focused on the DOE’s American Recovery and Reinvestment Act (ARRA) activities to ensure contractor operational excellence, primarily in support of DOE’s Environmental Management program. During 2010 and 2011, this joint DOE-EFCOG ARRA Project Team facilitated communication in the area of safety practices and worker training associated with the execution of DOE’s ARRA operations. Several informative workshops were conducted to highlight lessons learned. In addition to these forums, the Team participated in the series of EM-sponsored information exchanges. The Environmental Management program completed the majority of its ARRA projects by the end of FY 2011 and is working to transition from ARRA staffing levels as projects are successfully completed. In support of DOE, EFCOG created an ARRA Workforce Transition webpage. This webpage provides an additional employment tool for individuals that may be impacted through workforce transition actions across the complex. The EFCOG website is populated with links to EFCOG member company employment web pages as well as DOE workforce transition web pages.
EFCOG key activities, or work products, and achievements for 2011 by each of the Working Groups included the following:

**ACQUISITION MANAGEMENT**
- Provided a forum for contract and subcontract managers to share and exchange best practices in their respective areas.
- Supported DOE’s Office of Environmental Management in reviewing issues/problems with processing requests for equitable adjustments and the relationship to contract modifications and baseline changes.
- Coordinated the development of a contractor training course for effectively managing Federal Acquisition Regulation (FAR) Part 15 contract changes, to parallel the training DOE is conducting for federal employees in the Environmental Management program.
- Conducted active discussion of strategies and measurements regarding the success of strategic sourcing at National Nuclear Security Administration (NNSA) sites and possible implementation in other DOE programs.

**CONTRACTOR ASSURANCE**
- Developed and posted a white paper on leading indicators, which provides general guidance in using leading indicators and describes an approach for developing leading indicators that is broadly applicable across sites, helping managers to manage their operations.
- Continued site-to-site sharing of information on contractor assurance system implementation based on numerous site benchmarking visits and independent assessments across DOE.
- Developed, at DOE’s request, contractor assurance training material that can be used during semi-annual training opportunities to inform DOE senior management about contractor assurance.
- Contributed to the contractor assurance system peer reviews and affirmations at several DOE and NNSA sites.
- Supported the NNSA-directed parent organization functional management review of the Los Alamos National Laboratory contractor assurance system.

**D&D AND FACILITY ENGINEERING**
- Collaborated with DOE Office of Environmental Management and Florida International University to develop the D&D Knowledge Management Information Tool, a web-based knowledge platform, which provides a single-point access into the “collective knowledge base” of the D&D community, within and outside of DOE.
- Prepared and posted on the EFCOG website two best practices addressing demolition challenges and initiated work on four additional best practices to be completed in FY 2012.
- Continued development of D&D informational products to assist in continued support for D&D projects.

**ENERGY AND INFRASTRUCTURE**
- Continued to support DOE in its implementation of Executive Order 13514, “Federal Leadership in Environmental, Energy, and Economic Performance.”
- Facilitated a significant information exchange with DOE’s Federal Energy Management Program through a joint GovEnergy Conference.
- Led the development and hosting (with support from the DOE Office of Engineering and Construction Management) of the Achieving Excellence in Facilities Management and Sustainability Workshop in Albuquerque.
- Performed two surveys as a basis for issuing a best practice and whitepaper on space management practices across the DOE.

**ENFORCEMENT COORDINATION**
- Continued a forum of interacting with the DOE’s Office of Enforcement and Oversight to discuss Price Anderson, worker safety/health, and classified information security issues, including lessons learned from recent enforcement actions, enforcement conferences, program reviews, and other interactions with the DOE Office of Enforcement and Oversight.
- Participated in the DOE Office of Enforcement and Oversight Annual Coordinator training, with a shift in the focus of the training from being directed largely at new coordinators to all coordinator participants.
- Documented a best practice regarding contractor participation in enforcement conferences.

**ENGINEERING PRACTICES**
- Continued to work with the DOE National Training Center to form a partnership for developing commercial grade dedication, configuration management, cognizant system engineer, and general engineering standards training courses.
- Continued to broaden a partnership with the California Polytechnic University at San Luis Obispo fire protection engineering program to establish a career pipeline/mentoring relationship with the DOE and contractor companies.
- Provided a forum for members to share information and lessons learned, discuss common issues, and to develop best practices with a focus on fire protection engineering across the DOE complex.
- Continued to develop an understanding of the requirements of an effective pressure safety program as required by 10 CFR 851 Appendix A Section 4.0, “Worker Safety and Health Program,” including establishment of a pressure vessel SharePoint site and development of an “Implementation Guide for Pressure System Safety.”
- Three best practices were developed and posted on the EFCOG website, including fire protection program assessments and recommended structures for system health monitoring and reporting.

**ENVIRONMENTAL SAFETY AND HEALTH**
- Co-sponsored the 13th Annual Joint EFCOG/DOE Chemical Management Workshop with a theme of "Keeping Chemicals Safe and Secure."
- Documented five best practices on the EFCOG website, including radiation protection technology training, safety performance index, and emergency preparedness.
- Worked with DOE Headquarters (HQ) personnel to propose a new hazardous electrical energy control criteria for DOE Order 232.2, “Operations Reporting and Processing,” that will use the electrical severity measurement tool as a basis for hazard determination and reporting for electrical events.
- Continued to support the DOE Office of Health, Safety, and Security in development of the monthly DOE Electrical Safety Report.
- Continued to participate on the DOE HQ Directives Reform Team for Safety & Health.
- Completed reviews and updates for two recent Type B investigations involving radiological events in the DOE complex.
- Established the Behavior Based Safety/Human Performance Improvement Project, whose scope is to maximize value of behavior-based safety (BBS) and human performance by effectively expanding the BBS observation to include a determination regarding human performance improvement causal factors.
• Initiated a joint development effort with DOE Office of Health, Safety, and Security on revising the DOE Accident Investigation Manual and associated training.
• Coordinated with the Massachusetts Institute of Technology to support the DOE Laser Safety Officer Workshop 2011 as a continuing response to the DOE Special Operations report issued in 2005.

**Human Capital**

• Led the effort to understand and address fire protection engineering staffing issues in support of DOE work. A survey was prepared and distributed complex-wide to collect demographic data, forecasts of future staffing levels, and personnel qualification requirements.
• Documented two best practices on the EFCOG website addressing on-line learning programs and leadership training.
• Sponsored and organized a workforce planning panel at the 2011 annual EFCOG Executive Council meeting, which featured highlights of strategic workforce planning initiatives from three DOE contractors representing various stages of planning maturity.

**Integrated Safety Management and Quality Assurance**

• Served as a catalyst for the growing attention within DOE on safety culture with a focus on safety culture training, interfaced with DOE in the development of its Implementation Plan in response to Defense Nuclear Facilities Safety Board (DNFSB) recommendation 2011-1, “Safety Culture at the Waste Treatment and Immobilization Plant,” issuing two best practices, and updating the EFCOG website and guidance documents based on lessons learned and DNFSB 2011-1 activities.
• Continued to work on the Work Planning & Control Improvement Initiative Project Plan with NNSA and the Office of Environmental Management. Also, performed a Work Planning and Control assist visit assessment at the Los Alamos National Laboratory.
• Continued the development of the Joint Supplier Evaluation Program for the DOE Office of Environmental Management, which included the accessibility of a database for gathering audit data and making it available to the site quality assurance organizations for both contractor and DOE personnel. Also, continued to work with NNSA program personnel to integrate this evaluation program with the NNSA evaluation program.
• Supported the 2011 DOE Integrated Safety Management Champions Workshop in September 2011 in Kennewick, Washington, by supplying track leads and speakers, reviewing abstracts, and providing general meeting support.
• Made improvements to the EFCOG Best Practices website which provides a single reference point for all contractors and DOE. The best practice enhancement initiative continued to focus on improving the best practices process.
• Focused on the development of leading and lagging metrics and methodologies in a joint effort with the DOE Office of Health, Safety, and Security to mine valuable data contained in DOE complex databases, explore the Wiki websites, review the lessons learned reports, and view the new videos developed to share best practices and lessons learned.
• Continued to support the DOE Environmental Management Corporate Quality Assurance Board.
• Participated in the review cycle of the draft DOE Guide for dedication of commercial grade software, including the review of industry standards for a comprehensive path forward for effectively dedicating commercial software.
PROJECT MANAGEMENT

- Continued supporting the DOE Corrective Action Plan developed to address the remaining two systemic project management deficiencies (identified in the 2008 Root Cause Analysis study) that have resulted in DOE remaining on the Government Accountability Office “High Risk” agency list. EFCOG continued to work closely with DOE’s Office of Engineering and Construction Management and program offices to provide input on the corrective measures from the contractor perspective and to support the implementation plan.

- Completed support of the development and aggressive implementation of revision B to DOE Order 413.3, “Program and Project Management for the Acquisition of Capital Assets”, including participation in project peer reviews across the DOE complex.

- Completed a white paper on project peer reviews, which provides guidance and best practices to assist contractors and federal staff in performing Order 413-3.B peer reviews of DOE projects.

- Completed a white paper regarding the lack of qualified suppliers, which is reducing the competition on DOE projects which, in turn, has the potential for increasing costs and delaying project completions. The paper discusses how the DOE complex could leverage resources by performing joint supplier audits and acquisition strategies, developing and maintaining a database for audit documentation, and making the audit list available to all DOE contractors.

- Continued to provide implementation support for earned value management systems (EVMS), development support of the DOE 413.3B EVMS Guide, and maintenance support of the EVMS website with reference documents.

- Completed a white paper on design maturity to assist in documenting the issues, recommending approaches based on lessons learned, and highlighting successful examples to aid in meeting the goals of DOE’s policy regarding project design maturity.

SAFETY ANALYSIS

- Held the annual Safety Basis Workshop to discuss and disseminate information and training on safety-basis related activities, applications, and documentation.

- Supported development and implementation of an expert-based unreviewed safety question (USQ) process across the DOE complex, based on the successful pilot study at the Y-12 National Security Complex. Feedback and lessons learned were applied to the Y-12 process and data thus far for the second year indicate improved utilization of expert-based USQ determinations. Two other sites implemented the expert-based USQ determination process based on the Y-12 pilot study.

- Facilitated discussions and sharing of information as Japan’s Fukushima accident was unfolding, including presentations from Los Alamos National Laboratory, the American Nuclear Society, and the Nuclear Energy Institute, and subsequently facilitated discussions on how the Nuclear Regulatory Commission and DOE should address post-Fukushima considerations pertaining to implications on DOE contractor safety analyses.


- Continued development of liaison with the DOE National Training Center (NTC) to coordinate delivery and review course material of safety analyst training and maintained a course schedule on the SAWG webpage. In particular, extensively supported the development of the new NTC USQ course, including development of the course material, review of the material, and review/mentoring of the initial teaching of the material.

SAFEGUARDS AND SECURITY

- Completed efforts to identify and document root-cause analysis improvements for Incidents of Security Concern (IOSC) and the evaluation of associated corrective actions. The study identified effective training, tools, and methods that exist today which accurately identify the root-cause of IOSC, deficiencies, findings, and non-compliant conditions, provided recommendations for corrective actions to prevent reoccurrence, and supported issuance of a best practice.
- Provided material control and independent accountability assessment resources from the Y-12 National Security Complex, Pantex Plant, Sandia National Laboratory, and Nevada National Security Site to other sites for performing independent assessments.
- Completed a study which determined that buying thermionic detectors (TID) in bulk across the DOE complex would not be cost efficient since every site has different TID needs. Also developed and provided a list of TID vendors with specific information to all sites.

WASTE MANAGEMENT

- Continued to support the efforts of the update of DOE Order 435.1, “Radioactive Waste Management,” with the DOE Office of Environmental Management, serving on specific Order requirement rewrite teams and preparing drafts for acceptance by DOE.
- Developed a position, draft requirement, and guidance for consolidation of radioactive waste (supporting worker risk reduction and reduced disposal costs) and worked with DOE to include this position and requirement in the update of DOE Order 435.1.
- Took the successful waste incidental to reprocessing citation program that began at Hanford and applied it to the West Valley Demonstration Project environmental cleanup work in New York and to the Savannah River Site.
- Transmitted a report to DOE of the results from an investigation of waste with no path to disposal from Los Alamos National Laboratory, Savannah River Site, and Lawrence Berkeley National Laboratory.
- Worked with DOE HQ to comment on and improve a DOE guidance document on the implementation of low specific activity (LSA) and surface contaminated objects (SCO), Department of Transportation requirements for packaging of radioactive waste for transportation.
- Posted seven best practices to improve the management of radioactive waste across the DOE complex.
- Completed support to the DOE Office of Environmental Management in its successful execution of ARRA projects through identification of waste treatment and disposal capabilities versus needs.

The report that follows for FY 2011 is organized and presented as follows:

- information on EFCOG membership, on the Board of Directors, and on the Working Groups,
- individual reports on each of the 13 Working Groups, with information on their vision/purpose/objectives/scope, membership and organization, FY 2011 achievements, FY 2012 plans, effectiveness evaluations (including the seven new performance metrics to help measure the value and effectiveness of Working Group meetings and activities), lessons learned and recommendations, and
- summary information on the EFCOG website and EFCOG finances.
BOARD OF DIRECTORS

The Board of Directors is elected by the Executive Council from the membership and serves as the governing entity for EFCOG’s day-to-day operations. In 2011, the Council elected to increase the Board of Directors from 15 to 18, and six new Directors were added at the 2011 Executive Council Meeting. During FY 2011, the Board met five times to ensure that the activities of EFCOG were supportive of the overall objectives of DOE and were responsive to DOE’s needs. Under the leadership of the Board of Directors, EFCOG’s focus in the coming year is to continue encouraging other DOE contractors from all programs and all sectors to contribute to performance improvement and lessons learned activities. EFCOG’s Directors after the June 2011 annual meeting are shown in Table 2.

**TABLE 2. 2011 BOARD OF DIRECTORS**

<table>
<thead>
<tr>
<th>CHAIR</th>
<th>Joseph R. Yanek</th>
<th>Fluor Government Group</th>
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<tr>
<td>VICE-CHAIR</td>
<td>Susan G. Stiger</td>
<td>Bechtel Group, Inc./Los Alamos National Laboratory</td>
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<tr>
<td>VICE-CHAIR ELECT</td>
<td>Patricia N. Smith</td>
<td>Sandia National Laboratories</td>
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<tr>
<td>DIRECTORS</td>
<td>Juan Alvarez</td>
<td>Idaho National Laboratory</td>
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<td></td>
<td>Frank Armijo</td>
<td>Mission Support Alliance, LLC</td>
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<tr>
<td></td>
<td>Michael J. Bebon</td>
<td>Brookhaven National Laboratory</td>
</tr>
<tr>
<td></td>
<td>Nicholas J. DiMascio</td>
<td>Bartlett Services, Inc.</td>
</tr>
<tr>
<td></td>
<td>Thomas F. Gioconda</td>
<td>Bechtel Group, Inc./Lawrence Livermore National Laboratory</td>
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<td></td>
<td>Pamela A. Horning</td>
<td>Babcock &amp; Wilcox Technical Services Group</td>
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<td></td>
<td>Moses N. Jaraysi</td>
<td>CH2MILL Plateau Remediation Company</td>
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<td></td>
<td>William R. Klemm</td>
<td>Babcock &amp; Wilcox Y-12</td>
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<tr>
<td></td>
<td>Peter M. Knollmeyer</td>
<td>Savannah River Nuclear Solutions</td>
</tr>
<tr>
<td></td>
<td>Ellen A. Livingston-Behan</td>
<td>URS Washington Division</td>
</tr>
<tr>
<td></td>
<td>J. Gregory Meyer</td>
<td>Fluor Hanford/Fluor Federal Services</td>
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<tr>
<td></td>
<td>Robert J. Milazzo</td>
<td>Tetra Tech, Inc.</td>
</tr>
<tr>
<td></td>
<td>William A. Morrison</td>
<td>EnergySolutions, LLC</td>
</tr>
<tr>
<td></td>
<td>Beth Sellers</td>
<td>AREVA Federal Services, LLC</td>
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<tr>
<td></td>
<td>Roy J. Schepens</td>
<td>Parsons</td>
</tr>
<tr>
<td>DIRECTOR EMERITUS</td>
<td>Lincoln E. Hall</td>
<td>L&amp;L Associates, Inc.</td>
</tr>
<tr>
<td></td>
<td>Donald W. Pearman</td>
<td>Bechtel National, Inc.</td>
</tr>
</tbody>
</table>
During the year, the EFCOG Working Groups focused on numerous critical initiatives. The Working Groups utilized teleconferences and meetings to exchange information and lessons learned, including enhanced industrial/chemical and nuclear safety, improved project management, coordinated efforts on engineering standards and practices, increased energy efficiency, improved acquisition practices, improved maintenance and infrastructure management, sharing of D&D best practices, and compliance with Price-Anderson Amendments Act requirements. Each Working Group performs its activities consistent with a charter approved by the Board of Directors. A Chairperson oversees the direction of each Working Group (with assistance from a Steering Committee). Working Group membership includes individual subject matter experts interested in working on a particular focus area. A Sponsoring Director (shown as [Director] in Table 3 below) is the point of contact within EFCOG for advice and decision-making, while DOE and NNSA sponsors provide guidance, up-to-date information, advice, and support as required. The FY 2011 Working Group leadership as of the June 2011 annual meeting is shown in Table 3.

TABLE 3. 2011 WORKING GROUPS

<table>
<thead>
<tr>
<th>WORKING GROUP</th>
<th>EFCOG CHAIR [DIRECTOR]</th>
<th>DOE &amp; NNSA SPONSOR(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition Management</td>
<td>Kathleen Vaselopulos</td>
<td>None assigned</td>
</tr>
<tr>
<td></td>
<td>[Ellen Livingston-Behan/Frank Armijo]</td>
<td></td>
</tr>
<tr>
<td>Contractor Assurance</td>
<td>Jack Anderson</td>
<td>John Boulden III, William Roege</td>
</tr>
<tr>
<td></td>
<td>[Beth Sellers/Juan Alvarez]</td>
<td></td>
</tr>
<tr>
<td>D&amp;D/Facility Engineering</td>
<td>Rick Dearholt</td>
<td>Paula Kirk, Andrew Szilagyi</td>
</tr>
<tr>
<td></td>
<td>[Pete Knollmeyer/Moses Jaraysi]</td>
<td></td>
</tr>
<tr>
<td>Energy &amp; Infrastructure</td>
<td>Lynnwood Dukes</td>
<td>Pete O’Konski, Gordon Fox, John Yates, Skye Schell, Beverly Dyer, Donna Green, Robert Herrera</td>
</tr>
<tr>
<td></td>
<td>[William Klemm]</td>
<td></td>
</tr>
<tr>
<td>Enforcement Coordination</td>
<td>Conard Stair/Alan Wagner</td>
<td>John Boulden III, Kathy McCarty</td>
</tr>
<tr>
<td></td>
<td>[Greg Meyer]</td>
<td></td>
</tr>
<tr>
<td>Engineering Practices</td>
<td>Charles Kronvall</td>
<td>James McConnell, Chip Ligdon, Earl Hughes, James O’Brien</td>
</tr>
<tr>
<td></td>
<td>[Roy Schepens]</td>
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<tr>
<td>Environmental Safety &amp; Heath</td>
<td>Tony Umek</td>
<td>Pat Worthington, Ray Corey</td>
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<td></td>
<td>[Nick DiMascio]</td>
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<tr>
<td>Human Capital</td>
<td>Dione Heusel</td>
<td>Mary-Jo Campagnone, Sandra Waisley</td>
</tr>
<tr>
<td></td>
<td>[Pat Smith]</td>
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<td>Integrated Safety</td>
<td>Norm Barker</td>
<td>Pat Worthington, Ray Corey</td>
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<tr>
<td>Management/QA</td>
<td>[Robert Milazzo]</td>
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<tr>
<td>Project Management</td>
<td>Bob Miklos</td>
<td>Paul Bosco, Bob Raines, Lowell Ely, Dan Lehman, Mike Hickman</td>
</tr>
<tr>
<td></td>
<td>[Tom Giocondo/Sue Stiger]</td>
<td></td>
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<tr>
<td>Safety Analysis</td>
<td>Rob McKeehan</td>
<td>Mark Blackburn, Amanda Anderson, Bob Nelson</td>
</tr>
<tr>
<td></td>
<td>[Pamela Horning]</td>
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<tr>
<td>Safeguard and Security</td>
<td>Reuben McGilvary</td>
<td>Glenn Podonsky, Doug Freemont, Amy Whitworth, Ted Wyka, Steve Crowe</td>
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<td>[Michael Bebon]</td>
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<tr>
<td>Waste Management</td>
<td>Sonny Goldston</td>
<td>Dave Michlewicz, Frank Marcinowski, Christine Gelles, Steve O’Connor, Bill Levitan</td>
</tr>
<tr>
<td></td>
<td>[William Morrison]</td>
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</tbody>
</table>
INTRODUCTION

Vision - The vision is to provide a forum in which the EFCOG membership and the Department of Energy (DOE) - including the National Nuclear Security Administration (NNSA) - acquisition programs can mutually achieve continuous improvement of the acquisition process and build mutual trust between the contractor community and the DOE and NNSA staff.

Purpose - The Acquisition Management Working Group (AMWG) facilitates the objectives of the EFCOG by enhancing the contract relationship between DOE and the contractor base and by sharing best practices among the EFCOG membership.

Objectives

- Promote a win-win relationship with shared priorities and a common understanding of acquisition and contracting issues through effective communications.
- Function as a forum to promote the sharing of contractor best acquisition practices.
- Provide an industry perspective on proposed DOE changes in contract requirements.

Scope

- The AMWG pursues actions to promote the continuous improvement of the DOE acquisition systems as related to the planning, solicitation, awarding, and administration of prime contracts within the DOE complex and actions to promote contractor performance in the management of prime contracts.
- While the Working Group does not lobby, advocate independent positions, or try to change DOE policy, the AMWG will communicate with DOE and staff and participate in DOE initiatives relating to acquisition systems.
- The AMWG works with contract management personnel within the EFCOG membership to promote best contractor management practices and to develop coordinated responses to DOE initiatives.
- The AMWG represents the EFCOG membership by assisting the DOE and their staff in the identification of areas of improvement, the assessment of proposed policy/regulatory changes, the introduction of new or changed processes, and the gathering of information in support of any proposals or initiatives. Additionally, the AMWG, from time to time, develops independent recommendations that serve to promote continuous improvement.
- The AMWG, as appropriate, operates in concert with other industry groups where there may be overlapping interests, ensuring a cooperative effort.

MEMBERSHIP AND ORGANIZATION

Membership

Approximately 20 members representing nominally 13 EFCOG member companies participate on the AMWG. Networking has been the method of recruitment.
Organization
Leadership in the AMWG is comprised of:

Chair: Kathy Vaselopulos, Babcock and Wilcox Technical Services Group
Vice-Chair: Heidi H. Timmerman, Oak Ridge Associated Universities
Secretary: Anita Ross, National Security Technologies, LLC
Subgroups: None

EFCOG Sponsoring Directors: Ellen Livingston-Behan, URS Washington Division; and Frank Armijo, Mission Support Alliance, LLC

DOE Sponsors: None (however, contacts were initiated with David Boyd, Office of Procurement and Assistance Management; Ingrid Kolb, Office of Management; Mike Hickman, NNSA; and Jack Surash, Office of Environmental Management during this fiscal year)

Succession planning: A new Vice-Chair was elected in May 2011.

ACHIEVEMENTS

- The AMWG held the following meetings during FY 2011:
  - November 9, 2010 - face-to-face at the offices of Universities Research Association in Washington, D.C.
  - May 25, 2011 - conference call
  - August 30, 2011 - conference call
  - September 14, 2011 - conference call
- The AMWG Chair held a liaison meeting with David Boyd, Deputy Director, Office of Procurement and Assistance Management, DOE in November 2010.
- Ingrid Kolb, Director, Office of Management, DOE briefed AMWG membership on her office’s Contract Management Improvement Initiative resulting from the Government Accountability Office’s “high risk” list and the corrective action plan established to address weaknesses.
- Members from both the Sandia National Laboratory and the Nevada National Security Site provided training to the AMWG regarding the sites’ acquisition capabilities.
- AMWG initiated a white paper on pre-approved subcontractors in prime contract proposals.
- AMWG provided a forum for contract and subcontract managers to share and exchange best practices in their respective areas.
- The group held active discussion of strategies and measurements regarding the success of strategic sourcing at NNSA and possible implementation in other DOE programs.
- A task team led by the AMWG Chair completed and submitted a white paper to DOE’s Office of Environmental Management (EM) in December 2010 in response to the review of issues/problems with processing requests for equitable adjustments (REAs) and the relationship to contract modifications and baseline changes.
• AMWG coordinated the development of a contractor training course for effectively managing contract changes. This parallels the training DOE is conducting for its federal employees in the EM program.

PLANNING FOR THE NEXT YEAR

In September 2011, the EFCOG Board of Directors voted to stand up a new Business Management Working Group (BMWG) with a charter, that will include the elements of the AMWG, to provide improved value to the member companies and DOE, such as the Office of the Chief Financial Officer. Therefore, the AMWG has only one item to complete in FY 2012, which is the development of the training course for effectively managing contract changes. Once the BMWG charter is in place and membership attained, activity planning for the balance of the fiscal year will be identified.

LESSONS LEARNED

DOE sponsors are key to a working group’s effectiveness, along with effective participation by EFCOG member companies. Also, while a small group of members continue to step forward, membership participation and direction has waned.

EFFECTIVENESS EVALUATION

The AMWG provided value to the member companies and to DOE, although not to its full potential. The Survey Monkey feedback tool was not utilized by the AMWG during the FY 2011 reporting period to help measure value, therefore no performance metric data are available for the first four metrics. The following is provided for performance metric questions five through seven:

• Number of best practices posted during the FY Zero
• Number of white papers submitted to DOE One
• Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE Zero

The AMWG provided a forum for the sharing of information and the comparison of operating and business practices. True membership benefit came from this activity, such as discussion on handling the current budget reductions and various impacts on contractor volume. In addition, the AMWG members benefitted from the discussions and development of the REA white paper.

RECOMMENDATIONS

The AMWG has value for the member companies and DOE and should be continued in some form as discussed with the EFCOG Board of Directors. Given the Board’s decision to incorporate acquisition management as an element into a broader BMWG, the AMWG recommends that the active AMWG members be included in the new Working Group.
CONTRACTOR ASSURANCE WORKING GROUP

CHAIR: JACK ANDERSON, UNIVERSITY OF TENNESSEE-BATTELLE (OAK RIDGE NATIONAL LABORATORY)
VICE-CHAIR: CAMILLA LOPEZ, LOS ALAMOS NATIONAL LABORATORY

INTRODUCTION

Vision - The vision is to provide an exciting community for collaboration, sharing, learning, and development of best practices and tools within performance management and contract assurance.

Purpose - The intent of the Contractor Assurance Working Group (CAWG) is to facilitate the collaboration between EFCOG and the U.S. Department of Energy (DOE) - including the National Nuclear Security Administration (NNSA) - to deploy performance-based contracting tools and systems that make the interface of federal oversight and contract administration with contractor management and performance more effective and efficient. The CAWG coordinates with other federal and contractor groups that are working on contractor assurance systems (CAS), e.g., NNSA’s Line Oversight and Contractor Assurance System (LOCAS) Integration Council.

Objectives

- Promote, coordinate, and facilitate the active exchange of successful approaches to performance-based integrated management systems as well as lessons learned.
- Identify, analyze, and produce important lessons learned for distribution through DOE that could accelerate the implementation of effective federal line oversight and contractor assurance systems.
- Develop LOCAS case studies for future workshops and training courses.

Scope

- The area to be addressed by the CAWG is the use of performance-based contracting tools and systems to promote more effective and efficient interfaces of federal oversight and contract administration with contractor management and performance.
- The CAWG will facilitate interaction with other governmental and non-governmental organizations regarding application of performance-based contracting and performance-based integrated management systems in the DOE complex.
- The CAWG will communicate with other EFCOG and DOE groups to avoid duplication of effort.
- While the CAWG does not lobby, advocate independent positions, or try to change DOE policy, performance-based contracting practices as applied to DOE missions may be discussed and suggestions for improvement made to the DOE.

MEMBERSHIP AND ORGANIZATION

Membership

Approximately 250 contractor representatives and DOE personnel are associated with this Working Group with a core group of 40-60 members. The CAWG has more than quintupled in size since its inception in 2006. Participants represent 40 member companies.

The CAWG semi-annual meetings have been increasingly well attended and have received very positive feedback for having interesting presentations and discussions and for being well organized. The positive feedback has encouraged more members to join the Working Group; hence, the main member recruitment has been through CAWG members encouraging new colleagues to join the CAWG.
Membership also increased due to greater visibility of the CAWG during joint meetings with other Working Groups.

Organization

Leadership in the CAWG is comprised of:

Chair: Jack Anderson, University of Tennessee-Battelle (Oak Ridge National Laboratory)

Vice-Chair: Camilla Lopez, Los Alamos National Laboratory

Secretary: Connie De Grange, Lawrence Livermore National Laboratory

Subgroups: None (several ad hoc teams were formed to work on specific deliverables)

EFCOG Sponsoring Directors: Juan Alvarez, Idaho National Laboratory; and Beth Sellers, AREVA Federal Services

DOE Sponsors: William Roege, Office of Health, Safety, and Security (HSS); and John Boulden III, HSS

Succession planning: A new Chair of the CAWG was appointed in FY 2011 for a term up to two years.

ACHIEVEMENTS

- Developed and posted a white paper on leading indicators. This document provides general guidance on using leading indicators and describes an approach for developing leading indicators that is broadly applicable across sites, assisting managers in managing their operations.
- Continued site-to-site sharing of information on CAS implementation based on numerous site benchmarking visits and independent assessments across DOE.
- At the request of DOE, the CAWG developed contractor assurance training material that can be used during semi-annual training opportunities to inform DOE senior management about contractor assurance. This action was completed on a ‘fast-track’ timetable with the inaugural training session planned for December 14, 2011 in Washington, DC.
- Contributed to the CAS peer reviews and affirmations at many sites.
- Supported the NNSA-directed Parent Organization Functional Management Review of LANL CAS.
- In October 2010, the CAWG held its fall meeting in conjunction with the Enforcement Coordination Working Group.
- In June 2011, the CAWG held its spring meeting at Oak Ridge National Laboratory.
- Provided support for HSS directives on the development of a revised independent oversight approach.

PLANNING FOR THE NEXT YEAR

- Develop and post up to two best practices related to contractor assurance.
- With NNSA and the Office of Science having moved through the process of conducting peer and affirmation reviews of contractor assurance systems, there is a begging question associated with ‘what next?’ The CAWG opportunity in FY 2012 is to demonstrate leadership to offer a framework by which the gains made through these recent processes can be sustained over time.
- At the 2011 ISM Champions Workshop held in Kennewick, Washington, a common theme that surfaced in a number of the contractor assurance papers and discussions gravitated toward discussions about risk, risk management, risk-informed planning and decision making.
It was concluded that the CAWG should spend time in FY 2012 discussing this in more detail and possibly suggesting some guidance for the complex.

- Continue enhancement of DOE-requested contractor assurance training material that can be used during semi-annual training opportunities at DOE.
- Evaluate and promulgate key elements of a corporate governance model.
- Continue engagement with HSS on topics of common interest: human performance improvement, leading indicators, causal analysis, operating experience, and social media and networking.
- Develop approach to integrate with the HSS Operating Experience Committee (lessons learned program).
- Continue to work with NNSA on refinement/implementation of their Governance Reform initiative.
- Continue to develop an approach to an integrated risk-based assessment schedule.
- Evaluate and promulgate key elements of a corporate governance model.
- Consider new approaches to performance improvement.

**Lessons Learned**

No problems or issues encountered resulted in the publication of formal lessons learned documents.

**Effectiveness Evaluation**

FY 2011 was a successful year for the CAWG. Members continued to join the Working Group, and collaboration with other EFCOG Working Groups proved to be an effective way to introduce new perspectives to CAWG while spreading the knowledge and understanding of what CAS is and can be.

Of particular interest to DOE was the white paper published on leading indicators and the development of training material on contractor assurance that can be used during semi-annual training opportunities to inform DOE senior management about contractor assurance.

At the semi-annual meetings, CAWG hosted a series of interesting and relevant presentations on different governance models. These presentations resulted in fruitful discussions and increased understanding. CAWG will continue the focus on governance models in FY 2012.

Survey Monkey feedback results indicate that the CAWG meetings and activities are effective, although emphasis will be placed in the coming year on improving how the Working Group can assist in changing practices within member companies. Data for the key survey questions in response to the first four performance metrics are provided below:

<table>
<thead>
<tr>
<th>Question</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is participation in the CAWG ‘added value’ for your project/company?</td>
<td>89%</td>
</tr>
<tr>
<td>2. Are you changing any practices as a result of your involvement with the CAWG?</td>
<td>56%</td>
</tr>
<tr>
<td>3. Does the CAWG tackle relevant issues?</td>
<td>89%</td>
</tr>
<tr>
<td>4. Is the CAWG helping to create solutions for challenges you or your company are facing?</td>
<td>89%</td>
</tr>
</tbody>
</table>
The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: Zero
- Number of white papers submitted to DOE: One
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Multiple

**RECOMMENDATIONS**

The Working Group should be continued in FY 2012. Focus on CAS governance models should continue with emphasis on how the CAWG can best support the DOE governance reform initiative.
DEACTIVATION & DECOMMISSIONING AND FACILITY ENGINEERING
WORKING GROUP

CHAIR: RICK DEARHOLT, SULLIVAN INTERNATIONAL GROUP, INC.; PAUL TERP, STRATEGIC MANAGEMENT SOLUTIONS, LLC
VICE-CHAIRS: JEFFERY HUNTER, MISSION SUPPORT ALLIANCE, LLC; CAROL JOHNSON, WASHINGTON CLOSURE HANFORD; AND BRAD SMITH, WASHINGTON CLOSURE HANFORD

INTRODUCTION

Vision - The Deactivation and Decommissioning (D&D) and Facility Engineering (FE) Working Group provides leadership to focus on improving safety and reducing D&D life cycle costs across the Department of Energy (DOE) complex, including the National Nuclear Security Administration (NNSA).

Purpose - The DD&FE Working Group is a working committee whose intent is to facilitate the objectives of EFCOG to partner with the Office of Deactivation & Decommissioning and Facility Engineering in DOE's Office of Environmental Management (EM) in identifying and addressing key opportunities for improved performance in D&D safety and project execution across the DOE complex through application of experience and technology transfer.

Objectives

- Promote, coordinate, and facilitate the active exchanges of successful D&D programs, practices, procedures, technology, and other pertinent information of common interest and effectively utilized by contractors and subcontractors for DOE facilities as well as in nuclear power plant decommissioning and other environmental cleanup scenarios.
- Identify, analyze, and produce for distribution throughout EM important lessons learned that could reduce life cycle costs of EM's D&D program in a safe manner.
- Develop D&D case studies for future workshops/training courses.

Scope

- The area to be addressed by the DD&FE Working Group is facility D&D.
- The DD&FE Working Group facilitates interaction with outside agencies and organizations regarding application of D&D principles and methods in the DOE complex.
- The DD&FE Working Group communicates with other EFCOG Working Groups to avoid duplication of effort.
- Facilities are covered from the point of ceasing an operating mission through the final declaration of cleanup status. However, activities during the operating mission that prepare for efficient and safe D&D when the mission ceases will be also be within the scope.
- The DD&FE Working Group does not lobby, advocate independent positions, or try to change DOE policy. However, D&D practices as applied to DOE missions may be discussed and suggestions for improvement made to the DOE.

MEMBERSHIP AND ORGANIZATION

Membership - Through aggressive recruiting, the number of members has risen in 2011, and the DD&FE Working Group now consists of 35 active members. These members represent 22 EFCOG member companies and represent the national laboratories and major DOE sites and projects in the DOE complex.
Organization

Leadership in the DD&FE Working Group is comprised of:

Chair: Rick Dearholt, Sullivan International Group, Inc. (through late FY 2011); Paul Terp, Strategic Management Solutions, LLC

Vice-Chairs: Jeffery Hunter, Mission Support Alliance, LLC (through late FY 2011)/Carol Johnson, Washington Closure Hanford; and, Brad Smith, Washington Closure Hanford

Secretary: Rob Vellinger, TerraneaPMC, LLC

Subgroups: None, but there are three task groups or teams with leads as follows:

- Best Practices Task Group Lead: Leo Lagos, Florida International University
- D&D Knowledge Resource Center Implementation Task Team Lead: Leo Lagos, Florida International University
- D&D Promotional Products Task Team Lead: Rick Dearholt, Sullivan International Group, Inc.

DOE Sponsors: Andrew Szilagyi, EM; and Paula Kirk, EM

EFCOG Sponsoring Directors: Peter Knollmeyer, Savannah River Nuclear Solutions; and Moses Jaraysi, CH2M Hill Plateau Remediation Company

Succession planning: The current DD&FE Working Group Chair and two Vice-Chairs were installed in September 2011 upon the resignation of the previous Chair and Vice-Chair. Terms are usually for one year, and the Vice-Chair normally succeeds the Chair. The Secretary was installed in March 2010. The plan is to extend the Secretary position to September 2012 and hold new elections in September 2012.

ACHIEVEMENTS

The DD&FE Working Group’s focus this year was on these goals:

- Improving the identification, documentation, dissemination and implementation of D&D best practices across the DOE complex.
- Identifying transformational changes that can be made to positively affect safety and the D&D baseline over the long term.
- Producing a D&D video to document successes and remaining challenges for DOE EM.

The DD&FE Working Group achieved the following during 2011:

- Issued two best practices on the EFCOG website as well as on the D&D Knowledge Management website developed by Florida International University in collaboration with the U.S. Department of Energy, EFCOG, and the As Low As Reasonably Achievable (ALARA) centers at the Hanford and Savannah River sites:
  - Best Practice #100 - Open Air Demolition of Asbestos Gunite by Using Track Mounted Wet Cutting Saw - June 2011
  - Best Practice #101 - Explosive Demolition of Buildings 337, 337B, and the 309 Stack at the Hanford’s 300 Area – June 2011
- Began preparation of four additional best practices as follows:
  - 185-3K Cooling Tower Demolition.
  - Historical Hazard Identification Process for D&D.
  - Closure of the Reactor Maintenance, Assembly, and Disassembly Facility and the Pluto Disassembly Facility at the Nevada National Security Site.
EM’s Office of Deactivation and Decommissioning and Facility Engineering announced a new web-based information resource for the D&D community. The D&D Knowledge Management Information Tool (KM-IT) is a web-based knowledge platform developed via collaboration by DOE, Florida International University (FIU), and the EFCOG DD&FE Working Group. It provides a single-point access into the “collective knowledge base” of the D&D community, within and outside of DOE. The D&D KM-IT provides a forum for collaboration to share “know-how”, real-world experiences, insights, best practices, lessons learned, references, readings, writings, and other “sources for solutions.” KM-IT is now “live” and accessible on the web at http://dndkm.org.

A task group was formed to focus attention on developing a D&D video which will show the numerous D&D successes within the DOE EM project portfolio. The video will also show some of the remaining challenges. The script of this video was drafted and is under revision.

A task team was formed to establish stronger technical support relationships with FIU and the ALARA centers. The goal is to enhance the ability of these organizations to support the DOE D&D community.

The progress made in accomplishing the DD&FE Working Group’s objectives was guided by interactions of the full DD&FE Working Group as follows:
- Held monthly telephone conferences.
- Conducted the winter DD&FE Working Group meeting in Phoenix, Arizona, in conjunction with the Waste Management 2011 Symposium in March.
- Conducted numerous task group and team telephone conferences.
- Met at the Savannah River Site to further develop the D&D video.

PLANNING FOR THE NEXT YEAR

- Strengthen Working Group outputs by increasing participation and leadership from EFCOG members who do the most D&D across the DOE complex.
- Improve the quality and quantity of lessons learned and information sharing between EFCOG members (and external organizations) to increase D&D and FE safety and efficiency for nuclear facilities.
- Complete work on the four best practices started in FY 2011 and prepare up to two additional best practices for a total target of six best practices.
- Complete the D&D video for DOE EM in time for the Waste Management 2012 Symposium in February 2012.
- Hold two face-to-face meetings of the Working Group in conjunction with:
  - June 2012 annual meeting in Washington, D.C.
- Continue to identify site points of contact and subject matter experts in D&D techniques. These individuals will support the FIU KM-IT and be a resource available to the help-lines at the ALARA centers.
- Form a task team to support the EFCOG Board of Directors and DOE EM to pursue a requirements management initiative/pilot for D&D projects. The goal is to control the change of requirements to the absolute minimum in order to prevent unnecessary baseline changes for closure projects or short duration D&D projects.
- Begin using the Survey Monkey tool as a routine feedback mechanism after each meeting.
LESSONS LEARNED

In order to maintain membership, the Working Group leadership will continue to actively pursue new members and reinvigorate those member companies to provide participants who want to participate and provide meaningful support. A new policy will be put in place that will require regular participation in Working Group meetings and initiatives. If a member does not meet the minimum requirements of participation, they will be removed from the Working Group membership roster.

EFFECTIVENESS EVALUATION

Despite the increased number of members, the effectiveness of the DD&FE Working Group declined in 2011. Aggressive D&D project schedules and accelerated work under the American Reinvestment and Recovery Act kept the Working Group’s members (involved in the EM program) constrained for time in 2011. Participation in meetings and initiatives suffered as a result, and progress on the D&D video was impacted.

The Survey Monkey tool was not utilized by the DD&FE Working Group during the FY 2011 reporting period to help measure effectiveness of the Working Group, therefore no performance metric data are available for the first four metrics. The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: Two
- Number of white papers submitted to DOE: Zero
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Zero

RECOMMENDATIONS

To help address the decline in effectiveness, the EFCOG Board of Directors assigned a second Director to serve as an additional sponsor to the Working Group. Now there is a Board Director sponsor who works at the Hanford Site and at the Savannah River Site. The goal is to increase the leadership and participation by these two sites (where the bulk of the D&D is occurring).
ENERGY AND INFRASTRUCTURE WORKING GROUP

CHAIR: LYNNWOOD DUKES, SANDIA NATIONAL LABORATORY
VICE-CHAIR: (VACANT)

INTRODUCTION

Vision – The vision is to provide a forum in which continuous improvement can be achieved in all facets of energy management and infrastructure management across the Department of Energy (DOE) complex, including the National Nuclear Security Administration (NNSA).

Purpose – The Energy and Infrastructure Working Group (EIWG) was established to promote excellence in the execution of DOE missions by sharing best industrial practices, applying lessons learned, and providing integrated recommendations to DOE officials in the areas of energy and infrastructure management and modernization.

Objectives

- Enable the success of DOE missions in terms of high-quality energy and infrastructure management that supports program and project objectives in a cost-effective and safe manner.
- Promote, coordinate, and facilitate the active exchange of successful energy and infrastructure management programs, practices, procedures, lessons learned, and other pertinent information of common interest to contractors and subcontractors for DOE facilities.
- Enhance collaboration among DOE contractors and encourage early involvement of complex-wide experts in order to maximize the probability of success of emergent or unique energy or infrastructure management initiatives.
- Serve as a consensus board for emerging standards and guides proposed by DOE and for the interpretation and consistent application of existing DOE standards.
- Promote employee development of participating companies’ energy and infrastructure management talent, by sharing management and technical information among Working Group participants through mechanisms such as workshops, task groups, and seminars.

Scope

- Activities will be in the areas of energy and sustainability, facility management, operations and maintenance, and work control associated with DOE facilities and real property.
- The EIWG facilitates interaction with outside agencies and organizations regarding application of energy and infrastructure management principles and methods in the DOE complex.
- While the EIWG does not lobby, advocate independent positions, or try to change DOE policy, energy and infrastructure management practices as applied to DOE missions may be discussed and suggestions for improvement made to the DOE.

MEMBERSHIP AND ORGANIZATION

Membership

The membership roster includes over 200 individuals with over 50 active members. Thirty-seven EFCOG member companies participate in the Working Group and associated subgroups. Membership for subgroups is solicited through existing members of the EIWG or, if needed, through engagement of DOE sponsors. Also, a liaison relationship has been established with the DOE Transformational Energy Action Management group, sponsored by the National Laboratories Directors’ Council in an effort to integrate and align efforts related to energy usage.
Organization

Leadership in the EIWG is comprised of:

Chair: Lynnwood Dukes, Sandia National Laboratories
Vice-Chair: (Vacant)
Secretary: Lanny Bates, Brookhaven National Laboratory

Subgroups: Three subgroups are in place with leadership as follows:
- Maintenance Management Subgroup Chair – Susanne Waylett, Los Alamos National Laboratory
- Energy Efficiency Subgroup Chair – Ernie Fossum, Idaho National Laboratory
- Facility Management Subgroup Chair – Paul Reynolds, Lawrence Livermore National Laboratory

EFCOG Sponsoring Director: William Klemm, Babcock & Wilcox Y-12 National Security Complex

DOE Sponsors: Peter O’Konski, Office of Engineering and Construction Management; Dino Herrera, NNSA; Skye Schell, Office Energy Efficiency & Renewable Energy (EERE); Beverly Dyer, EERE; Gordon Fox, Science (SC); John Yates, SC; and Donna Green, Office of Environmental Management

Succession planning: New leaders will be solicited in FY 2012 for all Subgroups except the Maintenance Management Subgroup where Susanne Waylett took the Chair position in FY 2011.

ACHIEVEMENTS

- The EIWG Steering Committee met in September at the Achieving Excellence in Facilities Management and Sustainability Workshop in Albuquerque, New Mexico, August 29 through September 1, 2011 to discuss ongoing activities and review issues for action in the coming year. The Maintenance Management Subgroup, with sponsorship and funding from DOE’s Office of Engineering and Construction Management, led the development and hosting of this workshop. There were over 150 registered attendees representing multiple site offices, nine national laboratories, eight industry partners, six DOE and NNSA sites, and three additional government agencies in attendance. Forty best-practice sessions and several panel discussions were conducted during the five-track workshop with each subgroup having at least one track.
- The Facilities Management Subgroup performed two surveys and published a best practice and whitepaper on space management practices across the DOE:
  - Best Practice #86 – Space Management Practices – November 2010
- Monthly teleconferences were held with the Energy and Infrastructure Steering Committee to discuss progress on issues and any new items of interest. The DOE Sponsors were actively involved in setting direction and working with the Steering Committee members to define key deliverables for the year.
- The EIWG met in December 2010 to discuss plans and develop action items for FY 2011.
- A meeting was held in March 2011 with the EIWG Steering Committee and the Maintenance Management Subgroup in conjunction with the National Facilities Maintenance and Technology Symposium in Baltimore, Maryland. Meeting minutes were documented and posted on the EFCOG website.
- The Energy Efficiency Subgroup met in August in Cincinnati, Ohio, at the annual GovEnergy Conference. The subgroup has been involved in review of data calls, sharing lessons learned, and clarification of guidance for annual sustainability plans in support of implementing Executive Order 13514, “Federal Leadership in Environmental, Energy, and Economic Performance.”

**PLANNING FOR THE NEXT YEAR**

- The EIWG Steering Committee met in September at the Achieving Excellence in Facilities Management and Sustainability Workshop to discuss activities and issues for FY 2012 and to develop its annual plan. During this meeting, the following three action items were agreed to:
  - Innovative or site approaches on cost recovery models for funding new mandates – Maintenance Management Subgroup
  - Facility manager qualifications and training – Facility Management Subgroup
  - ROI criteria for selecting energy projects – Energy Efficiency Subgroup
- The Maintenance Management Subgroup has plans to meet in March, 2012, at the National Facilities Maintenance and Technology Symposium in Baltimore, Maryland, along with the EIWG Steering Committee.
- The Energy Efficiency Subgroup plans to participate and meet again at the annual GovEnergy Conference in August, 2012.
- The EIWG will prepare and post up to two best practices.

Tasking for FY 2012 could include integration opportunities relating to energy goals, measurement efficiencies, guidance in development of the new annual site energy performance plans, and development of innovative strategies to address greenhouse gas emissions and water usage reduction. Information from the EIWG activities will be posted on the EFCOG website to allow sites easy access to energy reduction initiatives, space management practices, and maintenance practices.

**LESSONS LEARNED**

No problems or issues encountered resulted in the publication of formal lessons learned documents.

**EFFECTIVENESS EVALUATION**

Survey Monkey feedback results indicate that the EIWG meetings and activities are effective. Data for the key survey questions in response to the first four performance metrics are provided below:

<table>
<thead>
<tr>
<th>Question</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is participation in the EIWG ‘added value’ for your project/company?</td>
<td>97%</td>
</tr>
<tr>
<td>Are you changing any practices as a result of your involvement with the EIWG?</td>
<td>67%</td>
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<tr>
<td>Is the EIWG tackling issues relevant to the work you perform for your member company?</td>
<td>92%</td>
</tr>
<tr>
<td>Is the EIWG helping to create solutions for challenges you or your company are facing?</td>
<td>89%</td>
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</table>
Ninety percent of responses indicated satisfied (45%) or very satisfied (45%) with the overall contents of the meetings. As evidenced by the accomplishments listed, the EIWG tackles relevant issues that are of interest to the DOE.

The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: One
- Number of white papers submitted to DOE: One
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Two

Delivery of the space management white paper, space management benchmark, and best practice provided the Working Group members and sponsors with recommendations and guidance on topics of interest that allows for future planning of sustainment and management of sites within the complex. Participation by members of the EIWG on committees and specifically the rewrite of the DOE Maintenance Management for Nuclear Facilities Guide (DOE G 433.1) allowed for the development of a comprehensive and well-vetted maintenance guide for the DOE. The development and hosting of the Achieving Excellence in Facilities Management and Sustainability Workshop was viewed as a huge success by all attending parties and provided a much needed venue for facilities professionals to share valuable lessons learned and best practices across the DOE complex. Posting of timely information on the EFCOG website provided value to team members on the latest guidance, lessons learned, or information on topics.

**RECOMMENDATIONS**

It is believed that this Working Group provides value to the sponsoring programs and should be continued to work the issues identified by the Working Group sponsors in the pending FY 2012 annual plan. The Energy Efficiency Subgroup prepared a proposal to separate from the EIWG and form its own Working Group with sponsorship from EERE’s Office of Sustainability Performance. It is recommended that the Energy Efficiency Subgroup be raised to the level of a formal Working Group.
ENFORCEMENT COORDINATION WORKING GROUP

CO-CHAIR: ALAN WAGNER, IDAHO NATIONAL LABORATORY
CO-CHAIR: CONARD STAIR, BABCOCK & WILCOX Y-12 NATIONAL SECURITY COMPLEX

INTRODUCTION

Vision – The vision of the Enforcement Coordination Working Group (ECWG) is to provide timely and meaningful support to assist contractors in meeting the Department of Energy (DOE) – including the National Nuclear Security Administration (NNSA) – goal to improve nuclear safety for workers and the public, occupational safety and health for workers, and the protection of classified information at DOE facilities.

Purpose – The purpose of the ECWG is to enhance communications and cooperation with the DOE Office of Enforcement in the Office of Health, Safety, and Security (HSS) and to promote excellence at DOE facilities through the understanding and implementation of nuclear safety, worker safety and health, and classified information laws and regulations, information sharing, and the application of lessons learned.

Objectives

- Provide planning and actions necessary to achieve the overall objectives of EFCOG in the area of nuclear/radiological safety, worker safety and health, and classified information security regulatory activities.
- Promote, coordinate, and facilitate the active exchange of programs, practices, procedures, lessons learned, and other pertinent information of safety and security regulatory activities.
- Provide an avenue for communications to and from the DOE-HSS Office of Enforcement on matters of enforcement programs, expectations, clarifications, complex-wide issues, and guidance.
- Promote training and learning on safety and security regulatory activities by sharing of management and technical information among DOE contractors through mechanisms such as workshops, task teams, and conferences.

Scope – The primary focus of the ECWG is on nuclear/radiological safety, worker safety and health, and classified information security in the context of DOE enforceable regulations throughout the entire life cycles of facilities and activities. Relationships to other laws and regulations (e.g., Department of Transportation regulations) are included in the scope of the ECWG to the extent necessary to assist in the understanding of the relationships and interfaces. Coordination with other EFCOG Working Groups is appropriate and encouraged, especially where the technical aspects of the other Working Groups relate to DOE enforceable regulations. Areas that can benefit from focused and coordinated contractor attention include the following:

- Safety and security compliance assurance, including noncompliance reporting
- Conduct of enforcement investigations, conferences, and program reviews
- Graded or tailored approaches to safety and security regulation implementation, including appropriate benchmarking activities
- Working relationships with regulatory counterparts (e.g., DOE field office coordinators and DOE Office of Health, Safety, and Security - Office of Enforcement and Oversight personnel)
MEMBERSHIP AND ORGANIZATION

Membership

Membership in the ECWG varies from year to year and is currently at approximately 65 members representing 39 EFCOG member companies. The EFCOG member companies not represented are generally those with little or no direct Price-Anderson Amendments Act (PAAA) or worker safety and health (WS&H) reporting or liability issues. The PAAA/WS&H Coordinators, Coordinator Alternates, and staff from most of the laboratory and company sites across the DOE complex are, for the most part, a part of the ECWG membership. Additionally, subject matter experts in the areas of quality assurance, radiation control, safety analysis root cause analysis, regulatory compliances, safeguards & security, legal offices, project management and program management are important members of the ECWG. Some of the members are also members of other EFCOG Working Groups, such as Integrated Safety Management & Quality Assurance, and Environmental Safety and Health.

Organization

Leadership in the ECWG is comprised of:

Co-Chair: Alan Wagner, Idaho National Laboratory
Co-Chair: Conard Stair, Babcock & Wilcox Y-12 National Security Complex

Secretary: (Vacant)

Subgroups: One subgroup is in place with leadership as follows:

- Peer Review Subgroup Chair: Debbie Jenkins, University of Tennessee-Battelle (Oak Ridge National Laboratory)

EFCOG Sponsoring Director: J. Gregory (Greg) Meyer, Fluor Hanford/Fluor Federal Services

DOE Sponsors: John S. Boulden III, Office of Enforcement and Oversight, HSS; and Kathy McCarty, Office of Enforcement and Oversight, HSS

Succession planning: ECWG leadership positions serve two year terms. However, a number of leadership positions are extended at the discretion of the EFCOG Sponsoring Director if the individual continues to provide on-going leadership support to the ECWG and if the individual desires to continue in the leadership role. The tenure of the Co-Chairs will continue to be split to ensure continuity and experience in the leadership roles. This ensures that only one of the Co-Chairs is replaced in any given year. It continues to be a goal that the Co-Chairs come from site contractors that are not funded through the same DOE Program Secretarial Office.

ACHIEVEMENTS

- The ECWG held two workshop sessions during FY 2011. The first was held on October 12-13, 2010 at the Lawrence Livermore National Laboratory. The second was held on April 5-7, 2011 in Las Vegas, Nevada. The meetings were very productive. Extensive presentation and discussions on nuclear safety, worker safety & health and classified information security issues, including lessons learned from recent enforcement actions, enforcement conferences, DOE Enforcement and Oversight program assist visits, and other interactions with the DOE HSS Office of Enforcement and Oversight, were held at both meetings.
The April, 2011 workshop was fully coordinated with the DOE Office of Enforcement and Oversight Annual Coordinator training. This proved to be very effective in allowing experienced contractor regulatory coordinators to interact and participate in training sessions with new contractors and DOE coordinators. The experienced coordinators readily offered insights, responded to a variety of questions, and provided support for breakout sessions associated with the training. There was a shift in the focus of the training from being directed largely at new coordinators to all coordinator participants as a forum for the DOE Office of Enforcement and Oversight to present enforcement cases with influencing technical information affecting enforcement decisions. The balance of the spring meeting was held for contractor coordinators only in which a variety of topics were discussed, including Non-Compliance Tracking System (NTS) reporting decisions, lessons learned from enforcement actions, conduct of effectiveness reviews, suspect/counterfeit items, security issues, and DOE conducted assist visits. This venue provided the opportunity for presentations and discussion of cross-cutting topics of interest.

The ECWG completed and posted one best practice on the EFCOG website:

- **Best Practice #94** – Contractor Participation in Enforcement Conferences – May 2011

**PLANNING FOR THE NEXT YEAR**

- A peer review of the implementation of the DOE regulatory program will be conducted for the Nevada National Security Site contractor (Nevada Security Technologies). The dates for the peer review have not been set.
- The Peer Review Subgroup will support any additional peer review requests made during 2012.
- The ECWG will conduct a fall Working Group meeting at the DOE Nevada Site Office in Las Vegas on October 25-26, 2011. The spring meeting will be held in conjunction with the DOE Office of Enforcement and Oversight meeting tentatively scheduled for April, 2012 at the Nevada Site Office. A separate meeting with contractor coordinators only will be held at the Nevada Site Office. The joint session will permit the Working Group to continue special emphasis on its already effective working relationship with the DOE Sponsor. All future Working Group meetings will be held at the Nevada Site Office with DOE’s concurrence due to the current economic conditions. This should reduce costs for most Working Group members.
- The ECWG will develop one best practice based on activities to date and proceed to posting it on the EFCOG website.
- The ECWG will continue coordination and collaboration with the DOE Office of Enforcement and Oversight and other EFCOG Working Groups on cross-cutting issues of mutual interest.
- The ECWG will support the DOE Office of Enforcement and Oversight in implementation of the assist visit process as a mechanism to further improve safety and security performance.
- Support the DOE Office of Enforcement and Oversight by providing input for the revision of the Enforcement Process Overview guidance document and enforcement coordinator’s handbook as well as provide input regarding NTS reporting thresholds to accommodate the anticipated revision to the Occurrence Reporting and Processing System (ORPS) Order.
- Provide support to the DOE Office of Enforcement and Oversight for regulatory meeting training and information exchanges to achieve the most effective meeting.
EFFECTIVENESS EVALUATION

Survey Monkey feedback results indicate that the ECWG meetings and activities are effective, although emphasis will be placed in the coming year on improving how the Working Group can assist in changing practices within member companies. Data for the key survey questions for the first four performance metrics are provided below:

<table>
<thead>
<tr>
<th>Question</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is participation in the ECWG ‘added value’ for your project/company?</td>
<td>100%</td>
</tr>
<tr>
<td>Are you changing any practices as a result of your involvement with the ECWG?</td>
<td>47%</td>
</tr>
<tr>
<td>Is the ECWG tackling issues relevant to the work you perform for your member company?</td>
<td>89%</td>
</tr>
<tr>
<td>Is the ECWG helping to create solutions for challenges you or your company are facing?</td>
<td>77%</td>
</tr>
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</table>

Ninety-five percent of responses indicated satisfied (63%) or very satisfied (32%) with the overall content of the meetings. As evidenced by the accomplishments listed above, the ECWG tackles relevant issues that are of interest to the DOE.

The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: One
- Number of white papers submitted to DOE: Zero
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Zero

The ECWG continued its positive interaction with the DOE Office of Enforcement and Oversight during 2011. The ECWG enhanced its partnership with DOE by restructuring meetings to effectively deal with key issues and hot topics important to both DOE and the contractor community. The efforts of the ECWG are geared toward overall support of the DOE desire to move the enforcement program from an “event-driven” to an “assessment-driven” process.

LESSONS LEARNED

The ECWG usually has a “contractor only” session during its fall and spring Working Group meetings. These meetings focus on contractor lessons learned from enforcement actions, enforcement letters and the new regulatory assistance reviews conducted and issued by the DOE Office of Enforcement and Oversight. Contractor lessons learned and related technical presentations are posted on the ECWG portion of the EFCOG website and thus are broadly disseminated. This long standing arrangement continues to be viewed by attending contractor members as very effective in ensuring open and candid communications of some enforcement matters that can be sensitive. Portions of each meeting are joint sessions with DOE participants where topics and areas of interest to DOE are shared with the contractor attendees.

The ECWG continues to benefit from strong DOE sponsorship and the commitment from the DOE Office of Enforcement to the Working Group’s success and effectiveness. Participation by the EFCOG Sponsoring Director continues to demonstrate, to both DOE and to the Working Group members, a
positive and proactive commitment from the EFCOG Board of Directors to continue the viability of the ECWG.

RECOMMENDATIONS

It is clear that the ECWG should be continued into the foreseeable future. The ECWG will continue to monitor and report on its effectiveness and will adjust its approach, when necessary, to satisfy the DOE Sponsor and to meet the changing needs and expectations of the EFCOG member companies.

The ECWG is structured to focus on key regulatory issues important to the DOE Sponsor and to be responsive to the needs and expectations of the EFCOG Board of Directors. The leadership and working direction of the ECWG comes from a Strategic Planning Committee (SPC) which is led by two Co-Chairs. This arrangement continues to be successful. The Co-Chair structure allows more flexibility and spreads the workload such that periodic crises and times of escalated workload do not typically occur to both Co-Chairs simultaneously. The ECWG also utilized the services of an SPC Coordinator who leads the planning efforts for the semi-annual meetings. The success of the Co-Chair arrangement is personality dependent in that the two Co-Chairs must be able to work together and share a common vision. It is recommended that the current leadership structure remain intact.
ENGINEERING PRACTICES WORKING GROUP

CHAIR: CHARLES KRONVALL, CH2M HILL PLATEAU REMEDIATION COMPANY
VICE-CHAIR: CHERRI DEFIGH-PRICE, PARSONS

INTRODUCTION

Vision – The vision is to provide a forum for continuous improvement in engineering-related areas of carrying out the Department of Energy (DOE), including the National Nuclear Security Administration (NNSA), missions.

Purpose - The purpose of the Engineering Practices Working Group (EPWG) is to promote engineering excellence in the execution of DOE missions by sharing best practices, applying lessons learned, and providing integrated recommendations to DOE officials and EFCOG contractor members.

Objectives

- Enable the success of DOE missions in terms of high-quality engineering that supports program and project objectives in a safe, cost-effective manner.
- Provide a forum for the exchange of ideas, needs, and wants among the EFCOG member engineers that:
  - increases awareness and involvement of senior contractor and DOE management,
  - increases awareness and involvement of middle and line management,
  - provides information bridges within the DOE, and
  - provides proactive, value-added recommendations to the DOE.
- Promote, coordinate, and facilitate the active exchange of successful engineering programs, practices, procedures, lessons learned, and other pertinent information of common interest to contractors and subcontractors.
- Enhance collaboration among DOE contractors and encourage early involvement of contractor experts in order to maximize the probability of success for unique engineering projects.
- Promote employee development in participating companies’ engineering talent by sharing management, training techniques, and technical information among EPWG participants through mechanisms such as workshops, task groups, and seminars.

Scope - The EPWG’s scope includes the areas of engineering practice associated with DOE facilities, programs, and capital acquisitions. Engineering practice is the application of engineering disciplines and processes as governed by national codes and standards, recognized quality standards, and DOE orders and regulations. This includes the application of engineering practices throughout the lifecycle of DOE facilities, including initial design and construction, commissioning, operation and maintenance, decommissioning, and closure.

MEMBERSHIP AND ORGANIZATION

Membership

There is a total of approximately 220 members in EPWG, including 65 members on the Working Group and an additional 155 members in the six Subgroups and two Task Teams. Some EPWG members also participate in one or more of the Subgroups. Fifty EFCOG member companies are represented on the EPWG.
Organization

Leadership in the EPWG is comprised of:

Chair: Charles Kronvall, CH2M Hill Plateau Remediation Company

Vice-Chair: Cherri Defigh-Price, Parsons (Salt Waste Processing Facility, Savannah River Site)

Secretary: Tobin Oruch, Los Alamos National Laboratory

Subgroups: Six subgroups are in place, along with two task teams and one exploratory team, with leadership as follows:

- Cognizant System Engineer (CSE) Subgroup Co-Chairs:
  - Diane Cato, Washington River Protection Solutions
  - Gary Tarbet, CH2M-WG Idaho

- Commercial Grade Dedication (CGD) Subgroup Co-Chairs:
  - Dennis Weaver, Greenberry Fabrication
  - Don Zinter, Washington River Protection Solutions

- Configuration Management (CM) Subgroup Chair: Bob Cullum, Washington TRU Solutions

- Fire Protection Subgroup Chair: Perry D’Antonio, Sandia National Laboratory

- Pressure Safety Subgroup Chair: Tom Etheridge, University of Tennessee-Battelle (Oak Ridge National Laboratory)

- Testing and Commissioning Subgroup Chair: Doug Messerli, Babcock & Wilcox Y-12

- DOE-STD-3024, “Content of System Design Descriptions” Task Team Chair: Cherri Defigh-Price, Parsons

- Engineering Software Task Team, Task Team Chair: Donna Bennett, Babcock & Wilcox Y-12

- Welding Exploratory Team, Acting Chair: Gary Cannell, Fluor Government Group

EFCOG Sponsoring Director: Roy Schepens, Parsons

DOE Sponsors: James O’Brien, Office of Health, Safety, and Security (HSS); Earl Hughes, HSS; Chip Lagdon, DOE Chief of Nuclear Safety; and James McConnell, NNSA

Succession planning: EPWG elections for officers are held each year. Informally, the EPWG encourages a transition from the Vice-Chair to Chair position to ensure a smooth leadership transition.

ACHIEVEMENTS

- The parent EPWG membership meets twice with one meeting in Washington, D.C. and one meeting that rotates among member locations. For FY 2011, the fall (October) meeting was hosted by Merrick in Denver, and the spring (April) meeting was held in Washington, D.C. At the meetings, Subgroups and Task Teams report on progress, completed focus areas are closed, new focus areas are discussed, new task teams are formed, and pertinent lessons are shared. Issues and lessons learned of interest to DOE are discussed and topical areas are selected for breakout sessions to take advantage of the face-to-face meetings for more interactive working level sessions versus a presentation format. In addition, there are two teleconferences each year for all members to call in and obtain updates. The EPWG leadership and all Subgroup Chairs participate in a monthly status call, which results in updated status reports of all Subgroup and Task Group activities, which are then posted for all members.

- The DOE National Training Center (NTC) in Albuquerque, New Mexico, was engaged to form a partnership for developing CM, CGD, CSE, and general engineering standards training courses. CM Training courses (two sessions) were delivered in February, 2011 at the DOE Nevada Site Office and at the ATC. EPWG members supported development of regional training sessions on
• An ASME B31.3, “Process Piping Design,” training was delivered in conjunction with the Pressure Safety Subgroup meeting in March 29-31, 2011 at the Savannah River Site with 25 attendees.

• The Fire Protection Subgroup continued to broaden partnership with the California Polytechnic University at San Luis Obispo fire protection engineering program. This initiative to establish a career pipeline/mentoring relationship with the DOE and contractor companies is being worked in partnership with the Human Capital Working Group.

• A listing of engineering software titles, software application, and points of contact have been compiled and are posted on the EPWG file transfer protocol (FTP) site. In conjunction with this activity, an EPWG member was invited and presented on this initiative at the fall Integrated Safety Management and Quality Assurance Working Group.

• The Fire Protection Subgroup continues to provide a forum for members to share information and lessons learned, discuss common issues, and to develop best practices. To support the efforts of the Subgroup, one meeting was held in Albuquerque, New Mexico, and monthly conference calls were also held.

• The CSE Subgroup held a meeting in May, 2011 in conjunction with the Annual DOE Facility Representative/Safety System Oversight Workshop in Las Vegas, Nevada, with 5 members in attendance. Candidate best practices were identified, including one on system health monitoring.

• The Pressure Safety Subgroup continued to develop an understanding of the requirements of an effective pressure safety program as required by 10 CFR 851 Appendix A Section 4.0, “Worker Safety and Health Program.” A pressure vessel SharePoint site, established for collaboration purposes, continues to be used frequently by members. This group is working to raise awareness of pressure safety program aspects and to quickly accelerate sites with relatively new programs to experienced, soundly-based programs. The group provided an excellent forum of contacts for members to communicate with more experienced sites on a real-time basis. A current initiative is development of an “Implementation Guide for Pressure System Safety,” as specified in 10 CFR 851 Appendix A.4, using the sections of 10 CFR 851 Section A.4 as an outline: 4a – The General Program; 4b – Codes and Standards; and 4c – Equivalency. A team presented draft sections for group discussion.

• Three best practices were posted during the fiscal year:
  o Best Practice #104 - Fire Protection Program Assessments - July 2011
  o Best Practice #105 - Improving Access to and Control of Database Information - July 2011
  o Best Practice #107 - Recommended Structure for System Health Monitoring and Reporting - September 2011

PLANNING FOR THE NEXT YEAR

• Participate in a joint fall meeting with the Safety Analysis Working Group (SAWG) in Albuquerque, New Mexico, on October 25-26, 2011. A key focus of the discussion will be to identify areas of mutual interest with the SAWG for future partnering.

• Continue activities involving developing and supporting implementation of training in the areas of conduct of engineering (a DOE HSS and Environmental Management requested initiative) and pressure safety training.

• Prepare a minimum of three best practices. Areas under consideration include:
  o Providing best practice documents for the creation, implementation, and maintenance of an Nuclear Quality Assurance (NQA)-1 compliant commercial grade item dedication program
  o Maintaining configuration management in work packages during decontamination and decommissioning (D&D)
  o Version and formal change control during design
Design deliverables at 30-60-90-100%
- Final design documents and system design descriptions as design tools and deliverables
- “As-built” definition (versus “as found”)
- Title III services by the original architect-engineer
- Software configuration management
- Vendor information (formats, control, cataloging)
- Major modifications to operating facilities - special considerations
- Utilization of exemption process

- Maintain a listing of engineering software utilized at each of the major DOE sites. Use the listing to foster communication and error sharing between users of common codes and grow the effort to promote efficiency and cost savings among members.
- As requested by DOE HSS, provide assistance to the DOE Headquarters-led team evaluating natural phenomena hazard criteria development and implementation.
- Re-evaluate and make recommendations to DOE HSS relative to non-safety requirements presently in DOE-STD-1066, “Fire Protection Design Criteria,” when the additional requirements do not impact the safety and health of the public or worker.
- Pressure Safety Subgroup plans include:
  - Organize support for criteria for barrier design of pressure systems.
  - Seek HSS resolution of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code dates associated with 10 CFR 851.
- Complete a draft of an Implementation Guide for Pressure System Safety as specified in 10 CFR 851 Appendix A.4, using the sections of 10 CFR 851 Section A.4 as an outline.
- Fire Protection Subgroup plans include:
  - Benchmark site Authority Having Jurisdiction programs, particularly looking at roles, responsibilities, authorities, and accountabilities.
  - Benchmark fire barrier penetration seal configuration management practices.
  - Benchmark site fire protection design criteria (international codes vs. National Fire Protection Association).
  - Develop and post fire hazards analysis tool box.
  - Develop updated fire protection system and equipment inspection, testing, and maintenance recommended frequencies.
  - Continue to support DOE, including NNSA, on the development of a technical position to address actions appropriate for potential significant HEPA filter loadings under fire scenarios.

LESSONS LEARNED
Informal communication via e-mail and telephone was utilized, both in conjunction with the scheduled activities as well as informally to share information and best practices as a key to effectiveness. Members used EPWG as a sounding forum on issues that arose in their locations and as a communication network for sharing information on emerging issues and trends, sharing newly released documents/formal lessons learned, and for seeking answers to day-to-day engineering questions and challenges. The EPWG’s FTP site provided members with procedures, standards, guides, and training material from other DOE sites not normally posted on a public web site.

A challenging aspect of EPWG is the great diversity among the various members in how engineering,
CM, testing, pressure safety system design and operation, CGD, and fire protection activities are organized and executed at their sites. Working Groups will need to keep this in mind to ensure value for all its members.

Travel budget restrictions and downsizing of several large DOE site engineering staffs has impacted total attendance numbers and participation in sub-group activities. It has also made maintenance of an accurate subject matter expert list more challenging. The EPWG selection of Denver, Colorado (a central location) to reduce travel costs in fall 2011 was one way to reduce impacts. Increased usage of web based communications (example WebEx meetings) may also help to maintain contacts under reduced travel budgets.

**EFFECTIVENESS EVALUATION**

Survey Monkey feedback results indicate that the EPWG meetings and activities are effective. Data for the key survey questions in response to the first four performance metrics are provided below:

<table>
<thead>
<tr>
<th>Question</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is participation in the EPWG ‘added value’ for your project/company?</td>
<td>100%</td>
</tr>
<tr>
<td>Are you changing any practices as a result of your involvement with the EPWG?</td>
<td>91%</td>
</tr>
<tr>
<td>Is the EPWG tackling issues relevant to the work you perform for your member company?</td>
<td>92%</td>
</tr>
<tr>
<td>Is the EPWG helping to create solutions for challenges you or your company are facing?</td>
<td>100%</td>
</tr>
</tbody>
</table>

One hundred percent of responses indicated satisfied (31%) or very satisfied (69%) with the overall contents of the meetings. As evidenced by the accomplishments listed above, the EPWG tackles relevant issues that are of interest to the DOE.

The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: Three
- Number of white papers submitted to DOE: Zero
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Four

The EPWG has been effective during the past year, most notably in supporting DOE in several major initiatives, including the updates to the above standards/Orders and in support of training initiatives. The EPWG was positively recognized by the DOE customers in these activities, demonstrating the benefit of the EFCOG’s close interaction with DOE. DOE recognition is reflected in the request for EPWG support on new initiatives. This interaction is increasing performance and effectiveness across the DOE sites. The EPWG is focused on issues that are significant, and the output is being used by member companies to enhance engineering effectiveness. Strong interaction within the EPWG was evidenced throughout the year. The EPWG activities and contributions in FY 2011 covered a broad spectrum of activities, and the results were positively recognized by DOE.
RECOMMENDATIONS

It is recommended that the EPWG continue activities in support of DOE and the common interest of the contractor community in accordance with the FY 2012 plans. The EPWG leadership will evaluate the current status of the Testing Subgroup and the Cognizant System Engineer Subgroup. These two Subgroups did not meet expectations for effectiveness and contribution. Both Subgroups’ chartered activities are an important piece of a healthy and rigorous engineering program; however, member participation during FY 2011 declined. The DOE-STD-3024 Task Team’s work is complete, and the team has been disbanded. The EPWG is available to support other critical initiatives of the EFCOG Board of Directors and DOE that may be identified during the upcoming year. To accomplish all tasks, robust member company interaction and involvement in major activities and effective integration among various Working Groups will be required.
ENIRONMENTAL SAFETY AND HEALTH WORKING GROUP

CHAIR: ANTHONY UMEK, SAVANNAH RIVER NUCLEAR SOLUTIONS; PAT PADEZANIN, SAVANNAH RIVER NUCLEAR SOLUTIONS
VICE-CHAIR: RICHARD DEBUSK, LAWRENCE BERKELEY NATIONAL LABORATORY

INTRODUCTION

Vision - The vision of the Environmental Safety and Health (ESH) Working Group (ESHWG) is focused on supporting cost effective, efficient operation of Department of Energy (DOE) - including National Nuclear Security Administration (NNSA) - facilities while maintaining as the highest priority, safe, environmentally sound, and secure operations through the ongoing exchange of information and corresponding improvement initiatives.

Purpose - The purpose of the ESHWG is to promote excellence in all aspects of environmental protection and safety and health for the member organizations. The ESHWG identifies, evaluates, and selects "best in class" ESH practices, procedures, and tools for deployment and application throughout the DOE complex.

Objectives

- Promote, coordinate, and facilitate the active exchange of successful programs, practices, procedures, tools, lessons learned, and other pertinent information of common interest that can be adapted to enhance ESH performance of all contractors in the DOE complex.
- Working with the EFCOG Board of Directors, identify and address issues of common interest, including initiatives to foster continuous ESH improvement.
- Through focused subgroups, promote cooperation and interchange information, as appropriate, within EFCOG and with other entities involved in similar activities (e.g., Occupational Safety & Health Administration, Institute of Nuclear Power Operations, National Enforcement Investigation/Investigations Center, etc.), while minimizing duplication of efforts.
- Focus on active personal exchanges of management and technical information among contractors.
- Interact with DOE in ways that produce value-added benefits for both DOE and the contractor community. This includes DOE sponsorship and participation in ESHWG activities, as well as participating in technical exchanges with DOE as appropriate.

Scope

- Activities focus on work efforts, programs, and processes that are pertinent to promoting excellence involving ESH throughout the DOE complex. Other focus areas will be determined by the EFCOG Board of Directors, in consultation with the DOE, when required.
- The ESHWG facilitates the exchange of information through such vehicles as meetings, workshops, conferences, Working Groups, and written materials. ESHWG documents the results of various member-sponsored efforts in reports and position papers, including the EFCOG website.
- While the ESHWG does not lobby, advocate independent positions, or try to change DOE policy, the Working Group facilitates dialogue between DOE and member organizations for the purpose of understanding issues and initiatives of mutual interest.

MEMBERSHIP AND ORGANIZATION

Membership - The ESHWG has approximately 175 active members with representation from 36 of the EFCOG member companies.
Organization

Leadership in the ESHWG is comprised of:

Chair: Tony Umek, Savannah River Nuclear Solutions (through late FY 2011); Pat Padezanin, Savannah River Nuclear Solutions

Vice-Chair: Richard DeBusk, Lawrence Berkeley National Laboratory

Secretary: James Morgan, Savannah River Nuclear Solutions

Subgroups: Seven subgroups are in place, along with four task groups, with leadership as follows:

- Industrial Hygiene/Industrial Safety Subgroup Chair: Dina Siegel, Los Alamos National Laboratory
- Environmental Subgroup Chair: David Folse, DM Petroleum Operations Company
- Occupational Medicine Subgroup Chair: Jamie Stalker, Argonne National Laboratory
- Chemical Safety & Lifecycle Management (CSLM) Subgroup Chair: Steve Harris, Lawrence Livermore National Laboratory
- Electrical Safety Subgroup Chair: Jackie McAlhaney, Savannah River Nuclear Solutions
- Radiation Protection Subgroup Chair: Mark Ledoux, EnergySolutions
- Laser Safety Subgroup Chair: Joanna Casson, Los Alamos National Laboratory
- Leading Indicators/Metrics Strategy Task Group Chair: Steve Prevette, Savannah River Nuclear Solutions. The team has disbanded.
- Neutron Quality Factor Radiation Protection Task Group Chair: Ken Crase, Savannah River Nuclear Solutions. The team issued its report and has disbanded.
- Plutonium 241 Task Group Chair: Ted Glitz, Hanford Mission Support Alliance LLC. The team has issued its report and has disbanded.

EFCOG Sponsoring Director: Nick DiMascio, Bartlett Services, Inc.

DOE Sponsors: Pat Worthington, Office of Health, Safety, and Security (HSS); Ray Corey, NNSA (now DOE-Richland Operations Office)

Succession planning: A new Chair was selected late in FY 2011, along with a new Vice-Chair.

ACHIEVEMENTS

- A number of successful meetings were held in FY 2011:
  o The ESHWG held its fall meeting in Brookhaven National Laboratory October, 2010 in conjunction with the Electrical Safety Workshop and its spring meeting in March, 2011 in Washington, D.C., in conjunction with the 13th Annual Joint EFCOG/DOE Chemical Management Workshop.
  o The CSLM Subgroup, in conjunction with the DOE Chemical Safety Topical Committee, co-sponsored the Annual Joint EFCOG/DOE Chemical Safety and Lifecycle Management Workshop, on March 22-24, 2011. The year's theme was “Keeping Chemicals Safe and Secure.” The workshop topics included chemical safety and security, facility security, transportation security, enterprise integrated safety management, and globally harmonized system impacts at DOE sites. The workshop attracted approximately 200
participants (including telecast) from 14 sites throughout the DOE complex and included 30 speakers representing various federal and private sectors.

- Two Occupational Medicine Subgroup meetings were held in Las Vegas, Nevada, and at the Y-12 National Security Complex in Oak Ridge, Tennessee, in the fall of 2009 and spring of 2010, respectively. Continuing education credits were awarded for those participating. Outcomes included:
  - Better understanding of individual site occupational medical needs as a result of rotating meetings to different sites.
  - Collaboration with DOE Former Worker Programs with emphasis on information sharing going forward. The intent is to apply this information for use in the occupational medical clinics for active workers as applicable.
  - Continued collaboration and review of best practices for site wellness programs.
  - Continued discussion of and support for site development and use of DOE compatible electronic medical records systems with interoperability with other data systems. Complex-wide psychologists participated in the discussion, with a focus on fitness for duty issues.
  - Review of current medical and scientific literature concerning medical effects of engineered nanomaterial exposures.
  - Successful web broadcast of the previous spring 2010 meeting by the Oak Ridge Institute for Science and Education’s Radiation Emergency Assistance Center/Training Site.

- The Laser Safety Subgroup coordinated with the Massachusetts Institute of Technology to hold its annual meeting in conjunction with the Laser Safety Officer (LSO) Workshop 2011. The workshop was attended by nearly 150 attendees form DOE sites, academic institutions, and high-tech firms. The workshop was made up of presentations by nationally and internationally renowned laser and laser safety experts from the private sector and government agencies. The workshop is a grassroots effort by the DOE LSOs in response to the DOE Special Operations report issued in 2005.

- The Electrical Safety Subgroup coordinated the fall ESHWG meeting in conjunction with its annual Electrical Safety Workshop, October 4-8, 2010, at Brookhaven National Laboratory in Upton, New York. The ESHWG meeting attracted approximately 280 participants from over 25 sites and offices throughout the DOE complex. Approximately 125 of these attendees (contractor, federal and private industry) participated in the week-long Electrical Safety Workshop.

- The Electrical Safety Subgroup coordinated and sponsored a three-day Subsurface Investigation Workshop at the National Renewable Energy Laboratory in Golden, Colorado, on August 1-3, 2011. Over 40 DOE contractor personnel attended the workshop and over 15 other contractor personnel participated via a video conference link. Each of the participating contractors provided a summary and discussion of the subsurface investigation program and best practices used at their site. The Electrical Safety Subgroup also partnered with the Institute of Electrical and Electronic Engineers (IEEE) to hold its spring meeting in conjunction with the annual IEEE Electrical Safety Workshop. This spring meeting was attended by 38 electrical safety (contractor and federal) subject matter experts.

- The ESHWG prepared and posted five best practices on the EFCOG website:
  - Best Practice #87 – Safety Performance Index – November 2011
  - Best Practice #88 – Radiation Protection Technology Training Fast-Track – February 2011
  - Best Practice #89 – Emergency Preparedness Contributes to Correct Radiological and Medical Response Actions – February 2011
- Best Practice #90 - Addressing Short-Term Increased Training Demand - Recovery Act Training Challenges and Success at the Hanford Site - February 2011
- Best Practice #93 - Student Sustainability Challenge - May 2011

- The CSLM Subgroup had two papers from the CSLM Publications Team published by Journal of Chemical Health and Safety, a peer-reviewed journal of the American Chemical Society. The papers are entitled “Use of Chemical Inventory Accuracy Measurements as a Leading Indicator” and “Methods for the Safe Storage, Handling, and Disposal of Pyrophoric Solids and Liquids in the Laboratory.”

- The Electrical Safety Subgroup, in conjunction with DOE HSS, developed and promoted a May Electrical Safety Month focus for the DOE complex.

- The Electrical Safety Subgroup worked with DOE Headquarters personnel to propose new Hazardous Electrical Energy Control criteria for DOE Order 232.2, “Operations Reporting and Processing,” that will use the Electrical Severity Measurement Tool as a basis for hazard determination and reporting for electrical events. The proposed change is included in the RevCom review cycle for approval.

- The Electrical Severity Measurement tool was revised by the Electrical Safety Subgroup to clarify the electrical hazard factor and re-define the severity significance categories based on feedback from DOE and contractors.

- The Electrical Safety Subgroup members continued to support the DOE HSS in development of the monthly DOE Electrical Safety Report.

- At DOE’s request, the Environmental Subgroup prepared and provided a white paper, “EFCOG Environmental Subgroup - Position Summary and Recommendations,” on the integration of Environmental Management Systems ISO 14001 and ISM for their development of DOE Order 436.1, “Departmental Sustainability.”

- The Industrial Hygiene and Safety Subgroup in cooperation with the Integrated Safety Management and Quality Assurance Working Group is sponsoring a joint development effort with DOE HSS on revising the DOE Accident Investigation Manual and associated training.

- The Industrial Hygiene and Safety Subgroup is developing a Leading Indicator tool for Industrial Hygiene and Safety, which includes a leading metric definition.

- The Industrial Hygiene and Safety Subgroup established the Behavior Based Safety/Human Performance Improvement Project. The scope of this project is to maximize value of the behavior-based safety (BBS) and human performance by effectively expanding the BBS observations to include a determination regarding human performance improvement causal factors.

- The Chair and Co-Chair of the EFCOG Occupational Medicine Subgroup led members successfully into a new direction of discovery, benchmarking, and focused in-depth subject area discussions. In this past year, the Subgroup focused on wellness programming, metrics analysis, and the business end of occupational medicine clinics, occupational health implications of engineered nanomaterials, legal considerations, radiation emergency response, beryllium programs (participation in the webinars), and continued assessment of best practices in clinic programming overall, including approaches to electronic health records.

- The Occupational Medicine Subgroup worked closely with the National Supplemental Screening Program and other former worker programs, through the DOE program manager, to establish an understanding of active and former worker program functions and to work on continuity of information flow between the two entities.

- The Radiation Protection Subgroup performed five benchmarking requests during the year. Benchmarking between interested contractors has proven valuable in rapidly determining what or how different radiological situations are handled in the complex. For example, a request related to management of new tattoos in contamination areas resulted in...
confirmation that all contractors were consistent in their management policies. To improve communication of completed benchmarking, the Radiation Protection Subgroup is evaluating how best to post the information summaries and contacts on a web page.

- The Radiation Protection Subgroup completed reviews and updates to two recent Type B investigations involving radiological events in the DOE complex. The subgroup shared details of the event and management controls/barriers that would prevent or control similar events.
- The Radiation Protection Subgroup continued support and updates on complex-wide support being provided to the educational communities on providing future radiological control technicians and professional health physics/nuclear training. Several programs have been started in the last few years with direct equipment and personnel support being provided by contractor organizations.
- The ESHWG Chair continued to participate on the DOE Headquarters Directives Reform Team for Safety & Health.

**PLANNING FOR THE YEAR AHEAD**

- The fall 2012 ESHWG meeting will be held in early October 2011 at the Oak Ridge Y-12 National Security Complex. This meeting will serve as a forum to host a substantial discussion related to worker health and safety regarding new and ongoing activities.
- The spring 2012 ESHWG meeting will be in Washington, D.C., to facilitate increased participation by DOE personnel. Again, it will be held in conjunction with the Chemical Safety and Lifecycle Management Workshop.
- The Electrical Safety Subgroup is again working with the Institute of Electrical and Electronic Engineers (IEEE) to hold its spring meeting in conjunction with the annual IEEE Electrical Safety Workshop.
- The Occupational Medicine Subgroup will continue to rotate meetings to different sites to allow for occupational medicine clinic visits and to foster greater understanding of similarities and differences between various DOE Sites.
- The Laser Safety Subgroup 2012 annual meeting will take place in conjunction with the LSO Workshop at a location to be announced.
- With the issuance of the ANSI Z136.8, “Laser Safety in the Research, Development and Testing Environment Standard,” the Laser Safety Subgroup plans to work towards the adoption of this standard by DOE.
- The ESHWG will complete and post up to three best practices for the EFCOG website.
- Under the leadership of the Occupational Medicine Subgroup, sponsor the topics of wellness and performance indicators of safety to integrate with other EFCOG Working Groups and DOE.
- Planning in support of and participation in the September 2012 Integrated Safety Management Champions Workshop.
- Support member companies and DOE evaluation and implementation of the changes to the Hazardous Communication Standard expected to be issued in early CY 2012.
- Continuation of support in safety improvement initiatives in electrical safety, industrial hygiene and safety exposure monitoring, and radiological controls.

**LESSONS LEARNED**

Based on successful experience over the past three years to facilitate DOE and NNSA participation, at least one ESHWG meeting will be held in the Washington, D.C., area. Subgroups will be encouraged to meet at the semi-annual ESHWG meetings, but some subgroups will benefit from joint meetings with industry groups. No one right solution is proposed, but continued emphasis will be applied to ensure meetings and activities provide the best value to the members.
The ESHWG monitors various trends throughout the DOE complex. Based on an increasing trend of electrical safety events, the Electrical Safety Subgroup is doubling their focus on electrical safety.

**EFFECTIVENESS EVALUATION**

Survey Monkey feedback results indicate that the ESHWG meetings and activities are effective, although emphasis will be placed in the coming year on improving how the Working Group can assist in changing practices within member companies. Data for the key survey questions in response to the first four performance metrics are below:

<table>
<thead>
<tr>
<th>Question</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is participation in the ESHWG ‘added value’ for your project/company?</td>
<td>97%</td>
</tr>
<tr>
<td>Are you changing any practices as a result of your involvement with the ESHWG?</td>
<td>53%</td>
</tr>
<tr>
<td>Is the ESHWG tackling issues relevant to the work you perform for your member company?</td>
<td>90%</td>
</tr>
<tr>
<td>Is the ESHWG helping to create solutions for challenges you or your company are facing?</td>
<td>83%</td>
</tr>
</tbody>
</table>

One hundred percent of responses indicated satisfied (53%) or very satisfied (47%) with the overall contents of the meetings. As evidenced by the accomplishments listed above, the ESHWG tackles relevant issues that are of interest to the DOE.

The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY Five
- Number of white papers submitted to DOE Six
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE Twelve

The positive impact of the ESHWG to the customer was continued through the various participating contractor operations. Sharing of ESH processes and practices, which were made available for implementation at the various DOE locations, resulted in cost savings to all EFCOG member companies. ESHWG activities are focused around two central meetings where all members of the Subgroups can assemble at one place at one time. 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.” Integration with other Working Groups provides the opportunity to leverage resources and benefited the ESHWG in 2011.

**RECOMMENDATIONS**

The ESHWG and its Subgroups as currently organized should continue during FY 2012.
HUMAN CAPITAL WORKING GROUP

CHAIR: DIONE HEUSEL, DM PETROLEUM OPERATIONS COMPANY, INC.
VICE-CHAIR: TOM RICHEY, BABCOCK & WILCOX Y-12 NATIONAL SECURITY COMPLEX

INTRODUCTION

Vision – Ensure the human resource capacity and capability to sustain DOE - including the National Nuclear Security Administration (NNSA) - mission readiness through the next decade.

Purpose - The Human Capital Working Group (HCWG) facilitates collaboration between EFCOG and DOE to promote effective human capital management approaches. The HCWG advances strategic alliances between program and mission leaders and human resource professionals in order to preserve and sustain the workforce capability and capacity vital to DOE and the national security of the United States.

Objectives – Traditional practices for managing and leading human capital within core DOE businesses are insufficient for meeting future workforce requirements. Since effective recruitment and retention of human capital are two of the most crucial issues facing DOE and its contractor community within the next 10 years, the HCWG identified the following five human capital management objectives:

- Define a systematic approach for measuring effectiveness of human capital management performance (people readiness) with demonstrated leading, real-time, and lagging performance indicators.
- Assess and evaluate qualitative and quantitative data from national security critical skill sets and institutionalize the approach within the EFCOG community in a manner that is predictive and timely in mitigating risks to the government sector.
- Examine DOE program sectors and present annual results of predictive trends and recommendations of at-risk, mission critical skills based on projected demand and supply factors to the EFCOG and DOE community.
- Align strategic human resource and mission management partnerships with industry best practices in human capital.
- Communicate advanced transformational strategies and concepts applicable across EFCOG Working Groups and DOE programs that support innovative business approaches for sustaining a strong, well-educated and trained 21st century workforce.

Scope

- Facilitate exchange of information for purposes of understanding issues and initiatives of mutual interest with other EFCOG Working Groups and other governmental/non-governmental organizations regarding application of innovative approaches to human capital management. Communication venues for such exchanges may be in related conferences, meetings, teleconferences and other venues for verbal and/or written communications.
- Communicate with other EFCOG and DOE groups to avoid duplication of effort, recognizing that other EFCOG Working Groups have related human capital initiatives underway.
- Document results in reports and position papers and provide them to other EFCOG Working Groups, the EFCOG Sponsoring Director and other Directors, and the EFCOG Executive Council.
MEMBERSHIP AND ORGANIZATION
The membership of the HCWG has approximately 38 participants and includes representatives from 19 EFCOG member companies.

Leadership in the HCWG is comprised of:

Chair: Dione Heusel, DM Petroleum Operations Company, Inc.
Vice-Chair: Tom Richey, Babcock & Wilcox Y-12 National Security Complex
Secretary: Cristina Bordelon, DM Petroleum Operations Company, Inc.
Subgroups: None
EFCOG Sponsoring Director: Pat Smith, Sandia National Laboratories
DOE Sponsors: Sandra Waisley, Office of Environmental Management; and Mari-Jo Campagnone, Office of Health, Safety, and Security

Succession planning: This will be determined based on upcoming discussions with DOE Sponsors and the EFCOG Board of Directors

ACHIEVEMENTS

- Sponsored and organized a panel discussion on workforce planning at the 2011 annual EFCOG Executive Council meeting. The panel featured highlights of strategic workforce planning initiatives from three DOE contractors representing various stages of planning maturity.
- Prepared and posted two best practices on the EFCOG website:
  - Best Practice #106: U-Learn - Lawrence Livermore National Laboratory’s Multi-Faceted, Multi-Modal On-Line Learning Program – September 2011
  - Best Practice #108: Developing Every Leader at Every Level – September 2011
- Collaborated with the Engineering Practices Working Group in an effort to understand and address fire protection engineering staffing issues in support of DOE work. A survey was prepared to collect demographic data, forecasts of future staffing levels, and personnel qualification requirements. The survey was distributed by the Fire Protection Subgroup and was discussed in conference calls with the group membership. Data collection continues.
- The HCWG leadership team met individually with the DOE sponsors to ensure that the efforts of the HCWG remained in alignment with their current interests and needs. These meetings provided a good opportunity to discuss emerging issues, as several of the organizations the sponsors represent were beginning to deal with organizational change and workforce planning in the face of institutional constraints.
- A Working Group meeting was held in conjunction with the 2011 annual EFCOG Executive Council meeting. Topics of discussion included workforce planning, presentations on best practices, and sharing of information related to the DOE salary freeze, pension contribution issues, and upcoming changes in healthcare benefits.
- The Working Group made effective use of teleconferences as the primary means of communication. Conference calls were scheduled monthly and were used to keep members apprised of current efforts and to discuss issues and solutions to human resource questions.
PLANNING FOR THE YEAR AHEAD

• Complete the evaluation of the fire protection engineer staffing issues. In addition to providing recommendations to the Engineering Practices Working Group, the results will be presented as a case study to the DOE Sponsors and EFCOG community.
• Prepare and post up to three best practices and lessons learned from the Working Group.
• Provide workforce planning recommendations to DOE Sponsors.

LESSONS LEARNED

Human capital management is an issue that every DOE office and contractor has to address. For most organizations, it is not the central mission. Therefore, it is critical to the HCWG that sponsors be identified in sufficient numbers and at appropriate levels in the sponsoring organization to provide the necessary focus and alignment with the objectives of the organization.

EFFECTIVENESS EVALUATION

Although formal surveys were not used, the effectiveness of the HCWG was gauged informally. The regular conference calls were structured in a way that not only allowed but encouraged discussion of current issues of relevance. Frequently, the members expressed that the discussion and collaboration which take place in these calls and during the Working Group meetings are useful to them as they address the issues in their companies. While this approach does not always result in a completion of a specific deliverable, it does benefit the participating companies. One of the HCWG DOE Sponsors provided feedback that “EFCOG’s focus on the human capital issues in the last few years has been important in getting perspectives on a complicated issue with broader implications than just the issues that affect the management of the Federal workforce. Dialogues of this kind keep the senior DOE managers abreast of issues that could potentially affect their operations.”

The Survey Monkey feedback tool was not utilized by the HCWG during FY 2011, therefore no performance metric data are available for the first four metrics. The following is provided for performance metrics five through seven:

• Number of best practices posted during the FY: Two
• Number of white papers submitted to DOE: Zero
• Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Zero

RECOMMENDATIONS

The HCWG believes the continued presence of human capital as an area of focused effort, especially for supporting human capital needs and issues across EFCOG member companies. At its December 2011 meeting, the Board recommended that the Human Capital Working Group be leveraged with another Working Group to achieve optimum results. The HCWG will continue in its current form until an appropriate transition can be made.
INTEGRATED SAFETY MANAGEMENT AND QUALITY ASSURANCE WORKING GROUP

CHAIR: NORM BARKER, ENERGY SOLUTIONS
FIRST VICE-CHAIR: JOHN MCDONALD, WASHINGTON RIVER PROTECTION SOLUTIONS
SECOND VICE-CHAIR: SUSAN KIMMERLY, URS CORPORATION (URS | CH2M OAK RIDGE, LLC)

INTRODUCTION

Vision - The vision of the Integrated Safety Management (ISM) & Quality Assurance (QA) Working Group is to be recognized by both the Department of Energy (DOE), including the National Nuclear Security Administration (NNSA), and EFCOG as a driving force for complex-wide performance improvement throughout the full spectrum of Integrated Safety Management and Quality Assurance activities.

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

Objectives

- Promote, coordinate, and facilitate the active exchange of successful programs, practices, procedures, lessons learned, and other pertinent information of common interest to ISM and QA.
- Promote ISM and QA 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 and QA processes and programs.
- Facilitate coordinated contractor input to DOE on ISM and QA-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.

Scope - The scope of the Working Group is selected processes and activities directly associated with ISM system (ISMS) core functions and guiding principles such as:

- Feedback and improvement
- Work management
- Assessment processes
- Causal analysis
- Corrective action processes
- Human performance improvement
- ISM safety culture
- Occurrence reporting
- Operating experience review
- Performance metrics/analysis
- Quality assurance policy and program
- Quality engineering
- Supply chain quality
MEMBERSHIP AND ORGANIZATION

Membership

Membership on the Working Group includes representatives from the majority of DOE sites, with approximately 150 active members from 39 EFCOG member companies.

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

Organization

Leadership in the ISM&QA Working Group is comprised of:

Chair: Norm Barker, EnergySolutions

1st Vice-Chair: John McDonald, Washington River Protection Solutions

2nd Vice-Chair: Susan Kimmerly, URS Corporation (URS|CH2M Oak Ridge, LLC)

Secretary: Alice Lewis, Pacific Northwest National Laboratory

Subgroups: Four subgroups are in place (with sub-tier task groups) with leadership as follows:

- Feedback and Improvement (F&I) Subgroup Chair: Patricia Allen, Savannah River Remediation LLC
- ISM Safety Culture Subgroup Chair: John McDonald, Washington River Protection Solutions
- QA Subgroup Chair: Mike Mason, Bechtel Group, Inc.
- Work Management Subgroup Chair: Tim Flake, Savannah River Nuclear Solutions

EFCOG Sponsoring Director: Robert Milazzo, Tetra Tech, Inc.

DOE Sponsors: Pat Worthington, Office of Health, Safety, and Security (HSS); and Ray Corey, NNSA (now Richland Operations Office)

Succession planning: This is conducted by incumbent officers based on future anticipated vacancies. A Vice-Chair typically will move into the Chair position as the position becomes available, but not always. This allows for a flexible transition of vacancies in the Working Group.

ACHIEVEMENTS

- The Working Group leadership team supported the 2011 DOE ISM Champions Workshop in September, 2011 in Kennewick, Washington, by supplying track leads and speakers, reviewing abstracts, and providing general meeting support.
- Improvements were made to the EFCOG best practices website which provides a single reference point for all contractors and DOE. The best practice enhancement initiative continued to focus on improving the best practices process.
- Continuing support was provided to the DOE Occurrence Reporting and Processing System (ORPS) group in support of the new DOE Order.
- The Working Group continued liaison efforts with INPO and DNFSB.
Semi-annual ISM&QA Working Group meetings in FY 2011 were held at the DOE Nevada Site Office in Las Vegas, Nevada, on November 30–December 2, 2010, and at Argonne National Laboratory on April 26-28, 2011. Attendance at the semi-annual meetings averaged approximately 125 personnel. A Training and Communications Forum was provided the first day of each meeting, covering topics such as hot topics, safety culture, and quality assurance.

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

The Safety Culture Subgroup continued to grow in interest as well as involvement of Subgroup personnel in related industry activities. The Subgroup Chair participated in both the DNFSB 2011-1 Implementation Plan committee led by DOE and was the contractor safety culture track lead for the well-attended 2011 DOE ISM Champions Workshop culture track. The fall 2011 ISM&QA Working Group meeting included a half day session on safety culture training. The fall 2011 Subgroup meeting focused on potential impact of the DNFSB 2011-1 Implementation Plan and what EFCOG could do to assist this activity. Members of the Subgroup are interfacing with the 2011-1 Implementation Plan team and provide input and advice as appropriate on behalf of EFCOG. Actions are underway to update the EFCOG safety culture website and the EFCOG safety culture guidance documents based on lessons learned and DNFSB 2011-1 activities.

There was significantly increased participation in the development of EFCOG best practices due to increased focus by the Board of Directors and the ISM&QA Working Group. There was continued work to keep the best practices website up-to-date with appropriate contact information. EFCOG’s best practices receive primary exposure through the DOE’s HSS Operating Experience/Lessons Learned website and through other less formal conduits. For example, the DOE Oak Ridge Operations Office sends out a daily “Items of Interest” email that is distributed to several other sites around the DOE complex and lists links to all new best practices. The best practices are also listed with links on the weekly DOE Operating Experience / Lessons Learned email notification to points of contact across the DOE complex.

The QA support from EFCOG to the DOE Environmental Management (EM) Corporate QA Board continued.

Continued activities within the Work Management Subgroup as follows:
- Continued to work on the Work Planning & Control (WP&C) Improvement Initiative Project Plan with NNSA and EM.
- Performed WP&C assist visit assessment at Los Alamos National Laboratory.
- Continued to develop and author the EFCOG WP&C guideline.
- Participated in the ISM Champions Workshop as the WP&C Track Lead.

The Supply Chain Task Team continued the development of the Joint Supplier Evaluation Program (JSEP), which included the accessibility of a database for gathering audit data and making it available to the site QA organizations for both contractor and DOE personnel. The Team also continued to work with NNSA program personnel to integrate the EM evaluation program with the NNSA evaluation program.

The QA Policy and Program Requirements Task Group continued to develop guidance on best practices for measuring the “health” of quality with metrics.

The Quality Control (QC) Task Group activities included:
- Assisting the Work Management Team by providing direction in the application of a graded approach to work packages.
- Defining the multi-processes for the qualification/certification of QC personnel.

The Software Quality Assurance Task Group focused on the following issues:
- Participating in the review cycle of the draft DOE guide for dedication of commercial grade software which includes the review of industry standards for a comprehensive path forward for effectively dedicating commercial software.
Developing guidance on processes for commercial grade dedication of software used for design and safety analysis of nuclear facilities.

This was a transformational year for the F&I Subgroup. The Subgroup has been focusing on the development of leading and lagging metrics and methodologies to obtain the data input. The Subgroup teamed with DOE HSS to mine valuable data contained in DOE complex databases, explore the Wiki websites, review the lessons learned reports, and view the new videos developed to share best practice and lessons learned. The Subgroup shared multiple metrics to track performance, allowing for mid-course corrections and sustained performance.

The F&I Subgroup also shared examples of how feedback and improvement was implemented at various sites/projects. Examples included using metrics to track improvements in performance after improvement actions were implemented, valuable insight gained from reviewing lesson learned from “stop work” reviews, lesson learned from analyzing previous enforcement actions, and how to improve personnel training using feedback.

The F&I Subgroup supported the 2011 ISM Champions Workshop. The Feedback and Improvements sessions were well attended. Excellent examples of how to best utilize feedback and improvement were shared. Several follow-up actions occurred after the workshop between participants to continue the sharing of best practices. These forums provided excellent venues for sharing and gaining ideas and concepts to incorporate.

Two best practices were prepared and posted during the year:

- Best Practice #85 – ISMS and Safety Culture – October 2010
- Best Practice #91 – Successful Strategies for Integrating ISMS into the On-Boarding Process – February 2011

**Planning for the Next Year**

- The Safety Culture Task Team will continue activities as the newly formed Safety Culture / High Reliability Organization (HRO) Subgroup. This Subgroup’s scope was broadened to include HRO to further enhance the safety culture model as well as ISMS. The new Subgroup will look at capturing lessons learned from pilot facilities and establish ongoing dialogue to promote organizational learning. Subgroup members will continue to work with DOE on the DNFSB 2011-1 Implementation Plan team. The Safety Culture website and associated guidance documents will be updated in FY 2012.

- Two Working Group meetings are scheduled over the next year in the fall (November 8-10, 2011 at the DOE Nevada Site Office, Las Vegas, Nevada) and spring 2012. At least one conference call with Working Group leadership per quarter is planned.

- The ISM&QA Working Group will continue the Training and Communications Forum focused on hot topics, quality assurance, and safety culture.

- The ISM&QA Working Group will complete up to four best practices for posting on the EFCOG website.

- The F&I Subgroup will continue focusing on the following areas:
  - Continue sharing implementation of feedback and improvement initiatives.
  - Using feedback and improvement to develop a safety culture model.
  - Model to consolidate DOE required audits/assessments.
  - Identify examples of models/tools to process map programs/functions to improve performance and eliminate non-productive actions.
  - Continue to work collaboratively with the Contractor Assurance Working Group, including an evaluation of change management processes to sustain performance and refinement of performance metrics.
• Continue support to EM on the JSEP through finalization of the integration efforts, development of the description document for the program and full execution of the JSEP database.
• Continue to support the DOE Headquarters Occurrence Reporting Program Manager through the ORPS Task Group activities.
• Support the 2012 DOE ISM Champions Workshop.
• Continue to enhance EFCOG’s best practices initiative.
• Develop a set of performance metrics based on QA program elements to assist the DOE complex in monitoring performance.
• The Human Performance Improvement (HPI) Task Group will be working in the next year principally to finalize and publish key deliverables on the EFCOG website. This will include communication plans, HPI integration with other ISM groups including researchers, engineers, work planning and control, feedback and improvement, and QA, as well as other HPI applications of emerging importance.
• Continue working with DOE Headquarters (EM and NNSA) personnel to develop and implement an improvement plan for WP&C processes across the DOE complex, focusing on the following areas:
  o Identify performance measures
  o Develop tools
  o Apply WP&C in contractor assurance and federal oversight
  o Shared results
  o Federal initiatives

LESSONS LEARNED
The leadership of the F&I Subgroup and the Contractor Assurance Working Group continued to work together to clarify responsibilities between the two groups, and a joint meeting of these groups is scheduled for November 2011.

EFFECTIVENESS EVALUATION
Survey Monkey feedback results indicate that the ISM&QA Working Group meetings and activities are effective, although emphasis will be placed in the coming year on improving how the Working Group can assist in changing practices within member companies. Data for the key survey questions in response to the first four performance metrics are provided below:

<table>
<thead>
<tr>
<th>Question</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is participation in ISM&amp;QA Working Group ‘added value’ for your project/company?</td>
<td>97%</td>
</tr>
<tr>
<td>Are you changing any practices as a result of your involvement with the ISM&amp;QA Working Group?</td>
<td>53%</td>
</tr>
<tr>
<td>Is the ISM&amp;QA Working Group tackling issues relevant to the work you perform for your member company?</td>
<td>92%</td>
</tr>
<tr>
<td>Is the ISM&amp;QA Working Group helping to create solutions for challenges you or your company are facing?</td>
<td>83%</td>
</tr>
</tbody>
</table>
Ninety-three percent of responses indicated satisfied (65%) or very satisfied (28%) with the overall content of the meetings. As evidenced by the accomplishments listed above, the ISM&QA Working Group tackles relevant issues that are of interest to DOE.

The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: Two
- Number of white papers submitted to DOE: Three
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Two

The positive impact of the Working Group to the customer was continued through the various participating contractor operations. Sharing of ISM and QA processes and practices, which were made available for implementation at the various DOE locations, resulted in cost savings to all EFCOG 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 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.” There is continued positive interest in safety culture-related activities around the complex, with DOE, the DNFSB, INPO, and the American Nuclear Society. Evidence of this is the large number of high quality papers presented at the 2011 DOE ISM Champions Workshop and interest by various organizations in the products of the Safety Culture Task Team. This effort has been characterized as “taking ISMS to the next level” and should be associated with continuing safety and operational performance improvement in the complex. The safety culture interest resulted in the elevation of the Task Team into a standing subgroup of the ISM&QA Working Group.

Interest continues to grow at Working Group meetings, training sessions, and other industry forums in the related area of HPI. EFCOG provided leadership for the complex in this area and continues to expand the awareness and application of the associated principles and tools.

The ISM&QA Working Group activities in the QA area fill a need created by increasing attention to QA activities by DOE. The Working Group meetings provide a forum to address key issues identified by EM and NNSA on improving quality assurance program results particularly in appropriate application of the American Society of Mechanical Engineers Nuclear Quality Assurance-1 standard to nuclear projects.

RECOMMENDATIONS

The ISM&QA Working Group should continue in FY 2012. There continues to be some overlap between the F&I Subgroup and the Contractor Assurance Working Group. This has been discussed between groups, and the respective charters have been reviewed. The F&I Subgroup will focus on the performance/implementation aspects, specifically skill development.
PROJECT MANAGEMENT WORKING GROUP

CHAIR: MARK SUEKSDORF, LAWRENCE LIVERMORE NATIONAL LABORATORY; BOB MIKLOS, IDAHO NATIONAL LABORATORY
1ST VICE-CHAIR: DAN ARMSTRONG, SAVANNAH RIVER NUCLEAR SOLUTIONS

INTRODUCTION

Vision - The strategic vision of the Project Management Working Group (PMWG) is to enhance project management capability and execution to meet Department of Energy (DOE) – including the National Nuclear Security Administration (NNSA) - critical mission requirements in a way that delivers:

- Consistent successful performance
- Cost-effective delivery
- The capability to sustain performance in the future

Purpose - The PMWG is established to promote project management excellence in the execution of DOE programs by sharing best industrial practices, applying lessons learned, and providing integrated recommendations to DOE.

Objectives

- Provide a multi-year and multi-site contractor perspective on efforts to continually improve project execution and to maximize the probability of success of projects for the entire DOE complex, such as enhanced collaboration among contractors and encouragement of early involvement of experts.
- The PMWG will promote the ongoing assessment of organizational and project performance, focused on driving timely corrective action to prevent failures and active exchange of successful project management programs, practices, procedures, lessons learned, and other pertinent information of common interest.
- The PMWG will support EFCOG and member company initiatives in the human capital arena, focusing on program and project management functions, cost estimating, and construction management functions such as training through workshops, task groups, and seminars.

Scope - Promote project management excellence in the execution of DOE programs by sharing:

- Best industrial practices
- Lessons learned to:
  - Enhance project management capability to meet DOE critical mission requirements
  - Provide integrated contractor recommendations to DOE on project management, cost estimating, construction management, and earned value management
  - Support DOE initiatives to get off of the Government Accountability Office “High Risk” list for contract and project management.

MEMBERSHIP

The membership of the Working Group grew steadily over the year with new members from a broad range of contractors and service subcontractors specializing in project management services. The PMWG continued a practice of case study presentation from field project managers at its semi-annual meetings and scheduling of the meetings around other project management events, broadening exposure to the Working Group. This approach was well received by both the PMWG members and the field project managers. PMWG membership is approximately 95. The Working Group has representatives from 23 of the EFCOG member companies.
ORGANIZATION

The leadership of the PMWG is comprised of:

Chair: Mark Sueksdorf, Lawrence Livermore National Laboratory (through early FY2011); Bob Miklos, Idaho National Laboratory

1st Vice-Chair: Dan Armstrong, Savannah River Nuclear Solutions

Subgroups: Two subgroups are in place with leadership as follows:
- Cost Estimating Subgroup Chair: Lee Phillips, Lawrence Livermore National Laboratory
- Construction Management Subgroup Chair: David Leeth, Bechtel National Inc.

EFCOG Sponsoring Director: Tom Gioconda, Bechtel Group, Inc. (Lawrence Livermore National Laboratory); and, Susan Stiger, Bechtel Group, Inc. (Los Alamos National Laboratory)

DOE Sponsors: Paul Bosco, Office of Engineering and Construction Management (OECM); Bob Raines, NNSA; Lowell Ely, Office of Environmental Management (EM); Dan Lehman, Office of Science (SC); and Mike Hickman, NNSA

Succession planning: The PMWG operates with a two-year succession cycle. The current leadership has been in place for approximately one year and plans to rotate in 2013. The outgoing Chair serves as the 2nd Vice-Chair.

ACHIEVEMENTS

Consistent with the strategic objectives of the Working Group, the focus in FY 2011 was on supporting DOE initiatives to enhance project management application and to increase sharing of project management knowledge across the membership. Key highlights of work in FY 2011 include:

- Continued supporting the DOE Corrective Action Plan (CAP) developed to address the remaining two systemic project management deficiencies (identified in the 2008 Root Cause Analysis study) that resulted in DOE remaining on the Government Accountability Office “High Risk” agency list. PMWG continued to work closely with OECM and program offices to provide input on the corrective measures from the contractor perspective and to support the implementation plan.
- The PMWG’s December 2010 winter meeting was hosted by MCR Federal, LLC at their Washington D.C. office and was well supported by DOE sponsors. The meeting established initiatives targeted for completion in FY 2011 and assigned members as points of contact for support:
  - Design maturity – identify best practices
  - Peer reviews – participate as peer review member, reevaluate practice and draft white paper
  - Cost estimating – support DOE initiatives
  - DOE Order 413.3B training – evaluate training interest level/delivery methods
  - Earned Value Management System (EVMS) surveillance - support OECM initiatives including guide development
  - Lack of qualified suppliers/acquisition strategy – evaluate and draft white paper
- The PMWG supported the development and aggressive implementation of revision B to DOE Order 413.3, “Program and Project Management for the Acquisition of Capital Assets”, including participation in project peer reviews across the DOE complex.
- The Cost Estimating Subgroup held its annual meeting and workshop on April 19 – 20, 2011, hosted at the Y-12 National Security Complex in Oak Ridge, Tennessee. The workshop was
well attended with a good cross-section of approximately 35 representatives from the contractor community and DOE Headquarters and field offices. Breakout sessions were held to continue discussion on the presentation topics. In addition to supporting the DOE initiatives, the Subgroup’s initiatives included further exploration of methods to share estimating resources between contractor sites and developing communication tools to support effective collaboration.

- The Cost Estimating Subgroup Chair attended the DOE Chief Financial Officer Conference and DOE’s second Cost Symposium held in New Orleans, Louisiana, in May, 2011. The Subgroup Chair gave a presentation summarizing the interactions between the Subgroup and OECM regarding the proposed DOE Guide 413.3-21, “Cost Estimating.” The Subgroup Chair also moderated a panel discussion regarding project risk and risk management.

- The Construction Management Subgroup remains relatively small and is composed of contractor representatives from many of the sites with the largest active major construction projects. The Subgroup continued work on the most relevant issues identified in 2010. Three topics were selected and teams assigned to prepare plans to address fixed price subcontracting, acquisition/execution strategy planning, and the lack of qualified vendors. The Subgroup completed development of three white papers based on these initiatives that highlighted current practices and areas for continued improvement.

- The PMWG’s summer meeting was hosted by Dekker Ltd, in San Diego, California. The meeting provided the opportunity for members to earn professional development units at the meeting and reduce travel/training costs. The meeting was well attended and included presentations from OECM and from site project managers on lessons learned from active projects at various DOE sites.

- A task group completed a white paper entitled “Peer Reviews.” This paper provides guidance and best practices to assist contractors and federal staff in performing peer reviews of DOE projects. These reviews are required by DOE Order 413.3B to improve project performance, as well as to enhance the professional development of all participants, who can learn from each other the most effective ways to manage projects and benefit from lessons learned from others.

- A task group completed a white paper regarding the lack of qualified suppliers and associated acquisition strategies. The lack of qualified or experienced suppliers is reducing the competition on DOE projects, with the potential for increasing costs and delaying project completions. The paper discusses how the DOE complex could leverage resources by performing joint supplier audits, developing and maintaining a database for audit documentation, and making the audit list available to all DOE contractors. These steps will improve screening for qualified suppliers, facilitate more consistent and efficient compensatory actions when required, increase competition, and lower costs for supplier quality verification.

- A task group completed a white paper entitled “Design Maturity.” While there is no “one-size fits all” program or philosophy that can be applied to all DOE capital projects due to the wide variation in size and technical complexity, this white paper is intended to document the issues and recommend approaches based on lessons learned and successful examples to aid in meeting the goals of DOE’s policy regarding design maturity. Specific tools are described, which if applied with the appropriate rigor, can provide project management with assurance that sufficient design maturity can be attained at Critical Decision-2 and aid in executing successful projects for DOE.

- The PMWG continued to provide implementation support for EVMS, the development of the DOE 413.3B EVMS Guide, and maintenance of the EVMS website with useful reference documents.
PLANNING FOR THE NEXT YEAR

- A key focus of the PMWG in early FY 2012 will be continued collaboration with DOE on the implementation of the strategy for improving contract and project management, corrective measures from the Root Cause Analysis CAP, participation in peer reviews, and the next phase of enhancement for Project Assessment and Reporting System (PARS) II. The Working Group will remain involved with the cross-program teams of OECM, NNSA, EM, Chief Financial Officer, and the Office of Procurement and Assistance Management as these DOE offices complete implementation of the various measures. PMWG will continue collaboration with other professional organizations including: Project Management Institute, American Association of Cost Engineers International, National Defense Industrial Association, and EFCOG Working Groups, including Human Capital, Engineering Practices, Integrated Safety Management & Quality Assurance, Safety Analysis, and Acquisition Management.

- In 2012, the Cost Estimating Subgroup will continue to support and partner with DOE’s OECM as DOE implements measures to improve independent government cost estimating. Initiatives expected during the year include the completion of the DOE Cost Estimating guide, continued deployment of cost analysis training, support development of the DOE project cost database, and actions to address any other emerging cost estimating issues. The Subgroup plans to hold its annual workshop around the PMWG summer meeting.

- The Construction Management Subgroup will continue support of complex-wide peer reviews and will continue to partner with the Integrated Safety Management & Quality Assurance Working Group on common initiatives.

- The PMWG plans to hold its winter meeting on December 8-9, 2011, in Washington, D.C., and refine the initiatives and group agenda for 2012. A summer meeting will be held in May around the Dekker Ltd Program and Project Management Summit in San Diego, California. The meeting will focus on updates of initiatives and the sharing of lessons learned among field project managers.

- The Working Group is committed to preparing up to three best practices for posting on the EFCOG website related to project management and construction management.

LESSONS LEARNED

The value of connecting with other EFCOG Working Groups and industry trade organizations was recognized. Many of the issues facing project management are not unique to the PMWG or DOE, and engaging other groups brings a diversity of views, lessons, and resources that strengthen solutions.

As the Working Group worked on the 2011 initiatives, it became clear that having customer representatives from the key elements (NNSA, SC, EM, OECM) and contractor representatives from corresponding sites was critical to effectively responding to complex-wide issues. The diversity of project management implementation within the different business lines needed to be taken into consideration as the enterprise-wide project management issues were addressed.

The importance of the Working Group’s website maintenance as a key communication tool became more apparent and will require more routine attention.

EFFECTIVENESS EVALUATION

Survey Monkey feedback results indicate that the PMWG meetings and activities are effective, although emphasis will be placed in the coming year on improving how the Working Group can assist in changing practices within member companies. Data for the key survey questions in response to the
first four performance metrics are provided below. (Note: These results cover both the December 2010 and May 2011 PMWG meetings, respectively, shown as “X%/Y%.”)

<table>
<thead>
<tr>
<th>Question</th>
<th>% Yes</th>
<th>% Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is participation in the PMWG ‘added value’ for your project/company?</td>
<td>100% / 100%</td>
<td>100%</td>
</tr>
<tr>
<td>Are you changing any practices as a result of your involvement with the PMWG?</td>
<td>71% / 50%</td>
<td>62%</td>
</tr>
<tr>
<td>Is the PMWG tackling issues relevant to the work you perform for your member company?</td>
<td>100% / 100%</td>
<td>100%</td>
</tr>
<tr>
<td>Is the PMWG helping to create solutions for challenges you or your company are facing?</td>
<td>100% / 90%</td>
<td>96%</td>
</tr>
</tbody>
</table>

A hundred percent of responses indicate satisfied (35% / 20%) or very satisfied (65% / 80%) with the overall contents of the meetings. As evidenced by the accomplishments listed above, the PMWG Working Group tackles relevant issues that are of interest to the DOE.

All comments were received and incorporated as appropriate to ongoing activities and meetings. As an example, meetings were structured to accommodate more networking opportunities.

The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: Zero
- Number of white papers submitted to DOE: Four
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Eight

Significant strides have been made in the improvement of project management within the DOE enterprise, and it remains an area of continued emphasis within the current Administration. There continues to be recognition of the value in connecting the contractor community of practice with owner oversight and management. The PMWG has been at this nexus and continues to add value for both the membership and, more importantly, the DOE customer and their many stakeholders. The evaluation is supported by Survey Monkey results and discussions with DOE Sponsors. The group has an active membership and should continue to be effective with both the Cost Estimating and Construction Management Subgroups.

**RECOMMENDATIONS**

The PMWG should continue in FY 2012, along with its two Subgroups, and should establish task groups to support the peer review process and earned value management implementation enhancements.
SAFETY ANALYSIS WORKING GROUP

CHAIR: ROB MCKEEHAN, UNIVERSITY OF TENNESSEE-BATTELLE (OAK RIDGE NATIONAL LABORATORY)
VICE-CHAIR: MARK MITCHELL, LAWRENCE LIVERMORE NATIONAL LABORATORY

INTRODUCTION

Vision - The Safety Analysis Working Group (SAWG) will be a prime nuclear safety resource of the Department of Energy (DOE) community, including the National Nuclear Security Administration (NNSA), to foster ideas, advance initiatives, and team contractors and DOE to develop and implement effective and efficient initiatives, solutions, and programs in the area of nuclear safety analysis.

Purpose - The SAWG promotes excellence in nuclear safety applications and programs throughout the DOE with a primary focus on nuclear safety analysis.

Objectives

- Establish initiatives and programs to advance nuclear safety throughout the DOE complex.
- Prioritize initiatives and programs through the SAWG Steering Committee.
- Facilitate initiatives and programs through Subgroups and other groups.
- Investigate safety analysis strategies, leverage experiences, and share lessons learned.
- Maintain networking and interfaces using current technology.
- Provide a forum to effectively accomplish activities and conduct business.
- Train safety analysts, engineers, and managers.

Scope

- Hazard and accident analysis applications in support of safety analyses.
- Safety documentation development for nuclear and hazardous facilities, projects, and activities.
- Training of managers, engineers, scientists, and subject matter experts in these applications and requirements.
- Technical exchange of information, experience, and lessons learned.
- Support for nuclear safety research and development related to facility safety.

MEMBERSHIP AND ORGANIZATION

Membership

The membership of the SAWG has approximately 80 participants and includes representatives from 31 EFCOG member companies, representing over 15 DOE sites and national laboratories. During the year, over 150 people participated in SAWG activities. This year, an additional four companies participated in SAWG activities.

Organization

Leadership in the SAWG is comprised of:

Chair: Rob McKeehan, University of Tennessee-Battelle (Oak Ridge National Laboratory)

Vice-Chair: Mark Mitchell, Lawrence Livermore National Laboratory
Secretary: James Kuropatwinski, Los Alamos National Laboratory

Subgroup: Four subgroups are in place, along with a training liaison function and an interest group, with leadership as follows:

- Accident Analysis Subgroup Chair – Mukesh Gupta, URS Corporation
- Criticality Safety Subgroup Chair – Kevin Carroll, Lawrence Livermore National Laboratory
- Safety Basis Subgroup Chair – Belinda Niemi, URS Corporation
- Unreviewed Safety Question (USQ) Subgroup Chair - Mark Mitchell, Lawrence Livermore National Laboratory
- Training Liaison – Julie Johnston, EnergySolutions
- Hydrogen Safety Interest Group – Kevin O’Kula, URS Corporation

EFCOG Sponsoring Director: Pamela Horning, Babcock & Wilcox Technical Services Group

DOE Sponsors: Jim O’Brien, Office of Health, Safety, and Security (HSS); Mark Blackburn, HSS; Amanda Anderson, HSS; and Bob Nelson, Office of Environmental Management (EM)

Succession planning: The SAWG is managed by the SAWG Steering Committee with officers nominated by the Steering Committee and elected annually. The officers usually serve no more than two one-year terms.

ACHIEVEMENTS

- The Safety Basis Workshop was held in Albuquerque, New Mexico, in November 2010. Over 100 participants attended and contributed to workshop panel discussions and presentations on several topical issues:
  - DOE Directive Reform Initiative
  - Defense Nuclear Facilities Safety Board (DNFSB) and 10CFR830, “Nuclear Safety Management” Hazard Controls Issue Update
  - DOE Response to the DNFSB on “Dry Deposition Assumptions Used in DOE Facility Consequence Modeling”
  - Deposition Velocity Effects on Dose Consequence at the Uranium Processing Facility
  - DOE/DNFSB Fire Protection Response Status
  - Quality Assurance Requirements for Safety Significant Controls/Safe Harbors for Safety Significant Controls during Design
  - Expert Unreviewed Safety Question Determination (USQD) Process Implementation at the Y-12 National Security Complex
  - DOE Updates on Site Visit Status Reports
  - Hydrogen Evaluation Analysis and Control Panel Discussion (including tie-in with the United Kingdom)
  - National Training Center Focus
  - Site and Subgroup Reports
- Supported development and implementation of the Expert USQD process across the DOE complex, including a joint DOE/contractor panel at the Safety Basis Workshop on the path forward for implementation and issues to be addressed prior to implementation. Several pilot studies were conducted, which showed a potential for dramatic reductions in conventional USQDs and demonstrated significant cost savings without compromising effectiveness. The Y-12 site achieved about a 25% reduction in conventional USQ determinations during the initial 12 months. Feedback and lessons learned were applied to the Y-12 process, and data
thus far for the second year indicate improved utilization of Expert USQDs. Two other sites implemented the Expert USQD process. The SAWG also distributed a decision matrix developed by the Office of Science to support DOE consideration of sites, contractors, and facility eligibility for the Expert USQD process.

- Developed a best practice paper entitled “Application of Expert USQDs to Expedite the USQ Process,” which provides recommendations for efficiency improvements in the USQ process. This best practice paper includes the training material (slides and examples) necessary to support a contractor’s implementation of an Expert USQD process. This best practice implements one of the recommended actions to improve efficiency of the USQ process, consistent with last year’s SAWG white paper.

- A joint meeting of the Criticality and USQ Subgroups, attended by DOE Headquarters, was held to discuss and resolve technical interface issues between criticality safety and USQ processes. A team from the Criticality Safety and USQ Subgroups was identified and held periodic teleconferences to discuss relevant cross-cutting issues and interfaces between the two Subgroups with respect to DOE-STD-3009, “Nonreactor Nuclear Facility Documented Safety Analyses” and DOE G 421.1-2, “Implementation Guide for Use in Developing Documented Safety Analyses to Meet Subpart B of 10CFR830.”

- Continued development of liaison with the DOE National Training Center (NTC) to coordinate delivery of safety analyst training and maintained a course schedule on the SAWG webpage. The SAWG subgroups utilized its members as subject matter experts to support vetting of course material.

- Extensively supported the development of the new NTC USQ course, including development of the course material, review of the material, and review/mentoring of the initial teaching of the material. This course is a recognized success for the NTC and is seen as a future best practice for NTC course development.

- Elevated long-standing implementation issues associated with the USQ Guide to cross-cutting DOE nuclear safety management group for resolution.

- Regularly distributed information from the NTC regarding classes being provided at sites across the complex related to nuclear safety analysis.

- Participated with the DOE Nuclear Safety Research and Development (NSR&D) Coordinating Group and hosted several teleconferences between contractors and organizations within DOE to identify potential areas of research for next year.

- Participated in the validation and verification update of the DOE Safety Software Expert Working Group “Toolbox Code.”

- Facilitated discussions and sharing of information as the Fukushima accident was unfolding, including presentations from Los Alamos National Laboratory’s workshop, the American Nuclear Society, and the Nuclear Energy Institute. Subsequently, the SAWG facilitated discussions on how the Nuclear Regulatory Commission and DOE were responding to post-Fukushima considerations pertaining to implications on DOE contractor safety analyses.

- Facilitated discussions on areas of interface between recent DOE guidance on maintenance programs and the USQ process to aid in consistency and prevention of implementation problems.

- Supported FY 2011 revision of DOE G 421.1-2 and DOE-STD-3009 through input to DOE.

- Provided criticality safety recommendations to DOE for changes to DOE-STD-1027, “Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports.”

- Supported the discussion on impact of HSS Safety Bulletin 2011-2, “Accident Analysis Parameter Update” at various DOE sites.

- SAWG activities included the regular participation of HSS’s Departmental Representative office for matters of interest to the DNFSB.
• Supported USQ discussion for development of NNSA Technical Bulletins 2010-3 & 4.
• Continued occasional teleconference/virtual meeting link among the Hydrogen Safety Interest Group members and the Hydrogen Working Party from the Sellafield site in the United Kingdom to discuss common safety issues in the processing, storage, and transport of hydrogen.

PLANNING FOR THE NEXT YEAR

• Submit targeted opportunities to expedite the USQ process for consideration by DOE, e.g., via NNSA Technical Bulletins.
• Develop USQ frequently asked questions based on USQ Subgroup teleconference notes, panel discussions, and other workshop meetings for posting on the EFCOG website.
• The SAWG Steering Committee and Subgroups will hold periodic teleconferences (usually monthly) to coordinate work, track actions, and discuss emergent issues and concerns. Two face-to-face meetings of the Steering Committee will be held in conjunction with established workshops. Each Subgroup will meet at least once during the year.
• Continue DOE-STD-1189, “Integration of Safety into the Design Process” implementation activities, including:
  o Revise SAWG training based on DOE pilot course and deliver to project managers, design engineers, and safety analysts at a variety of venues, including the 2012 Safety Analysis Workshop and at contractor locations.
  o Support revision of DOE directives and technical standards to incorporate DOE-STD-1189 principles.
• Interface with NSR&D Coordinating Group to continue initiative to identify and provide input on nuclear safety R&D activities.
• Continue validation and verification work with the DOE Safety Software Expert Working Group’s “Toolbox Code.”
• Work with DOE to develop revisions of the following that potentially will lead to programmatic cost savings throughout the DOE complex:
  o 10 CFR 830, Subpart B, particularly input on hazard categorization and the USQ process
  o DOE USQ Guide (supporting innovations such as the Y-12 and LLNL improvements to the USQ process) and related DOE documents, e.g., NNSA Technical Bulletins
  o DOE-STD-3007, “Guidelines for Preparing Criticality Safety Evaluations at DOE Nonreactor Nuclear Facilities,” to integrate common safety basis and criticality safety practices
  o DOE STD-1027 on hazard categorization (long-term strategy to reform the hazard categorization process at the source)
• Evaluate need for cross-cutting training in the nuclear hydrogen safety area tailored to particular needs of integrating hydrogen control and management into DOE safety basis applications, and, if determined, needed, prototype this training at the 2012 EFCOG Safety Analysis Workshop.
• Develop a white paper for hydrogen safety relative to DOE activities and the experience at the Fukushima reactors.
• Coordinate with other EFCOG Working Groups in areas of mutual interest, including a joint meeting with the Engineering Practices Working Group.
• Prepare and post up to three EFCOG best practices.
• Provide input on guidance for Beyond Design Basis Events.
• Continue interface with the NTC for input on safety basis training classes and participation in those classes.
LESSONS LEARNED

SAWG recognizes that the DOE complex is in the midst of loss of a generation of experienced personnel and staffing impacts through budget reduction challenges. Consequently, facilitating and encouraging information sharing and training in appropriate and successful facility safety analyses remains vital to achieving the goals of DOE and needs to be kept at the forefront of activities. Encouraging younger staff for participation in SAWG activities has been productive and will continue to be pursued.

After holding successful annual safety analysis workshops for 20 years, SAWG experienced the sobering need for cancellation of the 2011 annual workshop based on low attendance commitments. The late approval to hold the workshop in combination with schedule overlapping with the uncertainty in the Federal budget was the primary driver of the cancellation. Attempts will be made to drive workshop approval early, follow the workshop guidance in the EFCOG Manual, and look for ways to reduce costs (more sponsorship, locations with favorable travel costs, reduced duration and/or frequency, etc.). Further, in recognition of the general need to reduce costs for workshops, SAWG and EFCOG should seek improved communications in lieu of face-to-face events without losing sight of the importance of the relationships and vital communications provided by the workshops.

EFFECTIVENESS EVALUATION

The SAWG continues to be an effective Working Group as evidenced by a widespread base of participation at events, training, teleconferences, and DOE involvement. SAWG has contributed to the implementation of STD-1189, as well as the development of the revision to STD-3009, development of training for the USQ process; it has also facilitated the application of the Expert USQD process and gave criticality safety input for recommended changes to STD-1027. SAWG continues to provide direct contributions to members in the form of addressing emergent issues and concerns such as those identified by the DNFSB and those arising from evaluations of the Fukushima accident. SAWG provides an ongoing resource to DOE in the area of nuclear safety, safety analysis applications, and research and development needs for facility safety.

The Survey Monkey feedback tool was not utilized by the SAWG during FY 2011, therefore no performance metric data are available for the first four metrics. The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: Zero
- Number of white papers submitted to DOE: Zero
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Three

RECOMMENDATIONS

Based on the ongoing value of the SAWG to the DOE community, the Working Group should continue, along with its current Subgroups and the Hydrogen Safety Interest Group.

Prime areas of innovation to provide substantial, tangible improvement to DOE operations include further expansion on the Expert USQD process, best practice papers for application of the USQ Guide and criticality safety training, input on revision to directives for documented safety analyses, consultation for potential revision of 10 CFR 830, and recommendations in addressing guidance for and analysis of beyond design basis events.
SAFEGUARDS AND SECURITY WORKING GROUP

CHAIR: REUBEN MCGILVARY, BABCOCK & WILCOX PANTEX
VICE-CHAIR: HEIDI BROCK, STRATEGIC MANAGEMENT SOLUTIONS, LLC

INTRODUCTION

Vision – The vision is to provide a forum for continuous improvement in safeguards and security areas of carrying out the missions of the Department of Energy (DOE), including the National Nuclear Security Administration (NNSA).

Purpose - The purpose of the Safeguards & Security Working Group (SSWG) is to provide a strong focus for meeting the DOE security management challenge by enhancing the protection of special nuclear material (SNM), classified matter, property, and cyber systems. The Working Group promotes collaboration by sharing information and lessons learned and by facilitating the application of information and techniques. The SSWG enables the successful execution of DOE missions and programs by helping ensure appropriate security in a cost effective and safe manner and by providing a forum for the active exchange of ideas, approaches, and lessons learned among DOE and its contractors.

Objectives

- Enable the successful execution of DOE missions and programs by helping ensure appropriate security in a cost-effective manner.
- Provide a forum for the active exchange of ideas, approaches, and lessons learned among DOE and contractors that:
  - Enhances collaboration among DOE contractors so that the latest technology and methods are deployed
  - Encourages interaction between DOE management and contractors on complex-wide objectives, issues, and projects
  - Provides value-added feedback and recommendations to DOE
- Serve as a sounding board for emerging security directives proposed by DOE and for the interpretation and consistent application of existing DOE directives.
- Encourage planning and actions necessary to ensure that the overall objectives of DOE are met in the area of security.
- Promote training and continuous improvement by sharing management and technical information and lessons learned through websites and workshops.

Scope - The areas of interest covered by the SSWG include both S&S and cyber security. S&S includes the protection of SNM, classified matter, personnel security, and both equipment and real property. Cyber security includes classified and unclassified computer communication and information systems. The cyber security area will address selected information technology topics of interest to the DOE community. The SSWG will identify candidate topics or issues considered important to DOE in meeting the security challenge and propose them to DOE management for confirmation. The SSWG will facilitate interaction with outside organizations and experts regarding the application of security principles and methods in the DOE complex. The SSWG will communicate with other EFCOG Working Groups and contractor groups to ensure activities are fully coordinated. While the SSWG does not lobby, advocate independent positions, or try to change DOE policy, the SSWG practices as applied to DOE missions may be discussed and suggestions for improvement made to the DOE.
MEMBERSHIP AND ORGANIZATION

Membership

SSWG membership remained steady with 80 active members with an average of 65 attendees at quarterly meetings. There are 44 EFCOG member companies who participate in the SSWG. The SSWG strives to keep a broad representation from the member companies. New membership is generally achieved by individual networking and peer relationships.

Relationships have been developed with EFCOG Working Groups, including Integrated Safety Management & Quality Assurance, Contractor Assurance, and Enforcement Coordination. Relationships have also been developed with the Institute of Nuclear Power Operations, Nuclear Regulatory Commission, Department of Homeland Security, Defense Nuclear Facilities Safety Board, World Institute of Nuclear Security, and the United Kingdom’s Nuclear Decommissioning Authority.

Organization

Leadership in the SSWG is comprised of:

Chair: Reuben McGilvary, Babcock & Wilcox Pantex

Vice-Chair: Heidi Brock, Strategic Management Solutions, LLC

Secretary: Bryan Avery, Pacific Northwest National Laboratory

Subgroups: Two subgroups are in place with leadership as follows:

- Material Control & Accountability (MC&A) Subgroup Chair: Michael Mitchell, Babcock & Wilcox Pantex
- Physical Security Chair: Ron Smith, University of Tennessee-Battelle (Oak Ridge National Laboratory)

EFCOG Sponsoring Director: Michael Bebon, Brookhaven National Laboratory

DOE Sponsors: Doug Freemont, NNSA; Ted Wyka, NNSA; Amy Whitworth, NNSA; Steve Crowe, NNSA; and Glenn Podonsky, Office of Health, Safety, and Security (HSS)

Succession planning: The SSWG Chair rotation occurs in January 2012 with the Vice-Chair moving to the Chair and a new Vice-Chair to be elected. For the Physical Security and MC&A Subgroups, the Chairs rotate out in January 2012 as well. The current Vice-Chairs will become the Chairs, and a new Vice-Chair will be elected for each Subgroup.

ACHIEVEMENTS

- The processes for task formulation, scoping, milestone development, and closure were mapped. Since its incorporation, the process flow has led to improved customer satisfaction, execution efficiencies, and more accurate documentation efforts.
- The first SSWG meeting for FY 2011 was conducted at the Savannah River Site, January 25-27, 2011. The spring meeting was held at the Nevada Test Site, April 5-7, 2011, with the Enforcement Coordination Working Group and the Contractor Assurance Working Group. The third meeting was held at Schneider Electric in Dallas, Texas, October 4-6, 2010.
- Root-cause analysis improvements for Incidents of Security Concern (IOSC) and the evaluation of associated corrective actions concluded in a published paper. The study identified effective training, tools, and methods that accurately identify the root-cause of IOSC, deficiencies, findings, and non-compliant conditions. Recommendations were based on
tools and methods providing a high level of confidence that the corrective actions taken would be effective in preventing reoccurrence.

- The MC&A Subgroup determined that buying thermionic detectors (TID) in bulk across the DOE complex would not be cost efficient since every site has different TID needs. The team decided to develop a list of TID vendors with specific information and provide the list to all sites.
- MC&A independent assessment resources were provided by Y-12, Pantex, Sandia, and Nevada to other sites to perform independent assessments. This will be an ongoing project.
- The MC&A Subgroup conducted a TID workshop at Oak Ridge National Laboratory on April 3, 2011.
- One best practice was prepared and posted during FY 2011:
  - Best Practice #92 – Using Human Performance to Raise Staff Awareness about Potential Security Situations – April 2011

PLANNING FOR THE NEXT YEAR

- Develop a Safeguards First Principles Initiative (SFPI) Implementation Guide to help sites implement NNSA Policy (NAP) 70.6., “Control and Accountability of Special and Alternate Nuclear Material.” The Guide will be based on the Nevada National Security Site’s participation in a pilot initiative.
- Prepare a Seals Reference Guide, which will provide sites with valuable information about the types of seals on the market for capabilities, cost, and performance reliability.
- Develop a Safeguards Termination Guide, since terminating safeguards on material is a long and difficult process. This guide will assist sites and standardize the process across the complex.
- Provide from the Savannah River Site TID performance test data to sites for use in purchasing decisions.
- Continue to support MC&A independent assessments.
- Develop and conduct a workshop that addresses new elements of the IOSC program, focuses on implementation consistency throughout the DOE complex, and fully indoctrinates the student on applicable DOE requirements.
- Develop and a self-assessment guide and lead a workshop on the conduct of self-assessments, including the assessment of risk.
- Develop a causal analysis guidance document that includes risk ranking methodology, appropriate causal analysis program elements, and a detailed list of causal analysis tools.
- Determine whether S&S performance assurance activities are fully integrated into contractor assurance activities across the DOE complex. If appropriate, develop and support a comprehensive site improvement plan.
- Prepare and post up to two best practices to the EFCOG website.

LESSONS LEARNED

The task scope and structure of the SSWG was evaluated to ensure that DOE’s expectations and goals were satisfied. It was determined that a systems approach that was utilized for deliverables planning and execution was effective.
EFFECTIVENESS EVALUATION

Survey Monkey feedback results indicate that the SSWG meetings and activities are effective, although emphasis will be placed in the coming year on improving how the Working Group can assist in changing practices within member companies. Data for the key survey questions in response to the first four performance metrics are provided below:

<table>
<thead>
<tr>
<th>Question</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is participation in the SSWG ‘added value’ for your project/company?</td>
<td>96%</td>
</tr>
<tr>
<td>Are you changing any practices as a result of your involvement with the SSWG?</td>
<td>58%</td>
</tr>
<tr>
<td>Is the SSWG tackling issues relevant to the work you perform for your member company?</td>
<td>100%</td>
</tr>
<tr>
<td>Is the SSWG helping to create solutions for challenges you or your company are facing?</td>
<td>86%</td>
</tr>
</tbody>
</table>

Eighty-nine percent of responses indicated satisfied (52%) or very satisfied (37%) with the overall contents of the meetings. As evidenced by the accomplishments listed above, the SSWG tackles relevant issues that are of interest to the DOE.

The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: One
- Number of white papers submitted to DOE: Four
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Four

The SSWG has a significant role to play within the EFCOG community; the full benefits and contribution for improving the overall effectiveness and efficiency of complex-wide security has not yet been achieved. However, there has been significant improvement in the communication across the complex, specifically that of interactions between contractors and DOE HSS’s Office of Enforcement and Oversight and NNSA’s Office of Security. Their engagement in the Working Group and Subgroup meetings has been valuable to the individual sites fostering open communication and dialogue. The value of the SSWG to DOE continues to improve as more and more comprehensive complex-wide tasks are supported.

RECOMMENDATIONS

It is recommended that the SSWG continue in FY 2012.
WASTE MANAGEMENT WORKING GROUP

CHAIR: W. T. (SONNY) GOLDSTON, ENERGYSOLUTIONS
VICE-CHAIR: RENEE ECHOLS, PERMA-FIX ENVIRONMENTAL SERVICES
SECRETARY: TAMMY MONDAY, PERMA-FIX ENVIRONMENTAL SERVICES

INTRODUCTION

Vision - The EFCOG Waste Management Working Group (WMWG) is chartered to leverage the expertise and experience of contractors to the Department of Energy (DOE) to focus on complex-wide integration and technology transfer while supporting cost-effective and efficient waste management options.

Purpose

- Seek out and promote the best management and operating practices, cost effective technologies and disposal options for all waste streams generated at DOE, including the National Nuclear Security Administration (NNSA), facilities whether destined for DOE or commercial facilities.
- Enhance complex-wide communication and maintain a priority on safety, environmental stewardship, and security.

Objectives

- Work with the EFCOG Board of Directors and DOE sponsors to identify and address issues that have broad impact on waste generators, shipment, storage, treatment, and disposal facilities throughout the DOE complex.
- Promote, coordinate, and facilitate the active transfer of best practices, procedures, lessons learned, and other salient information that can benefit contractors across the DOE complex.
- Through focused Subgroups, provide for technology exchange and development which will be used to provide “technology based” solutions for cross-cutting waste issues (e.g., waste with no paths to disposal).
- Pursue optimized pricing for waste management supplies (e.g., containers) and services (e.g., treatment and transportation) commonly used by DOE waste generators.

Scope

- Focus areas will be determined using a systematic approach to identify where gaps or optimization opportunities exist in the current DOE waste management strategies. In consultation with the EFCOG Board of Directors and DOE sponsors, these focus areas will be developed into WMWG actionable items.
- The WMWG will document the results of various member-sponsored efforts in reports, position papers, and the EFCOG website.
- The WMWG will communicate with other EFCOG Working Groups and DOE groups (e.g., Transuranic (TRU) Waste, Low-Level Waste (LLW), and High-Level Waste (HLW) Corporate Boards in the DOE Office of Environmental Management (EM)) to avoid duplication of effort.
- The WMWG will facilitate dialogue between DOE and member organizations for the purpose of understanding issues and initiatives of mutual interest but will not engage in lobbying efforts on DOE issues.
MEMBERSHIP AND ORGANIZATION

Membership
The WMWG has 50 members representing 36 EFCOG member companies and has several active DOE participants. Additionally, there are 35 other participants that are engaged in subgroup activities.

Organization
Leadership in the WMWG is comprised of:

Chair: W. T. (Sonny) Goldston EnergySolutions
Vice-Chair: Renee Echols, Perma-Fix Environmental Services
Secretary: Tammy Monday, Perma-Fix Environmental Services

Subgroups: Three subgroups are in place with leadership as follows:
- Packaging and Transportation Subgroup Chair: Mike Hughes, Savannah River Nuclear Solutions
- HLW Subgroup Chair: Scott Saunders, Washington River Protection Solutions
- Science/National Laboratory Subgroup Chair: John Powell, Oak Ridge National Laboratory

EFCOG Sponsoring Director: Billy Morrison, EnergySolutions
DOE Sponsors: Frank Marcinowski, EM; Christine Gelles, EM; Steve O’Connor, EM; Bill Levitan, EM; Dave Michlewicz, SC; (and Vacant, NNSA)

Succession planning: The Chair, put in place at the beginning of FY 2011, will continue through FY 2012. A new Vice-Chair was elected during FY 2011.

ACHIEVEMENTS

- The WMWG supported the efforts of the update of DOE Order 435.1, “Radioactive Waste Management.” A substantial number (over 15) of WMWG members participated in an active role in the drafting of several sections of the new Order. WMWG members are serving on specific Order requirement rewrite teams and preparing drafts for acceptance by DOE.
- The WMWG developed a position, draft requirement, and guidance for consolidation of radioactive waste and is working with DOE to include this position and requirement in the update of DOE Order 435.1. The goal is to reduce the risk to workers of segregation of waste through less handling and reduce the cost of disposal by reducing the classification of the waste wherever possible. The WMWG is also assisting DOE in preparation and participation in an NRC public meeting on the same subject. The Hanford Site members also introduced the “one touch” philosophy that waste should be packaged at the generator for final disposal, which saves dollars and streamlines the waste handling process. This philosophy is being adopted by the DOE 435.1 update.
- A WMWG team took the waste incidental to reprocessing (WIR) citation program that began at the Hanford Site and applied it to the West Valley Demonstration Project environmental cleanup work in New York and to the Savannah River Site. The WIR citation was approved by DOE and allows the decontaminated equipment, pumps and piping that was initially wetted incidentally by tank waste (managed as HLW) to be managed as LLW or TRU waste. This process will result in a significant reduction in disposal costs.
• A waste classification paper was prepared and approved by DOE for a tank sludge waste stream located at the Separations Process Research Unit environmental cleanup site in New York.
• The WMWG transmitted to DOE a report of the results from an investigation of wastes with no path to disposal across the DOE complex. Potential resolution for disposition of the high tritium waste streams at Los Alamos National Laboratory, Savannah River Site, and Lawrence Berkeley National Laboratory was provided.
• The WMWG identified several programs/sites that could benefit from better collaboration with others. The WMWG actively worked to increase communication among some of these, including the formation of the Science/National Laboratory and HLW Subgroups to focus on common issues.
• The WMWG worked with DOE Headquarters and the Portsmouth environmental cleanup site in Ohio to develop a strategy on the interface of DOE requirements with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in the design, construction, and operation of a CERCLA LLW disposal cell onsite.
• The WMWG worked with DOE Headquarters to comment and improve a DOE guidance document on the implementation of low specific activity (LSA) and surface contaminated objects (SCO), Department of Transportation requirements for the packaging of radioactive waste for transportation.
• The HLW Subgroup provided a report of lessons learned for sample transport and exchange of samples between sites for process development.
• Waste treatment/packaging capabilities of commercial vendors were presented to the WMWG to ensure that contractors are aware of capabilities, including utilization of DOE’s LLW/MLLW Treatment ID/IQ contract mechanisms.
• The WMWG prepared and posted on the EFCOW website the following best practices:
  o Best Practice #95 - Radioactive Waste Management Basis (RWMB) – June 2011
  o Best Practice #96 - Performance Assessment Scoping Process – June 2011
  o Best Practice #97 - Waste With No Identified Path for Disposal (WWNP) – June 2011
  o Best Practice #98 - Unreviewed Disposal Question Evaluation (UDQE) – June 2011
  o Best Practice #99 - Waste Incidental to Reprocessing (WIR) Citation Determination – June 2011
  o Best Practice #102 - Waste Characterization/Classification – June 2011
  o Best Practice #103 - Working with Offsite High-Level Waste (HLW) Samples - July 2011
• The March 3, 2011, WMWG meeting was held at the Waste Management Symposium in Phoenix, Arizona. Discussions were held on WMWG progress against identified focus areas, planned support to EM by the WMWG in the update of DOE Order 435.1, ARRA waste disposition lessons learned, and HLW and Science/National Laboratory Subgroup activities. Also, a team was formed to review LSA/SCO DOE Guidance. The WMWG discussed focus areas and assigned responsibilities.
• The May 6, 2011, Working Group meeting was held at the DOE Nevada Site Office with Portsmouth, SPRU, West Valley waste classification issues and shipment characterization issues discussed. A team was formed to evaluate lessons learned from those issues.
• The September 6-8, 2011, WMWG meeting was held at the RadWaste Summit in Las Vegas, Nevada. Discussion topics included status of the DOE Order 435.1 update, waste stream blending (optimization), WMWG participation on EM’s LLW Corporate Board, utilization of EM’s national indefinite delivery/indefinite quantity waste treatment contract, the possibility of a waste classification library, and the formation of a new Packaging and Transportation Subgroup.
PLANNING FOR THE YEAR AHEAD

- The WMWG will continue to support EM’s revision of DOE Order 435.1.
- A workshop will be organized and conducted to explore lessons learned in working with DOE, NRC and states concerning WIR determinations and section 3116 of the National Defense Authorization Act of 2005.
- A waste classification library will be developed to share across the DOE complex.
- Focus areas will be developed and teams established to help organize the efforts of the new Packaging and Transportation Subgroup.
- A new focus will be developed for the Science/National Laboratory Subgroup.
- The WMWG will continue to take advantage of the considerable knowledge and experience of the WMWG by sharing lessons learned and best practices and will complete documentation of up to two best practices for posting on the EFCOG website.
- Other focus areas will be defined at the first FY 2012 WMWG meeting.
- Working Group meetings will be held semiannually, and teleconferences will be held monthly.

LESSONS LEARNED

No problems or issues encountered have resulted in the formulation of lessons learned in terms of operation of the WMWG. However, the WMWG is well positioned to identify and document lessons learned dealing with radioactive waste management. A good example of this is the WMWG’s report this fiscal year to DOE on the results from a common cause analysis of a DOE complex issue related to waste shipments to the Clive, Utah, LLW disposal facility. This report identified common issues which were shared within EFCOG and provided to DOE.

EFFECTIVENESS EVALUATION

By using the collective knowledge and experience of the WMWG, the Working Group provided a significant contribution to the planning and implementation of DOE’s revision of DOE Order 435.1. The value of the WMWG’s contribution was formally acknowledged by the DOE Order 435.1 update project manager in EM. Additionally, EM utilized the WMWG membership to work with the NRC on matters such as the LLW disposal requirements, since NRC is working to revise its LLW disposal regulations embodied in 10CFR61. In both cases, the WMWG provided direct programmatic support to DOE in a way that will be mutually beneficial for DOE and its contractors.

Additionally, the WMWG created a forum by which members can seek help and support on similar waste issues. To date, the use of the forum has proven to be a valuable resource.

Although there are no cost savings to report at this time, it is expected that cost savings will be realized across the DOE complex through the efforts of the WMWG, particularly once the white paper on waste classification is approved and adopted for implementation at the various DOE and NNSA facilities.

The HLW Subgroup Chair attended the DOE EM HLW Corporate Board meeting in November and is expected to become a regular contributor. The DOE EM LLW Corporate Board voted to accept the EFCOG as technical advisors to the Board. Both the WMWG Chair and Vice-Chair are regular contributors. The DOE EM TRU Waste Corporate Board is also staffed with WMWG members.
The Survey Monkey feedback tool was not utilized by the WMWG during the FY 2011 reporting period, therefore no performance metric data are available for the first four metrics. The following is provided for performance metrics five through seven:

- Number of best practices posted during the FY: Seven
- Number of white papers submitted to DOE: Five
- Number of reviews/comment sets of draft DOE Orders/Guidelines and DNFSB recommendation responses submitted to DOE: Zero

RECOMMENDATIONS

It is recommended that the WMWG continue in FY 2012 and beyond. Formation of additional subgroups is being considered by the WMWG to enable focused support for WMWG actions.
As a lessons learned organization, dissemination of prompt and easily accessed information is essential to EFCOG’s effectiveness. The EFCOG website is a critical tool serving this purpose. During the past year, the EFCOG website administrators performed daily maintenance of the website to assure that data from contractors, Working Groups, and DOE is up-to-date and consistent with the EFCOG database.

In 2011, the EFCOG website administration included support for 13 Working Groups with 30 Subgroups and numerous supporting Task Groups and Teams, and maintenance of over 27,000 web pages and documents.

The EFCOG website experienced an increase in average use, with more than 180,000 visitors (more than a 50% increase over last year) viewing over 400,000 pages (more than a 30% increase over last year) throughout the year.

Modifications to the website are ongoing. The transfer of all current EFCOG data to the new design is being done on a site by site basis. Due to the extensive number of pages covering the 13 Working Groups, the conversion is projected for completion in early calendar year 2012.

It is EFCOG’s continued goal to make the website as useful as possible and in FY 2011 EFCOG began the process of updating the website to enhance its user-friendly capabilities. EFCOG continues to encourage all parties using the website to provide comments to the web administrator on how the EFCOG website can become more useful. Suggestions and comments can be made by logging onto the Feedback Section of www.efcog.org or by contacting Ed Yatsko, Website Administrator at eyatsko@efcog.org.
Longenecker and Associates, Inc. (L&A) is the EFCOG support contractor, providing Executive Council and Board of Director support and coordination, Working Group integration and coordination, strategic planning, and day-to-day administrative support, including website maintenance for the EFCOG members and Working Groups. John Longenecker of L&A serves as the Managing Director for EFCOG, overseeing and coordinating all activities of the organization, and is the direct liaison between the EFCOG membership, Board of Directors, Chair, and support staff. Mark Frei of L&A serves as the EFCOG Working Group Coordinator, and Barbara Pierre of L&A has served as the EFCOG Administrator (with Bonnie Bergey transitioning into this role in January 2012). Ed Yatsko of L&A serves as the Website Administrator for EFCOG. All of this support provides a focal point for coordination of EFCOG activities, tracking of action items, regular communication with DOE and members, and for maintaining and disseminating a central base of EFCOG data. The support contractor is also responsible for coordinating activities with DOE and member companies, developing and distributing the EFCOG Critical Few Overview, Annual Report, tri-fold brochures and other documents, contacting prospective new members, maintaining the EFCOG Executive Council and Working Group Operating Manual, developing and maintaining the EFCOG library of records and information, supporting the Directors, Working Groups and Subgroups, and other duties as assigned by the EFCOG Chair.

Funding for administrative support is provided by EFCOG members who annually pay a pro rata share of the support costs for EFCOG. The funds are collected, administered, and disbursed in a dedicated financial account by the EFCOG Board Chair. Receipts for members’ FY 2011 pro rata shares and disbursements for services are shown in Tables 4 and 5.

Membership pro rata fees for 2011 were approved by the Executive Council at the June 2011 annual Executive Council meeting, and there was no increase in membership fees for the seventh consecutive year. Annual membership fees remain at $6,000 for full members, $3,000 for associate members, and $1,000 for small business members.
TABLE 4.  2011 EFCOG FUND ACCOUNT SUMMARY

OCTOBER 1, 2010 – SEPTEMBER 30, 2011

<table>
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<tr>
<th>Description</th>
<th>Amount</th>
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<td>Receipts</td>
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<td>FY 2011 Membership Renewals</td>
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<td>FY 2012 Membership Renewals</td>
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<td>Disbursements</td>
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<td>Support Service Contractor</td>
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<td>Longenecker &amp; Associates, Inc. 1</td>
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<tr>
<td>Ending Balance as of 09-30-11</td>
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1 Support Service costs include:
   a. Managing Director and Working Group Coordinator Support
   b. Administrative Support
      • Working Group, Member Company Coordination
      • Database Development and Maintenance
      • Internet Service (IPowerWeb)
      • Website Development and Maintenance
      • Meeting Logistics and Support
   c. Printing and Distribution of Tri-folds and Other Documents
   d. Executive Council Meetings – Annual and Semi-Annual Meeting
   e. Quarterly Board of Directors Meetings
   f. Strategic Planning Meetings
   g. Working Group Chair Meetings and Teleconferences
   h. Travel
### TABLE 5. 2011 EFCOG MEMBERSHIP

<table>
<thead>
<tr>
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**Total Membership Renewal for FY 2011**

| 80 | $360,000 |

**New Membership for FY 2011**

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Total New Membership for FY 2011  
20  
$27,750

Total Membership for FY 2011  
100  
$387,750
Membership in EFCOG continued to grow, and by the end of FY 2011, included 102 DOE contractors. EFCOG’s member companies for FY 2011 are shown below. Appendix B lists these member companies and shows the EFCOG Working Groups in which these member companies are participating.

3M
ABS Consulting, Inc.
Advanced Technologies and Laboratories
AECOM
Alliance & Sustainable Energy, LLC (NREL)
Alliant Corporation
American DND, Inc.
AnovaWorks, PLLC
ARES Corporation
AREVA Federal Services, LLC
Argonne National Laboratory
Associated Container Sales & Fabrication
ATC-Nuclear
B&W Pantex
B&W Y-12
Babcock & Wilcox Technical Services Group
Bartlett Services, Inc.
Bechtel Group, Inc.
Black & Veatch Special Projects Corporation
Booz Allen Hamilton
Brekenridge Institute
Brookhaven National Laboratory
Burns and Roe Enterprises, Inc.
Cavanagh Services Group, Inc.
CDM Federal Programs Corporation
CH2M Hill, Inc.
CH2M Hill Plateau Remediation Company
CH2M-WG Idaho, LLC
Colleague Consulting LLC
Container Products Corporation
Curtiss Wright Flow Control Nuclear
Dade Moeller & Associates
Dekker, Ltd.
DM Petroleum Operations Company
El Review and Company, Inc.
EnergX, LLC
EnergySolutions, LLC
Envirocon, Inc.
Epsilon Systems Solutions, Inc.
ESI International
Federal Engineers & Constructors
Fermi National Accelerator Laboratory
Firewater Associates, LLC
Fluor Government Group
Fluor Hanford
GEL Laboratories
Hanford Waste Treatment & Immobilization Plant
Honeywell FM&T, LLC
Hukari Technical Services, Inc.
IBM
Idaho National Laboratory
Jacobs Engineering Group
Jefferson Science Associates, LLC
Kiewit Federal Group, Inc.
L&L Associates, Inc.
Lawrence Berkeley National Laboratory
Lawrence Livermore National Laboratory
Link Technologies
Lockheed Martin Corporation
Los Alamos National Laboratory
MCR, LLC
Merrick & Company
Mission Support Alliance, LLC
National Security Technologies
Navarro Research and Engineering, Inc.
Newport News Shipbuilding
North Wind, Inc.
Oak Ridge Associated Universities
Olgoonik Technical Services, LLC
Omega Technical Services
Pacific Northwest National Laboratory
Parsons
Perma-Fix Environmental Services
Portage, Inc.
Pro2Serve
Project Time & Cost, Inc.
S.M. Stoller Corporation
Sandia National Laboratories
Sapere Consulting, Inc.
Savannah River Nuclear Solutions
Savannah River Remediation, LLC
Schneider Electric
Science Applications International Corporation
Shaw Environmental & Infrastructure, Inc.
SLAC National Accelerator Laboratory
SM&A
Strata-G, LLC
Strategic Management Solutions, LLC
Sullivan International Group, Inc.
TerranearPMC, LLC
Tetra Tech, Inc.
Time Solutions, LLC
URS Corporation
UT-Battelle
Vista Engineering Technologies, LLC
Wackenhut Services, Inc.
Washington Closure Hanford
Washington River Protection Solutions
Washington TRU Solutions (WIPP)
Waste Control Specialists
Wastren Advantage, Inc.
Wastren-EnergX Mission Support, LLC
APPENDIX B. EFCOG MEMBER COMPANY PARTICIPATION IN WORKING GROUPS (MEMBERSHIP BETWEEN 10/1/10 AND 9/30/11)

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