

Engineering Practices Working Group
Annual Report to the Directors for 2003

Prepared by Toney A. Mathews
EPWOG Co-Chairman
January 2, 2004

PURPOSE

The purpose of the Engineering Practices Working Group (EPWOG) is to promote engineering excellence in the execution of Department of Energy (DOE) missions by sharing best industrial practices, applying lessons learned and providing integrated recommendations to Department of Energy officials.

EPWOG facilitates the objectives of the Energy Facility Contractors Group (EFCOG) as it relates to Engineering Practices. EPWOG serves as the initiator and sponsor of various sub-groups and task groups that are formed from time to time for the purpose of addressing specialized subjects.

The Group's scope includes the areas of engineering practice that are associated with DOE facilities, programs, and capital acquisitions. 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. 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.

MEMBERSHIP

The membership of the 2003 Engineering Practices Working Group is presented below:

Name	Address	E-mail
Steering Committee & Sponsors		
Co-Chair: Toney A. Mathews	General Manager Framatome ANP 400 South Tryon Street, Suite 2100, WC- 25F Charlotte, NC 28285	tony.mathews@framatome-anp.com
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STATUS

The Engineering Practices Working Group (EPWOG) had an organizational meeting May 8 and 9, 2003, and prepared a charter that was approved by the EFCOG Executive Directors on May 14, 2003. Tom Stevens became the Sponsoring Director, and Jim Rispoli, OECM, and Willie Clark, NNSA, agreed to be the initial Department of Energy sponsors.

Meetings: EPWOG had a conference call meeting July 16 and a working meeting in Washington, DC October 20 and 21, 2003. The conference call focused on organizational activities, since the working group had just been approved by EFCOG directors in May. The group initiated two studies: facility commissioning and engineering metrics. It also started the development of a matrix of contractor subject matter experts for engineering disciplines and engineering subject areas. This matrix was an ambitious undertaking and required considerable persistence. The two study teams presented their results at the October meeting. The matrix was completed in November and is now on the EPWOG website. Twenty-one members attended the October meeting. The meeting contained presentations by members regarding engineering activities at their sites, a discussion with the DOE sponsor, Jim Rispoli, and a guest presentation by Jim McConnell, DNFSB

staff. Willie Clark left DOE for private industry and subsequently, Jay McDonald agreed to be the NNSA sponsor effective December 1, 2003. Other activities at the meeting are discussed below.

Initiatives: At the October meeting the members developed a set of initiatives called Focus Areas. These constitute the major objectives of the working group for 2004. The subjects of the 5 Focus Areas are:

1. Safety System SSCs – Upgrade/Backfit
2. HEPA Filter Testing
3. Construction without Engineering
4. Best Practices in Engineering
5. New Design Basis Threat

Task Teams are assigned and work has started on these Focus Areas. The effort of the first focus area team has received considerable interest and support by the Defense Nuclear Facilities Safety Board staff because it addresses an emerging concern by the board. The board has communicated their issues to DOE and NNSA by letter as a result of potential safety impacts identified in DNFSB staff trip reports. Tom Stevens has advised Everet Beckner and Frank Russo of the EPWOG initiative to develop a recommended process for evaluating safety system upgrades and reviewing the need for backfits on a consistent basis.

Relationships with Other WGs: The Engineering Practices Working Group recognizes a close relationship between engineering and project management, maintenance, and safety analysis. The chairmen of the Project Management and Maintenance Working Groups were invited to the October meeting. Their presence added to the content and usefulness of the meeting. The chairman of the Safety Analysis Working Group will be invited to the spring 2004 meeting.

Change of Command: At the time the working group had its organizational meeting in May of this year, it was decided that officers would be elected once the membership was established and the working group was up and running. Tobin Oruch and Toney Mathews agreed to serve as the initial Co-Chairmen to get the working group started. Consistent with this plan, new leaders were elected at the October meeting to begin their terms in January 2004. The new leaders are:

- John Gertsen, BWXT, Y-12, Chairman
- David Lowe, CH2M Hill, Hanford, Vice-Chairman
- Tobin Oruch, Univ. of CA, LANL, Secretary

Toney Mathews, Framatome-ANP, will continue to serve on the steering committee.

2004 Meetings: The members developed a meeting schedule for 2004 as follows:

- January 21, conference call
- April 20 & 21, meeting- Las Vegas, NV (BSC host)
- July 21, conference call
- October 19 & 20, meeting-Oak Ridge, TN (Y-12/ORNL hosts)

SUBGROUP STATUS (EPWOG SPONSORS 3 SUBGROUPS)

Fire Protection Subgroup Report From Richard Lewis:

Major activities completed in 2003

- Conducted teleconferences in April and October to discuss issues of interest and future plans of the Fire Protection Subgroup
- Held a meeting of the Fire Protection Subgroup at the DOE Fire Safety Workshop in Amarillo, Texas, in April
- Formed three task teams that have begun to address the following issues:
 - Implementation of Reliability Centered Maintenance for Fire Systems Testing
 - Standardizing calculation of Maximum Potential Fire Loss (MPFL)
 - Benchmarking of Fire Protection Resources across the DOE Complex
- Organized a review of DOE Order 420.1 by subgroup members and provided comments to DOE
- Developed an email distribution list that has been used by Subgroup members to request information from other sites
- Provided information that was used to develop a Fire Protection Subgroup webpage

Major activities for 2004

- Continue having regular telephone conferences to share information and address issues of common interest
- Complete work on the three initiatives identified in 2003
- Identify additional initiatives that the Subgroup members are interested in pursuing and establish task teams to address
- Establish a regular Fire Protection Subgroup meeting at the DOE Fire Safety Workshop

Lessons Learned

- Lack of funding to allow subgroup members to participate in the DOE Fire Safety Workshop hinders the exchange of information in some instances.

- The great diversity (size, staffing, types of facilities, etc) among the various DOE sites requires adjustments on how fire programs are implemented.

Configuration Management Subgroup Report From Bob Cullum:

Major activities completed in 2003

- An EFCOG Configuration Management Sub-Group (CMSG) teleconference was held on October 1, 2003. The purpose of this CM Sub Group teleconference was to exchange information on Configuration Management, Decontamination and Decommission (D&D), Document Control, and other sub-group objectives.
- A roster was generated for the EFCOG web page to identify CMSG members.
- Attended the tenth annual Configuration Management Benchmarking Group (CMBG) conference in Hershey, Pennsylvania. There were 94 practitioners of nuclear facility configuration management in attendance.

While attending the CM conference Bob Cullum met with 6 other Department of Energy (DOE) affiliates. Bob exchanged information with them and discussed the goals and objectives of the Energy Facility Contractors Group (EFCOG), Engineering Practices Working Group (EPWOG) and Configuration Management Sub-Group (CMSG) with them.

Major activities for 2004

- FY04 Goal - Larry Bays, Charlie Kronvall, Jim Johnnessee, and Elaine Doolittle committed to be on a task team to develop a paper in the form of guidelines to phase out Configuration Management requirements for D&D work. This paper should consider plant systems and structures being removed or modified for D&D as well as temporary systems and structures being installed as part of the D&D process.

Engineering Standards Subgroup Report From Tobin Oruch:

Major activities completed in 2003

- The Engineering Standards Working Group (ESWOG) held teleconferences in October 2002 and January 2003 during which ongoing initiatives and future plans were discussed. Minutes are on the EFCOG website.
- In January, a subject matter listing of contacts who maintain engineering standards throughout the DOE complex was completed and posted on the EFCOG website (this was later expanded to include more disciplines and member companies in December 2003 after the Standards group became a subgroup to EPWOG).
- In February, ESWOG presented at and participated in the Energy Efficiency Working Group meeting in Golden, CO in an effort to increase coordination between the working groups. ESWOG also attended the 2003 Annual Executive Council Meeting in Washington, DC at which formation of the Engineering Practices Working Group was proposed, discussed, and directed

to proceed with scoping.

- In May, ESWOG held its Annual Meeting in Las Vegas, Nevada May 20-22, 2003 at the DOE-NNSA Support Facility, Las Vegas NV. It was even more successful than the 2002 meeting, lasting three days and having 18 member companies represented by 19 attendees. Officers were elected including a new vice chair/chair-elect position. The online agenda reflects the topics discussed, and copies of the workshop presentations can be accessed through the agenda. There were also optional engineer's tours of Hoover Dam and the Nevada Test Site.

Major activities for 2004

- ESWOG continues to work with DOE-HQ on its 2001 suggestion to put a corporate contract in place for online national standards. EH-22 reported that it has finished the RFP and associated paper work for the DOE-wide standards system and is sending it to EH-1 to send to the CIO to coordinate with DOE senior managers. EH-1 (Beverly Cook) said she supports the idea and has spoken to the CIO about it.

LESSONS LEARNED

There are no lessons learned to report other than those identified in the Fire Protection Subgroup section above. Technical lessons learned and good practices are being placed on the EFCOG website created especially for that purpose. Focus Area # 4 on Best Engineering Practices, identified with the 2004 objectives, is a commitment to identify, screen, and publish more items on the EFCOG Lessons Learned website.

RECOMMENDATIONS

It is recommended that the Engineering Practices Working Group and its three Subgroups continue their activities in support of DOE and the common interest of the contractor community in accordance with the 2004 plans. The Engineering Practices Working Group is available to help support other critical initiatives of the EFCOG Executive Directors and DOE that may be identified during 2004.