



**Energy Facility Contractors Group**

**Safety Analysis Working Group**

**1999 Annual Report to the Directors**

**February 2000**

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**John W. Rice, Jr.**  
**Bechtel BWX Technologies Idaho, LLC**  
**P.O. Box 1625, MS 3750**  
**Idaho Falls, ID 83415-3750**  
**(208) 526-4206**  
**wjr@inel.gov**

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**ENERGY FACILITY CONTRACTORS GROUP (EFCOG)  
SAFETY ANALYSIS WORKING GROUP (SAWG)  
1999 ANNUAL REPORT TO THE DIRECTORS  
February 2000**

**I. PURPOSE AND OBJECTIVES**

The purpose of the EFCOG SAWG is to promote excellence in the Department of Energy (DOE) safety analysis programs through information sharing and application of lessons learned to other facilities.

The objectives of the SAWG are to:

- Operate within the framework of EFCOG;
- Provide planning and actions necessary to see that the overall objectives of the EFCOG come to fruition in the area of safety analyses;
- Promote, coordinate, and facilitate the active exchange of successful safety analysis programs, practices, procedures, lessons learned, and other pertinent information of common interest on safety analyses, which have been effectively utilized by Management and Operations (M&O), Management and Integration (M&I), and Environmental Remediation contractors; and
- Promote training on safety analyses by sharing of management and technical information among contractors through mechanisms such as workshops, subgroups, and seminars.

**II. MEMBERSHIP**

The membership of the SAWG Steering Committee and its subgroups and task teams includes representatives from most of the EFCOG member companies. They represent most of the major DOE sites and National Laboratories. The 1999 end-of-calendar-year (CY) roster is as follows:

**A. Steering Committee**

Chair

John W. Rice, Jr.  
Bechtel BWX Technologies Idaho  
P.O. Box 1625  
Idaho Falls, ID 83415-3750  
(208) 526-4206, [wjr@inel.gov](mailto:wjr@inel.gov)

Yvonne P. Alvarez

Human Factors / Ergonomics  
Mason & Hangar Corporation  
U.S. DOE Pantex Plant  
P.O. Box 30020, Bldg. 12-6, Rm. 112  
Amarillo, TX 79120-0020  
(806) 477-5813, [yvalvarez@pantex.com](mailto:yvalvarez@pantex.com)

Vice Chair

C. Brad Evans  
Fluor Daniel Hanford, Inc.  
P.O. Box 1000, A3-02  
Richland, WA 99352-1000  
(509) 372-2744  
[C\\_B\\_Brad\\_Evans@rl.gov](mailto:C_B_Brad_Evans@rl.gov)

Albert (Al) O. Bendure

Sandia National Laboratories  
P.O. Box 5800, MS 0873  
Albuquerque, NM 87185-1037  
(505) 844-8518, [aobendu@sandia.gov](mailto:aobendu@sandia.gov)

William (Bill) L. Cowley  
Lockheed Martin Hanford Corporation  
P.O. Box 1500, MSIN R1-44  
2355 Stevens  
Richland, WA 99352-1505  
(509) 376-4567  
[William.L.Bill.Cowley@rl.gov](mailto:William.L.Bill.Cowley@rl.gov)

Frank A. Felix, II  
Pacific Northwest National Lab  
Program Manager, Operation / Facility  
ESH&Q Support  
P.O. Box 999 MS P7-28  
Richland, WA 99352  
(509) 373-1402, [frank.felix@pnl.gov](mailto:frank.felix@pnl.gov)

Aaron (Art) A. Francis  
Bechtel Nevada / NTS  
P.O. Box 98521, MS NLV080  
Las Vegas, NV 89193-8521  
(702) 295-1155, [franciaa@nv.doe.gov](mailto:franciaa@nv.doe.gov)

Floyd H. Galegar  
Sandia National Laboratories  
P.O. Box 5800, MS 1173  
Albuquerque, NM 87185  
(505) 844-8147, [fgaleg@sandia.gov](mailto:fgaleg@sandia.gov)

Howard E. Gilpin  
Kaiser Hill, RFETS  
P.O. Box 464  
Golden, CO 80402-0464  
(303) 966-3701  
[howard.gilpin@rfets.gov](mailto:howard.gilpin@rfets.gov)

Gary F. Hagan  
Lockheed Martin Energy Systems, Inc.  
P.O. Box 2009, Bldg. 9119, MS 8235  
Oak Ridge, TN 37831-8235  
(423) 576-8307, [hagangf@ornl.gov](mailto:hagangf@ornl.gov)

Jerry L. Hansen  
Westinghouse Safety Management Solutions  
1993 South Centennial Avenue  
Aiken, SC 29803  
(803) 502-9715  
[jerry.hansen@wxsms.com](mailto:jerry.hansen@wxsms.com)

J. Scott Hildum  
P.O. Box 808, L-386  
Lawrence Livermore National Laboratory  
Livermore, CA 94551  
(925) 422-5263, [hildum1@llnl.gov](mailto:hildum1@llnl.gov)

Michael (Mike) J. Hitchler  
Westinghouse Safety Management Solutions  
1993 South Centennial Avenue  
Aiken, SC 29803  
(803) 502-9624, [mike.hitchler@wxsms.com](mailto:mike.hitchler@wxsms.com)

John E. Johnson, Jr.  
Bechtel BXW Technologies Idaho, LLC  
P.O. Box 1625, Mail Stop 3750  
Idaho Falls, ID 83415-3750  
(208) 526-1098, [jejohnso@inel.gov](mailto:jejohnso@inel.gov)

Kirtland L. Jones  
DynMcDermott Petroleum Operations Co.  
850 South Clearview Parkway  
New Orleans, LA 70123  
(504) 734-4051  
[Kirkland.jones@spr.doe.gov](mailto:Kirkland.jones@spr.doe.gov)

Noel R. Kerr  
Bechtel Hanford, Inc.  
3350 George Washington Way  
Richland, WA 99352-1666  
(509) 372-4865, [noel\\_r\\_kerr@bhi-erc.com](mailto:noel_r_kerr@bhi-erc.com)

Carl Ortiz  
Westinghouse Waste Isolation Division  
P.O. Box 2078  
Carlsbad, NM 8822  
(505) 234-8727  
[ortizc@wipp.carlsbad.nm.us](mailto:ortizc@wipp.carlsbad.nm.us)

David (Dave) G. Renfro  
Office of Nuclear Safety  
Oak Ridge National Laboratory  
P.O. Box 2008, Bldg. 4500N,  
MS 6244  
Oak Ridge, TN 37831  
(865) 576-4120, [renfrodg@ornl.gov](mailto:renfrodg@ornl.gov)

David (Dave) J. Seidel  
Los Alamos National Laboratory  
P.O. Box 1663, MS K489  
Los Alamos, NM 87545  
(505) 667-8348, [dseidel@lanl.gov](mailto:dseidel@lanl.gov)

Carl Smith  
BNFL Inc.  
10306 Eaton Place #450  
Fairfax, VA 22030  
(703) 218-4483, [csmith@bnflinc.com](mailto:csmith@bnflinc.com)

## **B. Subgroups and Task Groups**

The chairperson of each active SAWG subgroup or task group is shown below. The status of these subgroups and task groups is provided in Section IV and separate Annual Reports for the subgroups.

### Accident Analysis Subgroup

Kevin R. O'Kula, Chair  
Westinghouse Safety Management Solutions  
1993 South Centennial Avenue  
Aiken, SC 29803  
(803) 502-9620; [kevin.okula@wxsms.com](mailto:kevin.okula@wxsms.com)

### Authorization Basis Subgroup

Sam Savani, Chair  
Westinghouse Safety Management Solutions  
1993 South Centennial Avenue  
Aiken, SC 29803  
(803) 502-9638; [sam.savani@wxsms.com](mailto:sam.savani@wxsms.com)

### Chemical Safety Subgroup

Douglas (Doug) W. Heal, Chair  
Westinghouse Safety Management Solutions  
138 Mitchell Road  
Oak Ridge, TN 37830  
(423) 481-2521; [doug.heal@wxsms.com](mailto:doug.heal@wxsms.com)

### Technical Safety Requirements Subgroup

James (Jim) A. McCormick, Chair  
Westinghouse Safety Management Solutions  
1993 S. Centennial Avenue  
Aiken, SC 29803  
(803) 502-9799; [jim.mccormick@wxsms.com](mailto:jim.mccormick@wxsms.com)

### Training Subgroup

Lorraine M. Segura  
Los Alamos National Laboratory  
P.O. Box 1663, MS K489  
Los Alamos, NM 87545  
(505) 667-2613; [lsegura@lanl.gov](mailto:lsegura@lanl.gov)

Unreviewed Safety Questions Subgroup

Robert (Bob) Edwards, Chair  
Westinghouse Safety Management Solutions  
1993 South Centennial Ave.  
Aiken, S.C. 29803  
(803) 502-9813; bob.edwards@wxsms.com

Evaluation Guidelines Task Group

C. Brad Evans, Chair  
Fluor Daniel Hanford, Inc.  
P.O. Box 1000, A3-02  
Richland, WA 99352-1000  
(509) 372-2744; C\_B\_Brad\_Evans@rl.gov

SAR Implementation Guide and Standards Task Group

John W. Rice, Jr., Chair  
Bechtel BWX Technologies Idaho, LLC  
P.O. Box 1625  
Idaho Falls, ID 83415-3750  
(208) 526-4206; wjr@inel.gov

**C. DOE Headquarters (DOE HQ) Germantown (GTN) Sponsor**

Dr. Richard W. Englehart  
DOE HQ GTN / EH-31  
19901 Germantown Road  
Germantown, MD 20874-1207  
(301) 903-3718; richard.inglehart@hq.doe

**III. STATUS**

**A. Key Objectives, Activities, and Benefits for CY 1999**

The CY 1999 key objectives, activities, and benefits of the SAWG included the following:

1. Promoting excellence in DOE and contractor safety analysis programs, through greater information sharing and application of lessons learned to other facilities, by
  - a. Better identification and definition of current complex-wide safety analysis issues;
  - b. Restructuring the objectives of SAWG subgroups and creating task groups;
  - c. Resolving major safety analysis issues; and
  - d. Developing better safety analysis guidance.
2. Promoting, coordinating, and facilitating a better exchange of safety analysis information by
  - a. Increasing the membership of the Steering Committee, subgroups, and task groups;
  - b. Continuing development and improvement of the SAWG Web Pages;

- c. Enhancing the utility of meetings and monthly teleconferences of the Steering Committee and Subgroup Chairs and the utility of subgroup teleconferences; and
  - d. Increasing participation in the SAWG Authorization Basis Workshop, the SAWG Annual Workshop, and DOE / EFCOG Chemical Safety Workshop.
3. Promoting and conducting safety analysis training by
- a. Maintaining a list of the Training Point of Contact (POC) at each site;
  - b. Completing development of and publishing the Guidelines for Training and Qualification of Safety Analysts;
  - c. Completing development of and publishing the Safety Analysts Training Plan;
  - d. Completing development of and publishing the Safety Analysts Vendor Course List;
  - e. Coordinating with the Subgroup Chairs to identify training needs and training classes and assisting the Chair of the SAWG Annual Workshop with training support; and
  - f. Conducting safety analysis training.

The following paragraph addresses the specific efforts expended to achieve these objectives.

- 1. Promoting excellence in DOE and contractor safety analysis programs through greater information sharing and application of lessons learned to other facilities.**
  - a. Better identification and definition of current complex-wide current safety analysis issues.**

The Safety Analysis Working Group Chair conducted a survey via email of the Steering Committee members in order to identify major safety analysis issues at each site. SAWG members reported back on input received from their company facility managers, safety analysis organizations, and DOE field offices. During its 19-20 October 1999 Steering Committee meeting in Germantown, Maryland, the Steering Committee discussed these issues, prioritized them, and agreed to address as a working group any issue, which was a major problem at three or more sites. Further action on those issues, which were specific to only one or two sites, were left to those individual sites to pursue, with the support of the Working Group, if requested. The description and disposition of these issues is detailed in the meeting minutes, which can be found on the SAWG web page at <http://www.efcog.org/publications/WG%20Minutes/sawg/Index.htm>. These issues were reviewed by representatives from four DOE HQ Secretarial Offices (DP, EH, EM, and SC), who concurred with their importance. Many of these issues aligned very well with similar DOE HQ initiatives. A summary of these SAWG issues and their correlation to the DOE initiatives, as shown in Appendix A, "DOE and SAWG Efforts", to this report, was sent to Mr. Richard Black, DOE HQ/EH-31 as an attachment to a letter from the SAWG Chairperson, which requested support and DOE HQ endorsement of these SAWG efforts. DOE HQ/EH is currently developing a supportive response to this letter.

**b. Restructuring the objectives of SAWG subgroups and creating task groups.**

Those issues, which were ranked as Priority #1 (highest) or #2 were assigned to the existing SAWG subgroups as priority issues. Subgroups were encouraged to address lower priority issues (i.e., Priority #3) on a time-available basis. Several issues were assigned to the two new task teams, i.e., the Evaluation Guidelines Task Team and the SAR Implementation Guide and Standards Task Team, as listed in Section II.B. and described in Section IV.A of this report. The disposition of these issues is shown in Appendix B, "Disposition of Issues", of this report.

**c. Resolving major safety analysis issues.**

Work on many of the issues identified during the 19-20 October 1999 SAWG Steering Committee was initiated in preparation for the 24-25 January 2000 Authorization Basis Workshop. Efforts to address other safety analysis issues were conducted throughout the year via email exchanges by the Steering Committee members and through subgroup efforts as detailed in the subgroup annual reports and as summarized below.

(1) Authorization Basis Subgroup.

The 1999 Authorization Basis Workshop, which was organized and hosted by the Authorization Basis Subgroup, was held in Albuquerque, NM on 25-26 January 1999. It was the second SAWG interactive workshop directed at identifying and resolving issues involving the planning, development, review, approval, and implementation of authorization basis documentation. There were 114 participants, representing 12 DOE sites and laboratories, 8 DOE field offices, 4 DOE HQ secretarial offices (i.e., DP, EH, EM, and ER), the Defense Nuclear Facilities Safety Board (DNFSB), and 18 companies. The attendees engaged in eight facilitated sessions that (1) presented the issues, (2) discussed various aspects of the issues, (3) gathered experiences and lessons learned from the participants, and (4) proposed several white papers to capture the discussions. The results of this workshop are posted by session on the Subgroup's publication web page. The white papers completed were presented during the 13-18 June 1999 Annual SAWG Workshop in Portland, Oregon. These papers are documented in the Workshop proceedings, which are posted on the SAWG's publications web page.

Planning for the third Annual AB Workshop, scheduled for January 25-26, 2000 in Las Vegas, NV, was conducted throughout the year. The purpose of the Workshop is to review and evaluate issues associated with Authorization Basis documents. The Workshop will provide a forum for a direct exchange between involved individuals from DOE/HQ, field offices, and the DOE contractors community to stimulate extended discussion of issues relative to the development, implementation, and maintenance of Authorization Basis documents and lesson learned. The workshop will consist of seven informative topical sessions formatted to foster audience participation.

The Authorization Basis Subgroup also conducted a survey of the processes that each site uses for its contractor independent safety review function. The results of this survey will be summarized in a white paper and published.

(2) Chemical Safety Subgroup.

During 1999 the SAWG Chemical Safety Subgroup worked with the DOE Chemical Safety Interest Group (CSIG) to address issues, which were identified during the 3-5 November 1998 Chemical Safety Workshop. These issues are identified on the Chemical Safety Interest Group web page at [http://tis.eh.doe.gov/web/chem\\_safety/csig/csig.html](http://tis.eh.doe.gov/web/chem_safety/csig/csig.html) and in the Subgroup Report. During the year the DOE CSIG was renamed the Chemical Safety Topical Committee (CSTC) under the DOE Standards Committee. Because of the large amount of work that was involved in addressing all of the issues, as listed above and as identified during the 1998 Chemical Safety Workshop, the CSIG and the SAWG Chemical Safety Subgroup developed a revised CSIG Priority Issues List in June 1999. This revised list may also be found on the CSIG web page.

There has been a considerable amount of discussion and effort throughout the year dedicated to trying to resolve Original Issue 2-3, "Management of Chemical Safety Basis". This issue was based on a need, as identified by a majority of the DOE field offices and DOE contractors, that a replacement for the cancelled DOE Order 5481.1B, "Safety Analysis and Review System", was needed to define requirements for establishing the safety basis for chemical facilities. In addition to being discussed at the November 3-5 1998 Chemical Safety Workshop, the issue was also discussed in great detail during Session II, "Worker Safety", and Session V "DOE Panel Discussion" of the January 25-26, 1999 Authorization Basis Workshop (see minutes at <http://www.efcog.org/publications/WG%20Minutes/sawg/Index.htm>), at the June 13-18, 1999 SAWG Annual Workshop (see the Workshop minutes at <http://www.efcog.org/publications/WG%20Minutes/sawg/Index.htm>), and at the December 14-16, 1999 DOE / EFCOG Chemical Safety Workshop (see [http://tis.eh.doe.gov/web/chem\\_safety/workshop/CSIGArch.html](http://tis.eh.doe.gov/web/chem_safety/workshop/CSIGArch.html)). In an effort to resolve this issue DOE HQ/EH-31 published a white paper (see the paper at [http://tis.eh.doe.gov/web/chem\\_safety/518wp.pdf](http://tis.eh.doe.gov/web/chem_safety/518wp.pdf)) on this subject and prepared a draft revision to DOE Order 420.1, "Facility Safety", (see the draft at [http://tis.eh.doe.gov/web/chem\\_safety/DOEo420.pdf](http://tis.eh.doe.gov/web/chem_safety/DOEo420.pdf)). However, because DOE HQ/EH was not able to acquire the agreement of all of the affected DOE Secretarial Offices for the revision to DOE Order 420.1, the revision was not approved and the effort has been on hold. Several DOE Secretarial Offices took the position that a replacement order was not needed since they believed that the requirements were adequately addressed elsewhere in DOE requirements documents and that only DOE expectations and guidance were needed. Efforts to resolve this impasse are now being worked as part of Issue G, "Develop Consistent DOE Expectations and Approach on Chemical Safety Analysis", from the 1999 Chemical Safety Workshop (see the Workshop meeting minutes location cited above for details).

The Chemical Safety Subgroup co-hosted with DOE the 1999 Chemical Safety Workshop in Washington, DC on 14-16 December 1999. For three days participants in the workshop discussed specific chemical safety issues. The minutes from this meeting are posted on the CSIG / CSTC web page.

**d. Developing better safety analysis guidance.**

Part of the efforts involved in addressing the issues identified during the 19-20 October 1999 Steering Committee meeting involved the development of better guidance. Efforts to develop other guidance were conducted throughout the year via email exchanges by the Steering Committee members and through subgroup efforts as detailed in the subgroup annual reports and as summarized below.

(1) Accident Analysis Subgroup.

The Subgroup is developing an Accident Analysis Guidebook, which will produce guidance in the selection of methods, data, and other insights to support DOE facility accident and consequence analysis. As with DOE-HDBK-3010-94, "Airborne Release Fractions / Rates and Respirable Fractions for Nonreactor Nuclear Facilities", this document will reduce costs by ensuring greater consistency in safety analysis around the DOE complex. A draft of the Accident Analysis Guidebook, that was 80% complete by December 1999, was submitted to DOE for review. Examples of exemplary safety analysis, that were volunteered by the Savannah River, Hanford, and Rocky Flats sites, have been included in the guide.

(2) Chemical Safety Subgroup.

During the year the CSTC and the Chemical Safety Subgroup had two major accomplishments: (1) the establishment of a clearinghouse network of information on chemical requirements, i.e., a roadmap of chemical safety requirements (see the following web page address: <http://csig-roadmap.lanl.gov/>), and (2) completion of a draft Chemical Management Handbook (see the following web page address or more information: [http://tis.eh.doe.gov/web/chem\\_safety/docs/cms.pdf](http://tis.eh.doe.gov/web/chem_safety/docs/cms.pdf)).

(3) Training Subgroup.

The Training Subgroup developed and published the Guidelines for Training and Qualification of Safety Analysts, the Safety Analysis Training Plan, and the Safety Analysts Vendor Course List.

**2. Promoting, coordinating, and facilitating a better exchange of safety analysis information by**

**a. Increasing the membership of the Steering Committee, subgroups, and task groups.**

The SAWG Chairperson contacted the EFCOG Executive Council members for those sites, which did not have a representative on the SAWG Steering Committee, and requested that a SAWG representative be identified. As a result the membership of the Steering Committee increased from 14 members in 1998 to 19 members in 1999. Four more new members were also added in January 2000. A roster, showing the membership of each of the subgroups and task

groups, was distributed to the SAWG Steering Committee member from each site with a request that at least one representative to each SAWG subgroup or task group be identified for each site. Although there are still a number of sites, which are not represented on each SAWG subgroups and task groups, significant progress has occurred throughout the year. The results of this effort are shown in Appendix C, "Steering Committee, Subgroup, and Task Group Membership".

**b. Continuing development and improvement of the SAWG Web Page.**

Significant progress has been made throughout the year in developing the web pages for the SAWG and its subgroups. A charter, roster, and list of publication now exists for the SAWG and most of its active subgroups. The SAWG web page was used to promote interest in the SAWG-sponsored workshops and to provide information on lessons learned, DOE HQ safety analysis interpretation letters, and frequently asked questions. The Authorization Basis Subgroup continued to maintain the Authorization Basis Database for nine sites on its Subgroup publications web page. DOE has cited this information as being of particular value to DOE Headquarters and field office personnel.

**c. Enhancing the utility of monthly teleconferences and meetings of the Steering Committee and Subgroup Chairs.**

The Steering Committee held three meetings during the year, two in conjunction with its annual workshops. During its January 27, 1999 meeting, held in conjunction with the 1999 Authorization Basis Workshop, the Steering Committee conducted business, including the election of a new Chairperson. The remainder of the meeting was dedicated to a review of paper abstracts and plans for the Annual Workshop. Details of this meeting may be found in the meeting minutes. The Steering Committee also met on June 17, 1999 in conjunction with its Annual Workshop. The majority of the meeting was dedicated to reviewing various aspects of the Annual Workshop and the status of each of the Subgroups. In order to promote more involvement by each site in the activities of the SAWG subgroups, the Steering Committee voted to revise its subgroup guidelines to require that the Chairperson position for each subgroup be rotated on a yearly basis, with the Vice Chairperson normally becoming the new Chairperson, and that an election for a new Vice Chairperson be held annually. Another meeting of the Steering Committee has held on October 19-20, 1999 in Germantown, MD. The primary purpose of the meeting was to address major safety analysis issues, as described in paragraphs 1.a. and 1.b. above. The Steering Committee members and Subgroup Chairs also participated in a monthly conference call except during those months, when a face-to-face meeting occurred. Several of the SAWG subgroups held conference calls throughout the yearly, ranging in frequency from monthly to quarterly.

All of the subgroups met at the SAWG Annual Workshop on June 15, 1999 in Portland, OR to discuss issues and share lessons learned. The USQ Subgroup also met on January 27, 1999 in Albuquerque, NM, after the Authorization Basis Workshop. During these meetings the USQ Subgroup identified major

USQ issues to be addressed and shared lessons learned. These major issues were reviewed by the SAWG Steering Committee during its meeting on October 19-20, 1999 in Germantown, MD and they formed the basis for many of the major objectives for CY 2000. The Accident Analysis Subgroup, Authorization Basis Subgroup, Chemical Safety Subgroup, and Training Subgroup held teleconferences throughout the year to address issues. Minutes of most of these meetings are posted on the SAWG publications web page.

**d. Increasing participation in Authorization Basis Workshop, SAWG Annual Workshop, and Chemical Safety Workshop.**

In 1999 three national workshops related to safety analysis were either hosted by the SAWG, or co-hosted with DOE. The workshops included training sessions, invited and selected papers, DOE speakers and panels, and SAWG Steering Committee and subgroup meetings. The January 25-26, 1999 SAWG Authorization Basis Workshop and the December 14-16, 1999 DOE / EFCOG Chemical Safety Workshops are described in Section III.A.1.c.(1). and (2). of this report. The SAWG obtained letters of support and endorsement from DOE for the Chemical Safety Workshop.

The SAWG held its 9th Annual Workshop with the theme of "Integrating Safety Analysis into Safety Management" in Portland, Oregon in June, 1999. The Workshop began with 3 days' worth of safety analysis training sessions and SAWG subgroup meetings. Training sessions were held on (1) RadCalc for Windows Training; (2) MELCOR Accident Consequence Code System (MACCS); (3) Integrated Accident Analysis; GENII – Environmental Radiation Dosimetry Software System; (4) Radiological Safety Analysis Computer (RSAC)-6 Computer Code; (5) DOE-Standard 1120-98; (6) Chemical Dispersion and Consequence Assessment CD / CA; (7) Process of Conducting Unreviewed Safety Questions; (8) Technical Safety Requirements; (9) Operating Experience – Lessons Learned; and (10) Benchmarking Processes to Enhance ISMS. The Workshop facilitated very productive and informative discussions between DOE and contractor personnel. An excellent group of invited speakers including the Keynote Speaker, Beverly Cook from DOE-ID, were featured during the Workshop. The DOE Panel Discussion, which was comprised of DOE HQ and field office representatives, was one of the major highlights as usual. Lessons learned were shared during nine paper sessions. The benefits of the Workshop being reported by the participants in the Workshop Survey Sheets show a return on investment of a factor of ten or more. The Workshop Proceedings have been published on the SAWG Home Page.

The 2000 SAWG Workshop will be held in Santa Fe, New Mexico, from April 28, 2000 through May 4, 2000, and will be hosted by Los Alamos National Laboratory and Sandia National Laboratories. The home page for this workshop, including abstract information and deadlines, can be accessed at <http://www.sawg2000.org/>.

A new initiative was addressed in 1999. An EFCOG SAWG presentation to the ANS Nuclear Installation Safety Division Program Committee at the Winter

ANS Meeting resulted in a commitment for reciprocal participation and communication. As a result the SAWG chaired and coordinated an EFCOG focused paper session at the November 14-18, 1999 ANS Winter Meeting in Long Beach, CA (See the Meeting Proceedings for further details.).

The SAWG continues to address initiatives, such as increased training and a focus on DOE initiatives, to increase participation in its workshops, especially in light of Congressionally and DOE-mandated restrictions on travel and limited budgets. As was discussed in Section III.A.1.a. the Steering Committee is seeking the support and endorsement of DOE HQ/EH-1 and the EFCOG Executive Council in this regard.

### **3. Promoting and conducting safety analysis training by**

#### **a. Maintaining a list of the Training Point of Contact at each site.**

The Training Subgroup was reorganized at the start of CY 1999 due to a general lack of participation by many sites in the Training Subgroup meetings and teleconferences. Because much of the responsibility of the Training Subgroup Chairperson needs to be focused on supporting training for the entire SAWG through the Annual Workshop and other training classes, the Training Subgroup Chairperson was also designated as the SAWG Training Coordinator. Because many sites do not have a central POC for safety analysis training, it was decided that a POC should be identified for each site. The Training POCs for each member site are listed on the Training Subgroup web page at <http://www.efcog.org/wg/sawg-trn/roster.htm>

#### **b. Completing development of and publishing the Guidelines for Training and Qualification of Safety Analysts;**

Guidelines for Training and Qualification of Safety Analysts, dated May 1999, were developed and published on the Subgroup Publications web page and distributed to the Steering Committee and approximately 40 people at the 1999 SAWG Annual Workshop in Portland, Oregon. These guidelines may be used to develop site-specific training programs. A session at the January 24-25, 2000 Authorization Basis Workshop in Las Vegas, Nevada will focus on training guidelines.

#### **c. Completing development of and publishing the Safety Analysis Training Plan.**

A Safety Analysis Training Plan was developed and published on the Subgroup Publications web page and distributed to the Steering Committee and approximately 40 people at the 1999 SAWG Annual Workshop in Portland, Oregon. This Training Plan may be used to develop site-specific training programs or individual training plans for each safety analyst and reviewer. A session at the January 24-25, 2000 Authorization Basis Workshop in Las Vegas, Nevada will focus on the need to develop individual training plans.

#### **d. Completing development of and publishing the Safety Analysts Vendor Course List.**

A Safety Analysts Vendor Course List was developed and published on the Subgroup Publications web page and distributed to the Steering Committee and approximately 40 people at the 1999 SAWG Annual Workshop in Portland, Oregon. This list identifies possible courses that can be used to satisfy individual training plans.

**e. Coordinating with the Subgroup Chairs to identify training needs and training classes and assisting the Chair of the SAWG Annual Workshop with training support.**

The Training Subgroup Chairperson supported the Annual Workshop Chairperson and Workshop Planning Committee in organizing the 18 training sessions.

**g. Conducting safety analysis training.**

Eighteen training sessions (listed in paragraph III.A.2.d. of this report) were conducted at the SAWG Annual Workshop in Portland, Oregon, training 450 registrants in various aspects of safety analysis and authorization basis methods. The Accident Analysis, TSR, and USQ Subgroups, among others sponsored these training sessions.

**B. Key Objectives, Goals, Processes, and Timelines for CY 2000**

The CY 2000 key objectives, goals, processes, and timelines of the SAWG will be primarily focused on those of its subgroups, as listed below and in the individual Subgroup Annual Reports:

1. Accident Analysis Subgroup.

a. Objective: Complete the development of the Accident Analysis Guidebook.

Goal: Complete the development of a DOE user review draft of the Accident Analysis Guidebook by June 2000.

Process: Obtain the final required inputs as soon as possible. Perform a technical and editorial review of the draft and then issue it.

Schedule: Complete development of the draft by June 2000.

b. Objective: Conduct in-depth training in source term analysis and chemical and radiological dispersion / consequence analysis.

Goal: Conduct a DOE Accident Analysis Workshop, with training in accident and consequence analysis, as part of the April 28 – May 4, 2000 Annual SAWG Workshop in Santa Fe, NM.

Process: Hold classes during the Workshop in Tritium Dispersion Consequences; RadCalc Computer Program for Windows; MACCS 2; Radiological Safety Analysis Computer (RSAC)-6 Program; In-facility Transport and Source Term Modeling; Fire Source Term Modeling; GEN II Computer Code; Radiological Dispersion / Consequence; and Chemical Dispersion and Consequence Assessment.

Schedule: Provide classes from April 28 – May 1, 2000.

c. Objective: Continue Accident Analysis Subgroup linkage to the June 4-8, 2000 ANS Summer Meeting in San Diego, CA.

Goal: Have EFCOG SAWG involvement in the ANS Summer Meeting.

Process: Working with the NISD and ANS Summer Meeting planners to include sessions with SAWG involvement.

- Schedule: Provide input to meet the timelines for the ANS Summer Meeting.
- d. Objective: Providing a forum via teleconferences, e-mail exchanges, and meetings to exchange information and lessons learned regarding accident and consequence analyses.
- Goal: To act as an active and viable forum for exchanging information and lessons learned, thereby reducing costs of accident and consequence analyses.
- Process: Exchange information and lessons learned via various communication means.
- Schedule. Meet in April 2000 in conjunction with the 2000 SAWG Annual Workshop and hold quarterly teleconferences to exchange information and lessons learned. Exchange e-mail as deemed necessary and appropriate.

2. Authorization Basis Subgroup.

- a. Objective: Assisting DOE HQ in the development of the Implementation Guide for the Price-Anderson Amendments Act (PAAA) Rule on Safety Basis Requirements (i.e., Code of Federal Regulations Part 830 Subpart B.)
- Goal: Provide information in the Implementation Guide, which addresses contractor concerns regarding the implementation of the rule, thereby reducing costs and minimizing DOE concerns with safety analysis documentation.
- Process: Address this issue as part of Session #4 during the Authorization Basis Workshop on January 24-25, 2000 in Las Vegas, NV. During this session develop a list of volunteers to work with DOE HQ personnel in developing the Implementation Guide.
- Schedule: Support DOE HQ development of the Implementation Guide by July 1, 2000.
- b. Objective: Assisting DOE HQ in developing guidance on Authorization Agreements.
- Goal: Review DOE HQ/EM and DP concerns with existing Authorization Agreements and assist DOE HQ personnel in revising the guidance in Chapter 4 of DOE Guide 450.4-1A, "Integrated Safety Management System Guide".
- Process: Review the concerns cited in the Safety Management Implementation Team (SMIT) letter to Distribution dated 27 September 1999. Address this issue as part of Session #3 during the Authorization Basis Workshop on January 24-25, 2000 in Las Vegas, NV. Assist DOE in revising the guidance in DOE Guide 450.1A.
- Schedule: Review the SMIT letter prior to the January 24-25, 2000 Authorization Basis Workshop. Discuss concerns during Session #3 of the Workshop and document the results. Provide a list of consolidated comments to DOE by no later than April 1, 2000.
- c. Objective: Developing better guidance on the independent safety review function.
- Goal: Reduce or eliminate problems with the contractor independent safety review function.
- Process: Complete the survey of all sites to document best practices and lessons learned with regard to the contractor independent safety review function. Document the results of the survey in a white paper and publish the results.
- Schedule: Complete the survey by July 1, 2000. Complete the white paper by October 1, 2000.

- d. Objective: Developing guidance on the use of Nuclear Regulatory Commission (NRC) versus DOE requirements for new construction.  
Goal: Document lessons learned on the use of NRC criteria for DOE facilities and develop a white paper to provide guidance on when NRC criteria should and should not be utilized.  
Process: Address this issue as part of Session #5 during the Authorization Basis Workshop on January 24-25, 2000. Document lessons learned and develop guidance based on input obtained during this session. Publish the minutes to the Workshop and present the results of the meeting and follow-up efforts as a white paper during the 2000 SAWG Annual Workshop.  
Schedule: Conduct Session #5 as part of the Authorization Basis Workshop. Publish the meeting minutes by March 1, 2000. Present the white paper during the SAWG Annual Workshop.
- e. Objective: Hosting and publishing the results of the January 24-25, 2000 Authorization Basis Workshop.  
Goal: Successfully conduct the January 24-25, 2000 Authorization Basis Workshop and publish the results.  
Process: Conduct the Authorization Basis Workshop as planned and publish the result in meeting minutes on the Subgroup's publications web page.  
Schedule: Host the 2000 Authorization Basis Workshop in Las Vegas, NV on January 24-25, 2000.
- f. Objective: Coordinating completion of the Authorization Basis Workshop white papers for presentation at the April 28 – May 4, 2000 SAWG Annual Workshop.  
Goal: Capture the results of the Authorization Basis Workshop in white papers and present the results at the Annual Workshop.  
Process: Ensure that each session chair documents the results of their session.  
Schedule: Develop abstracts for these white papers for the Annual Workshop Planning Meeting on January 26, 2000. Complete the white papers for the April 28 – May 4, 2000 Annual SAWG Workshop.
- g. Objective: Maintaining the Authorization Basis Database on the Subgroup web page.  
Goal: Acquire the Authorization Basis Database information and maintain it on the Subgroup web page for each EFCOG member company.  
Process: Request that a Subgroup member from each site, either supply an input to the database in those cases, where it does not exist, or update it in those case, where it does exist.  
Schedule: Provide inputs to the database by no later than July 1, 2000.
- h. Objective: Identifying and documenting Authorization Basis lessons learned on the Subgroup web page.  
Goal: Provide an easily accessible source of lessons-learned information regarding the development and maintenance of Authorization Basis documentation.  
Process: Gather lessons learned from Subgroup members and post them on the Subgroup's web page.  
Schedule: Gather and post information as it becomes available.
- i. Objective: Providing a forum via monthly teleconferences, e-mail exchanges, and meetings to exchange information and lessons learned.

Goal: To act as an active and viable forum for exchanging information and lessons learned, thereby reducing costs.

Process: Exchange information and lessons learned via various communication means.

Schedule: Meet on in conjunction with the April 28 – May 4, 2000 Annual Workshop and hold monthly teleconferences to exchange information and lessons learned. Exchange e-mail as deemed necessary and appropriate.

3. Chemical Safety Subgroup.

- a. Objective: Address Issue G, “Develop Consistent DOE Expectations and Approach on Chemical Safety Analysis”, from the 1999 Chemical Safety Workshop.

Goal: Identify DOE HQ and field office expectation and develop a complex-wide consistent approach to chemical safety analysis in order to reduce costs and maximize the benefit of lessons learned.

Process: To Be Determined.

Schedule: To Be Determined.

- b. Objective: Address other issues from the 1999 Chemical Safety Workshop, as appropriate.

Goal: Resolve issues identified during the Workshop.

Process: Work with the Issue Team Leaders to resolve these issues.

Schedule: To Be Determined.

- c. Objective: Providing a forum via teleconferences, e-mail exchanges, and meetings to exchange information and lessons learned regarding chemical safety.

Goal: To act as an active and viable forum for exchanging information and lessons learned, thereby reducing costs.

Process: Exchange information and lessons learned via various communications means.

Schedule: Meet in conjunction with the 2000 SAWG Annual Workshop and hold quarterly teleconferences to exchange information and lessons learned. Exchange e-mail as deemed necessary and appropriate.

4. Technical Safety Requirements Subgroup.

- a. Objective: Assisting DOE HQ in the development of the Implementation Guide for the Price-Anderson Amendments Act (PAAA) Rule on TSR Requirements (i.e., Code of Federal Regulations Part 830 Subpart B Section 208).

Goal: Provide information in the Implementation Guide, which addresses contractor concerns regarding the implementation of the rule, thereby reducing costs and minimizing DOE concerns with proposed TSRs.

Process: Address this issue as part of Session #4 during the Authorization Basis Workshop on January 24-25, 2000 in Las Vegas, NV. During this session develop a list of volunteers to work with DOE HQ personnel in reviewing and commenting on future drafts of this Implementation Guide.

Schedule: Support DOE HQ development of the Implementation Guide by July 1, 2000.

- b. Objective: Conducting TSR training.

Goal: Provide the opportunity for cost-effective TSR training to safety analysts in the DOE community in need of TSR, thereby producing more knowledgeable and cost-efficient TSR preparers and reviewers.

Process: Conduct a TSR Overview training class at the April 28 – May 4, 2000 SAWG Annual Workshop in Santa Fe, NM. Work with the Training Subgroup to develop alternative TSR training approaches (i.e., videotapes, computer-based training, centralized training sessions for site trainers, travelling road show training classes, etc.).

Schedule. Conduct TSR Overview class on April 28, 2000 at the SAWG Annual Workshop. Develop a plan for alternative TSR training approaches by October 1, 2000.

- c. Objective: Developing guidance on tailoring design and Quality Assurance (QA) criteria for safety significant structures, systems, and components (SSCs).  
Goal: Address all existing SAWG known concerns regarding the tailoring of design and QA criteria for SSCs, thereby reducing the potential for safety problems and potential PAAA fines.

Process: Develop a white paper based on information obtained during Session #7, “Design / QA Controls for Safety SSCs”, of the Authorization Basis Workshop and present this paper at the SAWG Annual Workshop. Obtain the concurrence of the TSR Subgroup and the SAWG Steering Committee on this white paper and publish it on the Subgroup web page.

Schedule. Present an SAWG-approved white paper at the SAWG Annual Workshop in May 2000.

- d. Objective: Revising the TSR Subgroup charter to place more emphasis on addressing specific contractor issues and supporting DOE initiatives as well as sharing of lessons learned.

Goal: By revising the TSR Subgroup charter, generate more interest and support in the Subgroup activities by focusing on major areas of concern at each site and on DOE initiatives and by displacing the perception that the primary purpose of the Subgroup is to exchange lessons learned information.

Process: The Subgroup Chairperson and selected members of the Subgroup will revise the charter and obtain the concurrence of the TSR Subgroup, the SAWG Steering Committee, and the EFCOG Directors.

Schedule. Complete and obtain approval for the revised charter by July 1, 2000.

- e. Objective: Providing a forum via teleconferences, e-mail exchanges, and meetings to exchange information and lessons learned regarding the development and implementation of TSRs.

Goal: To act as an active and viable forum for exchanging information and lessons learned, thereby reducing costs of TSR development and implementation.

Process: Exchange information and lessons learned via various communication means.

Schedule. Meet in April 2000 in conjunction with the 2000 SAWG Annual Workshop and hold quarterly teleconferences to exchange information and lessons learned. Exchange e-mail as deemed necessary and appropriate.

## 5. Training Subgroup.

- a. **Objective:** Coordinate with the Subgroup Chairs and Steering Committee members to identify training needs and training classes and assist the Chair of the SAWG Annual Workshop with training support.  
**Goal:** Identify complex-wide safety analysis training needs and arrange for and schedule training classes at the SAWG Annual Workshop that address the needs of the safety analysis preparers and reviewers throughout the DOE complex.  
**Process:** Identify training needs through discussions with the Training Subgroup POCs, Steering Committee members, and Subgroup Chairpersons. Identify training classes that address these needs and arrange for these classes to be taught at the Annual Workshop. Keep DOE Headquarters and field office personnel informed regarding training opportunities.  
**Schedule:** Have the training classes arranged for and scheduled by the SAWG Steering Committee meeting on 26 January 2000.
- b. **Objective:** Develop training and qualification criteria for contractor independent safety reviewers of safety analysis documentation.  
**Goal:** Develop a white paper on Guidelines for Training and Qualification of Contractor Safety Analysis Reviewers.  
**Process:** Use an approach similar to the approach that was used to develop the white paper on Guidelines for Training and Qualification of Safety Analysts. Consider expanding this white paper to include DOE reviewers of safety analysis documentation.  
**Schedule:** Develop these guidelines by 1 October 2000.
- c. **Objective:** Develop a more rigorous training program for developing and maintaining the core competency of safety analysts and reviewers, which includes authorization basis training.  
**Goal:** Ensure that all safety analysts and reviewers across the DOE complex are properly trained.  
**Process:** Develop a matrix, which documents the extent of the need for each type of safety analysis training, including authorization basis training, at each DOE site. Identify existing training courses or the requirements for new courses to address these needs. Begin to schedule and conduct these existing courses. Promote the development of these new courses.  
**Schedule:** Develop the matrix by 1 July 2000. Identify existing training courses by 1 October 2000. Identify the requirements for new courses by 31 December 2000. Develop a schedule for existing classes by 31 December 2000.
- d. **Objective:** Develop complex-wide type safety analysis training to be offered on a site-by-site basis.  
**Goal:** Where appropriate, identify and promote safety analysis training that can be cost-effectively taught on a site-by-site basis.  
**Process:** Identify existing safety analysis training classes that can be cost-effectively taught on a site-by-site basis and publish this information on the Training Subgroup webpage. Identify safety analysis training that could be effectively taught on a site-by-site basis and promote its development through the generation of requirements documentation for the associated training material.  
**Schedule:** Identify existing safety analysis training classes, that can be taught on a site-by-site basis, and publish this information by 1 July 2000. Identify

training classes, that could be effectively taught on a site-by-site basis, and develop requirements documents for their development by 31 December 2000.

- e. Objective: Identify and develop web-based safety analysis training.  
Goal: Where appropriate, identify and promote safety analysis training that can be effectively conducted via the Internet.  
Process: Identify existing safety analysis training classes that can be taken via the Internet and publish this information on the Training Subgroup webpage. Identify safety analysis training that could be effectively conducted via the Internet and promote its development through the generation of requirements documentation for the associated training material.  
Schedule: Identify existing safety analysis training classes, that can be taken via the Internet, and publish this information by 1 July 2000. Identify training classes, that could be effectively conducted via the Internet, and develop requirements documents for their development by 31 December 2000.
- f. Objective: Develop safety analysis training, which offers more of a hands-on approach.  
Goal: Promote the development of training programs that provide an opportunity to apply the training through the performance of safety analysis and the development of safety analysis documentation.  
Process: Review existing safety analysis training classes to determine how the training can be expanded to include application of the training.  
Schedule: Revise existing safety analysis training classes by 31 December 2000.
- g. Objective: Providing a forum via teleconferences, e-mail exchanges, and meetings to exchange information and lessons learned regarding safety analysis training.  
Goal: To act as an active and viable forum for exchanging information and lessons learned, thereby reducing costs of training.  
Process: Exchange information and lessons learned via various communication means.  
Schedule. Meet in April 2000 in conjunction with the 2000 SAWG Annual Workshop and hold quarterly teleconferences to exchange information and lessons learned. Exchange e-mail as deemed necessary and appropriate.

6. Unreviewed Safety Questions Subgroup

- a. Objective: Assisting DOE HQ in the development of the Implementation Guide for the Price-Anderson Amendments Act (PAAA) Rules on USQ Requirements (i.e., Code of Federal Regulations Part 830 Subpart B Sections 210 and 211).  
Goal: Provide information in the Implementation Guide, which addresses contractor concerns regarding the implementation of the rule, thereby reducing costs and minimizing DOE concerns with the USQ Process.  
Process: Address this issue as part of Session #4 during the Authorization Basis Workshop on 24-25 January 2000 in Las Vegas, NV. During this session develop a list of volunteers to work with DOE HQ personnel in reviewing and commenting on future drafts of this Implementation Guide.  
Schedule: Support DOE HQ development of the Implementation Guide by 1 July 2000.
- b. Objective: Conducting USQ training.

Goal: Provide cost-effective USQ training to all safety analysts, who need this training across the DOE complex, thereby producing more knowledgeable and cost-efficient users of the USQ Process.

Process: Support a USQ training class at the 28 April – 4 May 2000 SAWG Annual Workshop in Santa Fe, NM. Work with the Training Subgroup to develop alternative USQ training approaches (i.e., videotapes, computer-based training, centralized training sessions for site trainers, travelling road show training classes, etc.).

Schedule: Support a 3-day USQ training class on 29 April – 1 May 2000 at the SAWG Annual Workshop. Develop a plan for alternative USQ training approaches by 1 October 2000.

- c. Objective: Develop enhanced guidance for addressing USQ Determination questions.  
Goal: Provide guidance for all existing SAWG known concerns regarding the proper methods to address specific USQ Determination questions.  
Process: Work with DOE HQ personnel to develop this guidance at part of the Implementation Guide for the PAAA rules on USQ Requirements.  
Schedule: Support DOE HQ development of the Implementation Guide by 1 July 2000.
- d. Objective: Develop guidance on what constitutes a “significant increase” in consequences and how it impacts the use of “acceptance criteria” to determine USQs.  
Goal: Provide guidance for all existing SAWG known concerns regarding what constitutes a significant increase and how it impacts the use of acceptance criteria.  
Process: Work with DOE HQ personnel to develop this guidance at part of the Implementation Guide for the PAAA rules on USQ Requirements.  
Schedule: Support DOE HQ development of the Implementation Guide by 1 July 2000.
- e. Objective: Develop guidance on the application of the USQ Process to changes in infrastructure (i.e., administration and hardware).  
Goal: Provide guidance for all existing SAWG known concerns regarding the application of the USQ Process to changes in infrastructure.  
Process: Work with DOE HQ personnel to develop this guidance at part of the Implementation Guide for the PAAA rules on USQ Requirements.  
Schedule: Support DOE HQ development of the Implementation Guide by 1 July 2000.
- f. Objective: Develop guidance on what constitutes a “reasonable time” for determination of applicability and existence of potentially inadequate safety analysis (PISA).  
Goal: Provide guidance for all existing SAWG known concerns regarding what constitutes a reasonable time.  
Process: Work with DOE HQ personnel to develop this guidance at part of the Implementation Guide for the PAAA rules on USQ Requirements.  
Schedule: Support DOE HQ development of the Implementation Guide by 1 July 2000.
- g. Objective: Develop and document metrics (i.e., performance indicators) for the USQ Process.

Goal: Measure the effectiveness of the USQ process.

Process: Develop the metrics and utilize selected Subgroup members to implement their use at each site. Document the results.

Schedule: Complete development of the metrics by 1 October 2000 and measure the results by 31 December 2000.

- h. Objective: Providing a forum via teleconferences, email-exchanges, and meetings to exchange information and lessons regarding successful USQ programs, practices, lessons-learned, training, and other pertinent information of interest.

Goal: To act as an active and viable forum for exchanging information and lessons learned regarding the USQ process.

Process: Exchange information and lessons learned via various communications means.

Schedule: Meet in April 2000 in conjunction with the 2000 SAWG Annual Workshop and hold quarterly teleconferences to exchange information and lessons learned. Exchange e-mail as deemed necessary and appropriate.

#### IV. STATUS OF TASK GROUPS AND SUBGROUPS

##### A. New Task Groups

An Evaluation Guidelines Task Group and a SAR Implementation Guide and Standards Task Group were established by the Steering Committee at its October 1999 meeting to meet short-term objectives. They are briefly described below.

##### 1. Evaluation Guidelines Task Group

- a. **Leaders**: Brad Evans and Jerry Hansen
- b. **Purpose**: The purpose of this task group is to develop a position paper on the proper use and application of evaluation guidelines, including frequency-based evaluation guidelines.
- c. **Sites Represented**: Currently, the task force represents the Hanford Site and the Savannah River Site.
- d. **DOE Sponsor**: Dick Englehart, DOE HQ/EH-31
- e. **Accomplishments**: None, since it is a new task group.
- f. **Planned Activities**: Develop a straw man position paper on the use and application of evaluation guidelines. Use this paper as a starting point toward a consensus position discussion at the 24-25 January 2000 Authorization Basis Workshop. The final product will be a White Paper, that will be submitted as a formal SAWG position paper.

##### 2. SAR Implementation Guide and Standards Task Group

- a. **Leaders**: John Rice, John Johnson, and Jerry Hansen
- b. **Purpose**: The purpose of this task group is to review DOE Standard 3009-94, "Preparation Guide for U.S. DOE Nonreactor Nuclear Facility Safety Analysis Reports", as part of the DOE-mandated 5-year review and the new proposed implementation guide for the PAAA Safety Basis Requirements Rule and provide suggestions and comments to DOE HQ/EH-31. Comments on DOE Standard 3009-94 and the new implementation guide

will be discussed during sessions at the 24-25 January 2000 Authorization Basis.

- c. **Sites Represented:** Currently, Bechtel BWXT Idaho, LLC and WSMS have representatives on the Task Group.
- d. **DOE Sponsor:** Dick Englehart, EH-31
- e. **Accomplishments:** None, since this is a new task group.
- f. **Planned Activities:** Review DOE STD-3009-94 and the new proposed implementation guide for the PAAA Safety Requirements Rule and provide comments and suggestions to DOE HQ/EH-31.

## **B. Inactive Subgroups**

The following subgroups were moved to the inactive status due to a general lack of participation. Due primarily to a lack of travel funding most of the safety analysts, who have a strong interest in human factors, have participated in the human factors professional society meetings rather than the EFCOG SAWG meetings; therefore, there has been little participation during the past several years in the SAWG Human Factors Subgroup. In the past few years there have not been any major issues raised, which have involved facility disposition; therefore, the subgroup was deactivated. However, during the 2000 Authorization Basis Workshop, there were several facility disposition issues raised, which might warrant a reevaluation of this position.

### Human Factors Subgroup

Yvonne P. Alvarez, Chair

Human Factors / Ergonomics

Mason & Hangar Corporation

U.S. DOE Pantex Plant

P.O. Box 30020, Bldg. 12-6, Rm. 112

Amarillo, TX 79120-0020

(806) 477-5813; [yalvarez@pantex.com](mailto:yalvarez@pantex.com)

### Facility Disposition

Noel Kerr, Chair

Bechtel Hanford, Inc.

3350 George Washington Way

Richland, WA 99352-1666

(509) 372-4865; [noel\\_r\\_kerr@bhi-erc.com](mailto:noel_r_kerr@bhi-erc.com)

## **V. LESSONS LEARNED**

### **A. Problems**

#### **1. Lack of Adequate Funding for EFCOG Activities**

One difficulty being encountered, even as the SAWG is becoming more involved and more solicited by DOE for its expertise, is the constant drain on, and the unavailability of, funding resources for EFCOG activities. Much of what the SAWG and its subgroups do is completed by its members after hours on personal time. The excellence of the SAWG products is in jeopardy due to the amount of unfunded time required to keep it functioning and beneficial. Management personnel at some sites are limiting their involvement in EFCOG activities, as

budgets are diminishing, and it is often very difficult to show line managers specific tangible cost savings for a given activity, especially training. If enhanced safety is a continuously advertised and supported goal, and if the DOE and EFCOG Executive Council are committed to the belief the SAWG is an integral part of that goal, then DOE and EFCOG efforts to directly support this function should be reevaluated. As a minimum, more individual involvement by the EFCOG Director at each site is needed to ensure that funding is adequately allocated locally to support these SAWG efforts.

## **2. Negative Impacts Due to Travel Restrictions**

Congressional and DOE-mandated travel restrictions are having a significant negative impact of SAWG activities during the current fiscal year. Participation in several SAWG meetings and workshops has been reduced in Fiscal Year 2000 by approximately 50 percent. These travel restrictions are also having a major impact on non-travel related activities, since SAWG members are often reluctant to spend a lot of their volunteered time on the planning and early phases of initiatives, when they know that they will not be able to participate in future workshops and meetings, where this issues will be further discussed and resolved. Support from the EFCOG Director at each site is needed to prioritize limited travel resources to support SAWG efforts, especially those which support important DOE initiatives.

## **3. Problems with DOE Order 110.3, "Conference Management"**

DOE Order 110.3, "Conference Management", imposes new stringent requirements on DOE and contractor personnel involved in the planning and participation in conferences. Although this new order has only been officially incorporated into a few site contracts, it is still being implemented for all DOE personnel and in many cases unofficially implemented for many contractors. The planning and implementation efforts for many SAWG workshops is often done on very limited budgets and with a large degree of volunteered time. The efforts required to address many of this stringent requirements are often quite time consuming and costly. Having to address these requirements is not cost-effective to the government. As is the case for training, an exemption to this order for EFCOG activities would be highly beneficial. In order to reduce costs, DOE is attempting to limit participation in workshops; however, training sessions are exempt. Since a large majority of the EFCOG workshops either involve training or are focused on addressing DOE initiatives, these activities should be exempt from the order.

## **4. Lack of Adequate Safety Analysis Training**

There are no DOE-mandated specific training requirements for safety analysts, reviewers, and approvers except for Unreviewed Safety Question training requirements. As a result, there is often very little, if any, funding allocated for safety analysis training. What is allocated is generally very limited overhead funding. As a result, there is generally inadequate training for safety analysts, reviewers, and approvers despite the Integrated Safety Management System (ISMS) general requirements for training commensurate with responsibility for all personnel. More DOE attention needs to be focused on establishing minimum safety analysis training requirements and ensuring that the associated training is adequately funded.

## **5. Lack of Emphasis on Chemical Safety**

Significant attention has been focused on hazard analysis requirements for large and even small radiological hazards through the existing and new PAAA rules and DOE orders and through Defense Nuclear Facilities Safety Board interest; however, the development and implementation of safety analysis requirements for potentially even more hazardous chemicals are not receiving adequate emphasis. Many of these chemical safety issues have been raised and discussed during the joint DOE / EFCOG Chemical Safety Workshops for the last several years. DOE and the EFCOG Executive Council need to focus more efforts on chemical safety. Other EFCOG working groups in addition to the SAWG need to be involved in these efforts.

## **B. Positive Aspects**

The SAWG and its subgroups and task groups continue to provide a meaningful presence in the DOE safety analysis community. They continue to grow in their acceptance, credibility, and use throughout the DOE complex. They actively communicate with each other and DOE Headquarters and field office personnel to address both short-term and long-term issues related to safety analysis. Information and lessons learned have been readily addressed and shared through day-to-day communication, Steering Committee, subgroup and task Group activities, workshops, training, guidance documents and DOE interaction and support.

Several of the primary benefits to the DOE from the existence of the SAWG are training and enhanced safety at each of its sites through more efficient and effective application of compliant and field safety. Much of what the SAWG offers is through its sharing of experience, ideas, and lessons learned. This year greater support of DOE is being realized through SAWG participation in DOE Working Groups; Standards Committees; Secretarial Officers Working Groups; and efforts involving national training, guidance, and lesson learned papers; and as a technical expert resources and points of contact.

- (a) Day to day savings and cost avoidances from SAWG participation and interaction is estimated conservatively at \$100K per participating site.
- (b) Participant surveys at the three 1999 SAWG workshops; Authorization Basis, Safety Analysis Working Group Annual Workshop, and the joint EFCOG-DOE Chemical Safety indicated a conservative cost savings of at least a factor of ten over the cost of the workshop, especially with regard to training.

## **C. Negative Aspects**

None

# **VI. RECOMMENDATIONS**

## **A. Continuation of Working Group**

The SAWG is one an active and beneficial EFCOG Working Group and should be continued. Because it is well-aligned with its DOE counterparts, the EFCOG Directors should encourage DOE to increase its use of the SAWG as a point of contact and

technical resource for DOE complex safety related issues, directive development, lessons learned, and training;

**B. Formation of Task Groups**

The SAWG Steering Committee has established the Evaluation Guidelines Task Team and the SAR Implementation Guide and Standards Task Team and it seeks the concurrence of the EFCOG Directors in this matter.

**C. Deactivation of Subgroups**

The SAWG Steering Committee recommends the deactivation of the Human Factors Subgroup. Because of budget limitations the vast majority of safety analysts interested in human factors and chosen to participate in conferences and meetings, sponsored by the Human Factors professional societies, rather than in workshops and meetings, sponsored by the SAWG. Due to the DOE complex-wide lack of participation in the Human Factors Subgroup, it is recommended that the Human Factors Subgroup be deactivated.

Note: The Facility Disposition Subgroup is inactive, but relevant topics recur periodically, such that its continuance in retaining experienced individuals is beneficial and recommended.

**D. Funding for EFCOG Activities**

More individual involvement by the EFCOG Director at each site is needed to ensure that funding is adequately allocated locally to support SAWG efforts. EFCOG management should work with the EFCOG Directors at those sites, where this is a significant problem. The EFCOG Directors should work with DOE senior management to identify specific funding to support for EFCOG to support DOE initiatives.

**E. Travel Restrictions**

The EFCOG Director at each site should help middle management prioritize their limited travel resources to better support SAWG efforts, especially those which primarily support DOE initiatives. EFCOG management should work with the EFCOG Directors at those sites, where this is a significant problem.

**F. DOE Order 110.3, “Conference Management”**

The EFCOG Directors need to work with DOE senior management to obtain an exemption for EFCOG activities, especially those involving training, from DOE Order 110.3, “Conference Management”.

**G. Safety Analysis Training**

The EFCOG Executive Council should work with DOE senior management to focus more attention on establishing minimum training requirements for DOE and contractor safety analysts, reviewers, and approvers and ensuring that the associated training is adequately funded.

**H. Emphasis on Chemical Safety**

DOE senior management and the EFCOG Executive Council need to focus more of their efforts on dealing with chemical safety problems and in addressing specific issues

and recommendations coming out of the joint DOE / EFCOG Chemical Safety Workshops. They should ensure that other EFCOG working groups, in addition to the SAWG, become more involved in these efforts.

## APPENDIX B

### DISPOSITION OF ISSUES

#### **Group: Safety Analysis Working Group Steering Committee**

##### **Priority Issues:**

- SAI-02 (Priority #1)- Need for Detailed DOE Requirements for Safety Analysis for Other Than Nuclear Facilities (Worked in conjunction with Chemical Safety Subgroup)
- HAI-03 (Priority #2) - Need for Guidance on Integrating Various Types of Hazard Analysis (Work with ISM Working Group)

#### **Group: Accident Analysis Subgroup**

**Mentor:** Scott Hildum

##### **Priority Issues:**

- AAI-01 – (Priority #1) Need to Complete Initial Accident Analysis Guidebook
- SCI-04 – (Priority #2) Relative to Unmitigated Accident Consequence Evaluations Develop Guidance on What You Can Take Safety Credit For In the Evaluation

#### **Group: Authorization Basis Subgroup (Absorb functions of Facility Disposition Subgroup)**

**Mentor:** Brad Evans

##### **Priority Issues:**

- ABI-01 (Priority #1) - Need for Guidance on Authorization Agreements
- ABI-02 (Priority #1) – Need to Complete and Update Authorization Basis Database for DOE Nuclear Facilities for Each Site
- ABI-03 (Priority #1) – Need to Further Identify and Document Authorization Basis Lessons Learned
- No # (Priority #1) – Need for Guidance on Use of NRC versus DOE Requirements for New Construction (Reference - Guy Bishop Paper)
- RAI-02 (Priority #2) – Need for Better Guidance on the Independent Safety Review Function

#### **Group: Chemical Safety Subgroup**

**Mentor:** Floyd Galegar

##### **Priority Issues:**

- SAI-02 (Priority #1) – Need for Detailed Requirements for Safety Analysis for Other Than Nuclear Facilities
- CSI-01 (Priority #1) – Develop a Requirements Driver (DOE Handbook) for Chemical Safety Programs, Including Safety Analysis, for Chemical Facilities

#### **Group: Technical Safety Requirements Subgroup**

**Mentor:** John Johnson

##### **Priority Issue:**

- SCI-05 (Priority #1) – Guidance on Tailoring Design, Quality Assurance (QA), Etc. Criteria to Safety Significant Structures, Systems, and Components (SSCs)
- SCI-06 (Priority #1) – Need for Design Requirements for Safety-significant Equipment
- SCI-08 (Priority #1)- Need for Better Guidance on Which Drawings Need to Be Maintained as “As Built” Drawings

**Group: Training Subgroup**

**Mentor:** John Rice

**Priority Issue:**

TRI-07 (Priority #2) – Need for Guidance on Safety Analysis Expectations and Increasing Worker Involvement

TRI-01 (Priority #1) – Need to Develop Training and Qualification Criteria for Independent Safety Reviewer of Safety Analysis Documentation

TRI-02 (Priority #1) – Need for More Rigorous Training Program for Safety Analysts

TRI-03 (Priority #1) – Need for Guidance on Maintaining Safety Analysis Core Competency

TRI-04 (Priority #1) – Need for Complex-wide Type Safety Analysis Training to Be Offered on a Site-by-site Basis

TRI-05 (Priority #1) – Need for Safety Analysis Training, Which Offers More of a Hands-on Approach

TRI-06 (Priority #1) – Need for Web-based Safety Analysis Training

TRI-08 (Priority #1) – Preparation, Delivery, and Material Support for SAWG Training Sessions

**Comments:**

- (1) Resolution efforts should address the potential for DOE and contractor collaboration.
- (2) Task Group should develop position paper on advantages and disadvantages including cost tradeoffs for various training options including (a) class at central location with students travelling, (b) class at each site with instructor(s) travelling, (c) computer based training, (d) video conference based training, and (e) site trainers with mentorship by subject matter expert(s).
- (3) A site-wide matrix identifying specific training needs at each site should be developed.
- (4) The specific attributes of courses, which can satisfy complex-wide training needs, should be identified and promoted.

**Group: Unreviewed Safety Question Subgroup**

**Mentor:** John Johnson

**Priority Issues:**

CCI-01 (Priority #1) – Need for Enhanced Guidance in Addressing Unreviewed Safety Question Determination (USQD) Questions

CCI-13 (Priority #1) – Need for Guidance on What Constitutes a “Significant Increase” in Consequences and How It Impacts the Use of “Acceptance Criteria” to Determine USQs

CCI-04 (Priority #2) – Need for Guidance on Management of Infrastructure and Co-located Facilities

CCI-09 (Priority #2) – Need for Guidance on Application of USQ Process to Changes in Infrastructure (Administration and Hardware)

CCI-11 (Priority #2) – Need for Guidance on What Constitutes a “Reasonable Time” for Determination of (1) Applicability and (2) Existence of PISA

CCI-16 (Priority #2) – Need to Document the Metrics (Performance Indicators) for the USQ Process

**Group: Evaluation Guidelines Task Group**

**Leaders:** Brad Evans and Jerry Hansen

**Priority Issue:**

SCI-01 (Priority #1) – Lack of Adequate DOE Guidance on Use and Application of Evaluation Guidelines

**Group: SAR Implementation Guide and Standards Task Group**

**Leaders:** John Rice, John Johnson, and Jerry Hansen

**Priority Issues:**

No # (Priority #1) – Need for Review and Update of DOE-STD-3009-94

No # (Priority #1) – Need for Implementation Guide for PAAA Rule on Safety Analysis Reports

HAI-01 (Priority #2) – Lack of Guidance or Mechanism to Evaluate Hazards that Can Impact  
Multiple Facilities and Activities