CHARTER OF THE DEPARTMENT OF ENERGY CRITICALITY SAFETY SUPPORT GROUP

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Approved	Jn McKamy 9/6/2016
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I. BACKGROUND

On July 14, 1997, the Department of Energy (DOE) accepted Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 97-2, Criticality Safety. Subrecommendation 8, within Recommendation 97-2 states:

> *Identify a core group of criticality experts experienced in the theoretical and experimental aspects of neutron chain reaction to advise on the above steps and assist in resolving future technical issues.*

The Criticality Safety Support Group (CSSG) was formed in response to Subrecommentation 8 and is composed of persons from DOE staff and contractors having collective knowledge in a broad spectrum of nuclear criticality technology and safety areas. CSSG Work Instructions are attached as Appendix A. The CSSG Membership Policy is attached as Appendix B.

II. MISSION

The primary function of the CSSG is to provide operational and technical expertise to the DOE through the Nuclear Criticality Safety Program (NCSP) manager. The CSSG provides advice and technical support to help meet the criticality safety needs of DOE missions, including stockpile stewardship, materials stabilization, transportation, storage, facilities decommissioning, and waste disposal. The CSSG also makes recommendations for the implementation and execution of the coherent, efficient NCSP administered for the DOE by the National Nuclear Security Administration (NNSA).

The collective CSSG expertise encompasses critical and subcritical integral experiments, differential nuclear physics measurements, nuclear data evaluation, calculational methods, criticality safety training and qualification, management of criticality safety programs, criticality safety evaluations, and criticality safety consensus standards.

III. OPERATION OF THE CSSG

A. Organization

The Chair of the CSSG is appointed by the NCSP manager and serves a 1-year renewable term. The Chair is responsible for coordinating the activities of the CSSG with the NCSP manager and for reporting these activities to the NCSP manager.

The Deputy Chair of the CSSG is nominated by the membership of the CSSG and appointed by the NCSP Manager. The Deputy Chair serves a 1-year renewable term. The Deputy Chair serves as the Chief Operating Officer of the CSSG and is responsible for tracking deliverables and taskings, developing CSSG funding requests/proposals for the NCSP Manager, documenting meeting results/notes/actions and performing the duties of the Chair when the Chair is absent.

Terms for both the Chair and Deputy Chair begin on the first day of the fiscal year. Either the Chair or Deputy Chair, but (preferably) not both, may elect to not renew their position at the end of their current term. When the Chair vacates that position, the Deputy Chair automatically assumes the position of Chair. Both the Chair and Deputy Chair shall provide notice to the NCSP Manager sufficiently in advance of leaving that position to allow for a replacement to be appointed.

The NCSP Manager shall document the reaffirmation of the Chair and Deputy Chair appointments each year.

The CSSG Chair may appoint subcommittees from the CSSG membership to review, report, or act on any matter of concern that comes before the CSSG.

In addition, to supplement the expertise of the CSSG members, the CSSG Chair, with the approval of the NCSP manager, may request other qualified individuals to provide the CSSG with technical expertise for specific tasks.

B. Meetings

The Chair shall call CSSG meetings as needed but no less than two times annually. The presence of the Chair or Deputy Chair standing in for the Chair is mandatory at CSSG meetings. In addition to the two mandatory CSSG meetings conducted each year, additional meetings may be called by the Chair as necessary. The CSSG also meets regularly via teleconferences arranged by the CSSG Chair or Deputy and/or by subcommittees appointed by the CSSG Chair.

C. Scope of Activities

All tasks and initiatives that require expenditure of NCSP funds by any CSSG member (other than participation in meetings as discussed above) shall be undertaken only after a formal tasking directive from the NCSP manager has been issued to the CSSG Chair.

The CSSG provides technical support to the NCSP manager for the performance of activities supporting the development and execution of the NCSP. Additionally, the scope of CSSG activities also includes the following reviews:

- Activities or conditions that have the potential for serious degradation of nuclear criticality safety at DOE facilities;
- New nuclear facility designs where criticality is a credible hazard;
- New or revised DOE Directives, Standards, and Guides related to criticality safety; and,
- Contractor nuclear criticality safety programs at DOE facilities in support of DOE Line Management.

APPENDIX A

CSSG WORK INSTRUCTIONS

This set of specific work instructions is provided by the NCSP manager to set performance expectations for the CSSG. The NCSP manager may modify the CSSG Work Instructions from time to time as deemed necessary. Revisions to these instructions will be promulgated promptly to the CSSG through the Deputy Chair. Meeting minutes, or other documents generated by the CSSG shall be posted to the NCSP website once approved. Documents/products deemed OUO or otherwise sensitive by the NCSP Manager may not be directly posted, but may be referenced, and access provided upon request to, and approval from, the NCSP Manager.

1) CSSG Meetings/Telecons

- An agenda for each CSSG meeting/telecon shall be issued by the Deputy Chair working with the Chair in advance of a scheduled meeting/telecon and distributed to the members of the CSSG and the NCSP manager together with any materials needed for review of the agenda items.
- The Deputy Chair of the CSSG shall ensure that the minutes of each meeting are formally recorded. Verbatim minutes of the meetings are not required, but the main points of the issues discussed must at least be summarized and decisions clearly delineated.
- After review and concurrence by the members of the CSSG, the minutes shall be forwarded to the NCSP manager.

2) CSSG Reports

- The results of any evaluation, review, response to a formal Tasking, or similar activity by the CSSG shall be transmitted to the NCSP manager in a formal report. These reports shall represent the consensus position of the CSSG members.
- All formal written correspondence on behalf of, or representing, the CSSG individually or collectively, must be reviewed and approved by the NCSP manager prior to making distribution.
- In the event of serious disagreement with the content of any such report, CSSG members, either individually or with other members, may submit a minority report to the NCSP manager. The NCSP manager will take action as needed to resolve the issues raised by any minority report and inform the authors of that report of the resolution.

3) CSSG Communications

- CSSG members as part of their duties with the CSSG and the NCSP may answer any informal query (voice or email) from any Departmental element or the DNFSB or its Staff. The NCSP manager should be kept informed of all such communication as appropriate.
- All invitations to external elements (i.e. DNFSB, DNFSB Staff, NRC, etc.) to participate in CSSG and/or NCSP meetings or activities shall be made by the NCSP manager only.
- Deliberations of the CSSG and discussion of issues with the NCSP manager must be kept within the CSSG until such time as an official position is reached and the NCSP manager grants approval to disseminate or discuss the information with non-CSSG members. The CSSG may discuss such issues with NCSP task element managers and/or the Chair of the Nuclear Data Advisory Group as appropriate.

- Discussion topics that the CSSG believes should be vetted with the DNFSB or its Staff must be provided to the NCSP manager who will make the arrangements through appropriate channels. CSSG members are not authorized to unilaterally engage external parties on CSSG or NCSP matters in their capacity as CSSG members.

4) CSSG Emeritus Activities

- Emeritus members may receive NCSP funding for support of CSSG Taskings subject to a case-by-case approval of the NCSP Manager. In all such cases, the CSSG Chair should propose to the NCSP Manager that such support is desirable during consultation with the NCSP Manager on the details of the Tasking. The CSSG Deputy Chair will provide an estimate of NCSP funding required and advise the NCSP Manager on the impacts of re-directing NCSP funding to Emeritus members.
- Emeritus members may take on tasks that are outside the scope of the CSSG Charter as requested by the NCSP Manager in consultation with the CSSG Chair as part of their continued support to the CSSG. This is subject to the condition that funding for such activities is provided by the requesting organization and do not require expenditure of NCSP funds. Reports of such work would still receive CSSG peer review and review of the NCSP Manager prior to being issued to the requestor.

APPENDIX B

CSSG MEMBERSHIP POLICY

1) Size and Composition of the CSSG

CSSG membership categories are: a) Current, b) Emeritus, and c) Ex officio.

a) Current membership shall be limited to ten members (except during new member transition periods when this number may be exceeded) having a collective balance of expertise that encompasses critical and sub-critical integral experiments, differential nuclear physics measurement, nuclear data evaluation, calculational methods, criticality safety training and qualification, management of criticality safety programs, criticality safety evaluations, and criticality safety consensus standards. Members may receive funding support from the NCSP as appropriate to their specific tasks and roles in the CSSG. Current members are the only voting members of the CSSG.
b) Emeritus status is comprised of formerly Current members (see Section 5 of this Appendix).
c) Ex officio members are appointed to the CSSG because of their positions related to the NCSP or their expertise in some area of criticality safety.

All members are appointed by, and serve with the approval of the NCSP Manager.

The CSSG may form subcommittees, working groups or mentoring relationships that can include ad hoc members as needed. However, these ad hoc participants are not voting members of the CSSG nor are they funded directly by the NCSP.

2) Current CSSG Member Qualifications

The following are minimum qualification requirements for Current members.

a) At least 15 years of experience as a criticality safety practitioner.
b) Hold an advanced degree in a technical discipline. An additional 5 years of professional criticality safety experience may be substituted for an advanced degree.
c) Demonstrated leadership and expertise in criticality safety that will ensure the balance of expertise as outlined in Size and Composition of the CSSG. This is typically achieved by a combination of technical publications, leadership in the Nuclear Criticality Safety Division (NCSD) of the American Nuclear Society, teaching criticality safety related courses or participation on ANSI/ANS-8 Standards working groups.
d) Hold an active DOE Q Clearance.
e) Have their management concurrence for membership service.

Once appointed as a Current member, this status is maintained by active participation in CSSG activities.

On an annual basis, the NCSP Manager and CSSG Chair assess the participation level of each member and determine whether continued membership is appropriate.

At their earliest convenience, Current Members should indicate to the NCSP Manager and/or the CSSG Chair their intent to discontinue as a Current CSSG Member and either transition to Emeritus

Member status or resign from the CSSG (become a Past Member).

3) Selection of New Members

From time-to-time it will be necessary to replace Current members. In order to facilitate training of new members and provide a seamless transition, the following process should be used.

a) A candidate shall be identified for each vacancy as soon as practicable using the Protocol for Selecting a New Member (Section 4).
b) When filling an anticipated vacancy the CSSG Chair shall provide the NCSP Manager with the name of the member planning to leave and the estimated departure date. If possible, the successor should be appointed at least one year before the departing member leaves the CSSG. During any overlap period, both the outgoing member and his/her successor will be voting members. This situation may temporarily raise the number of Current members above ten.
c) In the case of an unanticipated vacancy, the new Current member candidate should be selected as soon as practicable using the Protocol for Selecting a New Member (Section 4).
d) The successor is appointed as a Current member of the CSSG by the NCSP Manager on a date agreed to by the CSSG Chair and the NCSP Manager. At that time the outgoing member relinquishes his/her Current status and either transitions to Emeritus Member status or resigns from the CSSG. Whenever possible, this transition should occur on the first day of the fiscal year.

4) Protocol for Selecting a New Member

a) The CSSG Chair shall form a nominating committee comprised of at least three Current members including the CSSG Deputy Chair as committee lead. The CSSG Chair functions as an ex-officio member of the nominating committee.
b) The CSSG Deputy Chair shall solicit the Current and Emeritus members for names and qualification packages for nominees.
c) The nominating committee shall identify the expertise needed to maintain/achieve the collective balance of expertise of the CSSG.
d) The nominating committee shall vet the nominee qualification packages based on the need and their qualifications and disseminate packages for all qualified nominees to the full CSSG.
e) The CSSG Deputy Chair shall convene a meeting (face-to-face or telecom) of the full CSSG to discuss qualified nominees. The need to maintain the collective balance of expertise of the CSSG shall be discussed.
f) The nominating committee shall select, and present to the Current membership, at least two candidates who meet or exceed the qualification requirements and who will maintain a collective balance of expertise among Current members.
g) Candidates shall have their management concurrence for membership service prior to the CSSG initiating the balloting process.
h) In the event of simultaneous vacancies requiring the selection of more than one new member, the nomination and balloting processes are to be separate and independent in time.
i) The Current members vote on the candidates presented by the nominating committee. A majority of votes is required for selection of a new member. The name and qualification package for the selected new member shall be forwarded to the NCSP Manager for review and approval.
    1. In the case of more than two nominees, multiple votes may be necessary to obtain a

majority vote.

2. In the case where the CSSG is deadlocked and cannot develop a majority vote, the names of the candidates and their qualification packages, along with the final vote result, shall be provided to the NCSP Manager for breaking the tie/deadlock.

j) The NCSP Manager appoints the new member.

5) Emeritus CSSG Member Status

Emeritus members are encouraged to continue to participate in CSSG activities (teleconference calls, assessments, reviews, meetings, etc.) but will not receive programmatic (i.e. level of effort) financial support from the NCSP. NCSP funding may be provided to Emeritus members for specific technical contributions on a case-by-case basis. Emeritus members are also free to solicit funds to support their participation in reviews, assessments, etc. from the organization (other than the NCSP) that has requested CSSG assistance.

6) Past Member Status

At some point CSSG Members, or Emeritus Members, may become unable to, or may choose to no longer, be 'actively' associated with the CSSG. At that time their name will be moved to the Past Member portion of the CSSG Member listing on the NCSP website, their contact information will be removed, and they will be removed from ongoing CSSG related communications.