

**CSSG Minutes**  
**2131 S. Centennial Drive, Rm 1190**  
**Aiken, SC**

Monday 09/21, 13:00 – 17:00

CSSG Present: Trumble, Kimball, Morman, Hayes, Erickson, Hicks, Brady-Raap, Heinrichs

CSSG Emeritus: Anderson

NCSP: McKamy

Preface: There is a transition of leadership at the end of September. This was the last CSSG meeting presided over by Fitz Trumble after serving as Chair for 3 years. His leadership during this time, as well as during his years as Deputy Chair, is greatly appreciated by all. As of October 1, David Erickson is the Chair and David Hayes is the Deputy Chair.

13:00 Welcome & Safety Share

Fitz Trumble  
Jerry McKamy

Safety: Make sure you get sleep. TMI, Chernobyl, Challenger, Exxon Valdez – all sleep related. Sleep is also health related (reduces focus, ability to control emotions, drowsy driving).

McKamy - CSSG needs to maintain focus on high level, stay out of the weeds. We need to help defend the discipline, and not just become a part of Nuclear Safety., etc.

13:30 Current Tasking status (2015-02 DOE-STD-3007 and 2015-03 Accident Analysis Handbook have separate discussions)

2014-02 Validation

Fitz Trumble

2014-02: Was CSSG approved in June, sent to McKamy, McKamy asked Skip Kahler (NDAG chair) to review, received Kahler comments, resolved. CSSG present at this meeting re-approved, Jerry McKamy approved, and it will be posted.

Previous draft shared with ANSI/ANS-8.24. ANSI/ANS-8.24 will be notified it has gone final once posted.

14:00 Potential future Taskings

Management of criticality accident alarm systems

Kevin Kimball

Crit alarms being treated as Active Engineered, and the alarm set points as safety limits – this is causing major problems. Issues have been raised: Calibration to fine precision (beyond capabilities of the instrument, minimum accident of concern treated as a safety limit, etc. Much attention on items that have ‘no’ value. Facility vs. emergency planning and IEZ boundary. Should CSSG provide some guidance to preclude these issues that provides some realism associated with CAAS. No good guidance exists.

CAAS is not ‘protecting’ compared to a CAM alarm – and yet a CAM is not considered “safety” equipment. The current draft of ANS-8.3 has removed some specificity. Both provide similar protection as an immediate evacuation alarm signal, but neither prevents, they are mitigators.

Another issue is potential misunderstanding/misusing of the monte carlo codes to calculate detector response down to the single millirem range which is well outside the realistic capabilities based on the modeling/computational uncertainties/detector calibrations. This may also be an opportunity to educate on the need, purpose and expectations. CSSG to investigate addition to crit section of the AA Handbook, and or comments related to ANS-8.3 (as that is currently under revision).

12 RAD (~50 REM) was to protect from potential health impacts to the workers. Issue is using a help to define a boundary. Ties in to proper selection/justification of the fission yield from an accident. Minimum Accident of Concern is ~2 orders of magnitude below dose of impact.

Clearly there is a difference in how CAAS is treated between DOE and NRC. NRC requires CAAS if the facility will exceed mass, but CAAS is not treated as an IROF. On the DOE side you can justify need for CAAS or not based on “trivial” risk, but if have CAAS then they are expected to meet full set of criteria (typically safety significant).

**Action: Kimball to draft tasking.**

Review/Discussion of Hands-on Training class

All

Wish to review Hands-on for some time, but new changes suggest now is time to review. CSSG has reviewed it in the past (when started). FY-16 is an opportunity to review the ‘new’ what and the how.

Class presentations are being revisited for FY-16, so this will be an opportune time. The class and 3007 need to align. 3007 is the ‘what’, not necessarily the how, NCSET Module 12 is good ‘how’.

CSSG will develop a tasking and team to review the 2-week course (at least the class room portion) in conjunction with the Feb 2016 class offering. Part of that tasking will look at the current infrastructure to maintain and present the class and provide suggestions as to if that can be made more efficient. The team should also suggest methods for continuing periodic reviews of the class by the CSSG. Trumble, Kimball, Brady-Raap expressed interest in being part of that tasking.

**Action: Trumble, Kimball, Brady-Raap choose lead and draft applicable tasking.**

STD-3009/CFR 830 Nuclear Safety overload on NCS

Jerry McKamy

CSSG to develop a survey tasking: Where have we been impacted by safety basis community/regulations, with no CS benefit and/or adverse impacts. What documents are causing the troubles?

10 CFR 830, STD-3009, STD-1020, STD-1027, ??? CFR 830 didn’t create problem, others are interpretations. Needs to identify adverse and/or cost without benefit.

Department has adopted zero risk for CS (and other safety disciplines)

10CFR830 focus on Worker, Facility Worker, Public – too broad and makes all too hard to separate.

Survey needs to identify the root cause. A holistic and consistent treatment of NCS across all DOE documents would be the goal. Get out of 830? Concept of idea is good, but next issue is how does it get fixed? Need to consider a tiered approach (don't let perfection get in the way of adequate)

Focus on the positive approach, vs the negative of the impact. Basic requirement is OK, it is the interpretation that is the issue.

CSSG position paper – 830, and where it has lead over the last 15 years. Damage to CS in the name of NS. Cost/benefit. 3009-2014 is a victory, how do we leverage that success? Is 3007 the DOE answer to the 3009 victory.

**Action: Hayes and Hicks will take a stab at drafting a tasking.**

CSSG review of Hanford WTP crit efforts

Jerry McKamy

CSSG will draft a tasking to provide review and advice as to the closure of items associated with CSSG recommendations also the Secretary of Energy directed team's report (not explicitly CSSG). EM as requested support 'from the CSSG', and need help to evaluate the closure of these items. Assessment should be targeted for December 2015 or January 2016.

**Action: Bob Wilson (draft the tasking), Mikey, Tom Reily(?), supported by a Fluid Dynamics SME(?)**

15:00 – 15:30 Break

15:30 Potential future taskings (cont.)

DNFSB – CSSG issues closed? What is process. Site/facility specific. Should be local DOE that has responsibility to confirm closure.

16:15 NCSP 5 Yr Plan vs Mission/Vision - are they aligned?

David Erickson

See summary of discussion under 0800 09/22 entry.

16:10 New Member Protocol (what can we do better)

Heinrichs/Hayes

As part of the last membership election, there was discussion of what the CSSG could do to better the membership selection process. Discussion at the meeting centered around ensuring discussion of candidates prior to election. We are a consensus body, conducted in accordance with charter, however if that process needs tweaking we can certainly support that. There was discussion about the ability to “abstain” from a vote if a member felt the candidates brought forward by the nominating committee were not “the best available” candidates. The current chair expressed his expectation that the candidates forwarded would be voted for. This is a small consensus group, so want all to participate, feels like may not be fully participating if members abstain.

Want to improve the process so that the need for abstain is minimized and all members feel they have a voice prior to the nominating selection. Options discussed included: Potential to up/down vote on each, then send to the committee?

Better process to address unexpected vacancy? Better process to address multiple vacancies? Better mechanism for input by the members so that they have all the information on the candidates.

Telephone interviews by those interested?

Discuss candidates that are unacceptable?

David Erickson took the action to provide a draft markup to the Membership policy based on the discussion.

16:36 LANL CSC needs external (CSSG preferred) member Hayes

Discussion of potential members consisted of contact with Bob Wilson or CSSG Emeritus (e.g., Davis Reed, Mike Westfall, Tom Reilly). Also suggested evaluation of potential for non-CSSG (CSSG candidates not selected for the CSSG vacancy) to be considered.

17:00 Adjourn

Tuesday 09/22, 08:00 – 17:00

0800 NCSP 5 Yr Plan vs Mission/Vision (cont) David Erickson

Costs appear approximately stable over last few, and upcoming few, years.

ND and AM, and IE are about the people. ~Fixed costs, fixed scope?

IP&D and T&E are 'underfunded', so not many options. Thought T&E courses would be mostly stable, but appears there is much change still ongoing. Would like to have other options (Multimedia NCSET, Simulator, etc.). Review of the 2-week course maintenance and delivery will be part of the tasking discussed on 9/21. Also worth a review of the 10 year goals for T&E as part of that review.

Look at options for 'deployed' training, vs all at the 2 wk course. Opportunities to bring specific, relevant, topics onsite.

Focus of classroom is to address the DOE centric issues that cannot be adequately provided for either by individual sites, short courses or universities.

IP&D needs additional focus of capturing knowledge of past issues, current 'pioneers'. Near-misses, accidents, other CS issues, recovery efforts. Used to be more home-grown, but with less longevity comes less knowledge. There was discussion about the need for another 1999 type workshop with NCS and Sr Managers of the Sites to discuss NCS program breakdowns and

review of impacts and near misses. This may be a way for NCSP to “stay ahead” of the next train wreck as opposed to “picking up the pieces”.

T&E: Address focus is on model vs on process. Focus on safe by design, appropriate classification of controls. Do not regulate proper safety away by over regulating, or punishing using the right control. We have maintained the capability, but not much in improving the competency.

T&E should also capture any ‘near miss’ information, e.g., Sellafield (about a year ago?), Rocky Flats, GE/Wilmington, others?

09:45 - 10:15 Break

10:15 3007 revision (discuss what the 'new' 3007 should address) Jerry Hicks

Keep it ‘big picture’, define scope, allow WG to address specific words. The CSSG came to a consensus opinion that 3007 needs to be retained.

AU appears to be making a fundamental shift to make standards more like national standards. Intros, shall/should/may, then guidance in appendices.

Much DOE imposed, outside of ANS-8, and 3007 is only CS vehicle available to keep control. Need to supplement ANS-8, highlight DOE, capture guidance to fit in SB world.

Adequate level of analysis to meet process analysis (discussion of parameter(s))  
Need agreement between DNFSB recommendations (93-2 and 97-2), ANS standards, O 420.1x – focus on the how.

3007 needs to create an appropriate requirements box for both the regulator and the contractor. Requirements get implemented as a ‘safe harbor’ type consideration.

Appendices are amplifying, not really guidance. May need two documents?

Are there items that DOE thinks needs to be performed above/beyond the ANS-8 requirements? Consequences and mitigation. Natural phenomena guidance – to meet DOE requirements. Expectations and then amplifying in appendices.

Reference NCSET on how to document eval?

Discussed each section/subsection of the standard with the following overarching suggestions to the writing group.

Section I – keep but may need some additional definitions (like control and limit)

Section II – keep – some modification necessary but more or less ok

Section III

A. Maybe move to an appendix – not part of process analysis

B. Keep same information somewhere in the standard

Section IV – use the words from 3009

- A. Some of this can come out – but need the specificity were not consistent with how SB would do the analysis
- B. Should simply state that since crit is not a public issue, the need for beyond design basis event discussion does not apply to crit

Section V

- A. Still need applicability statement but it may move under new format
- B. Not clear if this is still needed or if it can point back to the standards or the NCS Program document. May want to retain a hook to keeping evaluations current and up-to-date.

Other potential areas for consideration in 3007

What is a criticality evaluation and what does it accomplish

Address Fire

Address NPH and High Energy Events

Address Hazard Categorization (Facility level)

Discussion of Balanced Risk

**Action: Jerry H. to draft the justification of need for the standard revision (similar to an ANS PINS) and provide to the CSSG to review.** Expectation is Roberson as SES can sign it out. Jerry McKamy to be listed as “author”. This will be followed up by a CSSG tasking to form a writing group to lead the 3007 effort (likely 3 CSSG, 1 AU, 1 CSCT and potentially 1 EFCOG CS subgroup). Then provide to a “designated” review team, prior to it going to RevCom.

11:30 – 13:00 Lunch (on your own)

13:00 AA Handbook

Jerry Hicks

Need dose consequences for hazard categorization. Identify a reasonably bounding event, use to identify if threshold is crossed. If not, then OK, else hazard categorization (SC/SS) comes into play. Solution events are generally bounding. Consider duration and shutdown mechanisms.

Collocated Worker and/or the Public are the concerns. Point to 8.23 for solutions, slide rule for direct dose? Base on historical accidents for solids.

Remove existing intro paragraph and draw from 2010-02

- SC/SS
- CSSG 2010-02
- ANS-8.23
- 1e17 first spike, 1e19 total yield?
- Providing updated information since 3010 references information that has been outdated/withdrawn.

**Action: Jerry H. will draft revised paragraph for review of WG, then full CSSG.**

14:30 – 15:00 Break

15:00 Year in Review and Other Items

Fitz Trumble

Ties back to 'draft' strategic plan.

One of the goals was to regain visibility for what the CSSG has accomplished and how it remains active: History - retrospective perspective presented @ TPR, EFCOG (CS SAWG) ORACS, ICNC. Very positive feedback DOE and International. Need to keep sharing what CSSG has done, and what the CSSG can do. Planning to present at Winter ANS  
May need to continue to look for engagement with Sr. DOE management as well as with DNFSB staff/board members.

Need to continue to stress the balanced risk perspective and educate on the actual effects of a criticality accident.

CSSG re-established the member and leadership telecons – this was found to be useful and should be continued going forward. Great way to stay aligned with goals and priorities as well as maintaining accountability on actions and deliverables.

What has been accomplished in 2015:

- Helping CNS by repackaging some responses for UPF
- STD-1020 Handbook section on NCS drafted and submitted
- Validation with Limited Data issued
- AA Handbook has a path forward
- Plutonium Handbook drafted and submitted
- 2 face to face meetings

16:00 Adjourn