

EFCOG Engineering Practices Sub-Group (EPSG) Summer 2020 Extended Teleconference – June 24 Meeting Minutes

Attendance was not taken rigorously due to the large number of participants.

The major topics discussed are below and notes follow:

1. DOE Sponsor Presentations
2. Code of Record Best Practice – Chip Lagdon
3. Conduct of Engineering Best Practice - Julie Minton-Hughes
4. Site issues (5 minutes per site to briefly discuss the 'top 3 engineering challenges' at each location)
5. Officer elections for FY21
6. FY21 Annual Working Plan & Special Request (Procurement of Mission Critical Equip)
7. Plans for next meeting

1. DOE Sponsor Presentations

Brian Dinunno, who has assumed the AU-31 manager role upon the May retirement of Pranab Guha, discussed his perspective of the role of his organization. He then discussed the status of DOE documents of interest to the EPSG. DOE-STD-1195 on **safety instrumented systems** is in the comment resolution phase in REVCOM wherein most of the contention surrounds SIL levels. DOE-HDBK-1169-2003, **Nuclear Air Cleaning Handbook**, is being split into a short Standard that will capture DOE expectations beyond ASME AG-1 and a shorter handbook that has no "shall" statements. Ron Bellamy, AG-1 chair, has been engaged with the goal of having AG-1 cover more the future DOE STD cover less over time.

Brian went on to discuss plans to create a handbook that updates DOE/**EH-0545**, *Seismic Evaluation Procedure for Equipment in the US DOE Facilities*, March 1997. This has been used beyond EM at Y-12, LANL, Pantex, SRS, and elsewhere in the past. It's based on old EPRI data and the update will use newer EPRI data via an MOU with them. This should start in FY21.

Finally, the future of DOE-HDBK-1132-99(14), **Design Considerations** was discussed. Patrick Frias will lead a conversation about eliminate or update in the fall. In response to a Doug Freels question regarding CoE expectations and the slide decks previously given by EPSG and HQ, David Compton mentioned the idea of incorporating certain CoE concepts not otherwise captured in formal DOE documents into 1132, along with some from DOE G 420.1-1A, *Nonreactor Nuclear Safety Design Guide for use with DOE O 420.1C, Facility Safety*.

Garrett Smith, AU-30 Office of Nuclear Safety, presented his organization and views (ppt file attached to Outlook invitation). He reiterated the distinction between Standards suitable for contracting expectations and Handbooks that are not. In discussing and responding to a question on equivalencies and exemptions, he said that these numbered about 3-5/yr, were usually about fire protection, and often of finite duration with strong justification. DOE O 251.1D contains the process for guiding these up through the field and program offices to the CTA or CNS. He closed by confirming HQ support for sites participating on voluntary consensus standards committees and stressed the need to also involve early career personnel in such work.

Thanks to our sponsors for the taking the time to present to us and participate in the call.

2. Code of Record Best Practice – Chip Lagdon

Chip has been leading the resurrected EPSG effort to publish a document that addresses best practices for documenting the code of record for greenfield/major mod projects, for determining COR for smaller modifications to existing facilities, and for reconstitution. The draft he presented (attached to Outlook invitation) is close to finished technically, and he will accept feedback from his team and others until mid-July to support an end-of-July submission to the EFCOG Best Practices review/approval process. Perry D’Antonio suggested addition of acknowledgment of considerations for resolving competing approaches between some DOE expectations to use latest codes and standards (e.g., by 1066) and the citation of certain (often older) editions invoked by the IBC. (10CFR851 citation of older editions might also be mentioned.) Perry also suggested additional effort to capture and clarify differing expectations for nuclear and not, perhaps in tabular form.

3. Conduct of Engineering Best Practice - Julie Minton-Hughes

Julie has taken over leadership of this task and team from Cherri DeFigh-Price who is retiring in July. Julie presented the effort using slides (ppt file attached to Outlook invitation). The intent to create a generic training package for new engineers that addresses both mandate-driven CoE tasks (a matrix was produced) and those considered good engineering practice. Caller discussion included design authority and code official flowdown, including in non-nuclear areas. Challenges include overall graded approaches for non-nuclear and translating high-level NQA-1 expectations into clear expectations in design and other processes.

4. Site issues (5 minutes per site to briefly discuss the ‘top 3 engineering challenges’ at each location.

Portsmouth (Minton-Hughes):

- Staffing
 - Aging staff/Attrition
 - Inability to attract required disciplines (electrical, structural)
 - Insufficient number of staff
- Aging equipment/infrastructure and lack of available parts or suitable replacements
- Lack of maturity in project schedules
 - No single, integrated schedule
 - Minimal identification of engineering tasks and resources

MSA Hanford (Ryan): Staffing (EE, FP)...infrastructure upgrades including fiber optics...contract change this fall

Hanford Tanks Farms (Baide): Onboarding staff during COVID (incl. EE)...new knowledge mgmt./xfer procedure...new webpage "Tank Exchange Knowledge"; Stackoverflow software to capture Q&As entered by newer folks getting answers...tank closure contract change eventually...high COVID impact

WTP (Vo): Progressing with construction and testing ahead of cold and hot startup, COVID may impact schedule (TBD)

SWPF (Herring): Rolls Royce maintenance/parts replacement program data entry...3D models—whether and how to maintain along with 2D exports with insufficient REVIT-trained staff...knowledge loss

ORNL (Freels): New emergency services building completing...adding another chief engineer for SNS...R&D pressure system design, CM...has been using CoE slides from HQ and EPSG in ORNL training

LANL (Oruch):

- Cost-effective office-type building construction
 - Design-build in a state with limited teams experienced with site-specific eng and other site requirements
 - Piloting modular construction
 - Balancing lifecycle cost desires with initial cost
- Hiring and retention
- R&D pressure system design, CM (4000+ systems)

WIPP (Beeman): DevonWay for issues mgmt. and MEL (N3B Los Alamos also used/uses this)

UCOR/ETTP (Fadeley): K1220 D&D success...staffing (EEs)...D&D and exiting buildings, moving into others

5. Officer elections for FY21

Grant Ryan, MSA was elected EPSG Chair and Julie Minton-Hughes, Portsmouth, Vice Chair beginning by FY21. We wish to thank them for stepping up to serve and thank outgoing chair Brad Walker and VC Richard Williams as well.

6. FY21 Annual Working Plan & Special Request (Procurement of Mission Critical Equip)

Dan Baide is leading the EPSG team contributing to a new-in-2020 EFCOG initiative on **engineered procurement effectiveness**; a slide presentation covering the basics was used and a charter for the overall team that includes Procurement Eng, QA, and EPSG were attached to the Outlook invitation. This FY is largely devoted to accumulating, categorizing, and concentrating on existing documents that might help sites with such procurements. Next FY will likely select gaps in available guidance that can be filled with new best practices. It's likely that one or two such BPs will be EPSG-led and can be considered deliverables in FY21.

The Fire Protection Task Team led by Michael Cates, INL, is rededicating itself to coordinating/producing code-change review papers by FY21. They are also likely to produce one or

more best practices, perhaps including one related to INL's movement toward networked/addressable fire alarm systems and possibly one based on the recent flyer on hand sanitizer fire hazard considerations.

7. Plans for next meeting

EPSG historical practice was a face-to-face meeting spring and fall, alternating between HQ and sites. The last was DC in the spring of 2019; however, COVID concerns probably mean that in-person meetings should not be planned at this time. **As such, another all-hands telecom may be called for the Oct-Nov timeframe with leadership calls more frequently to help keep tasks on track.**

THO:to