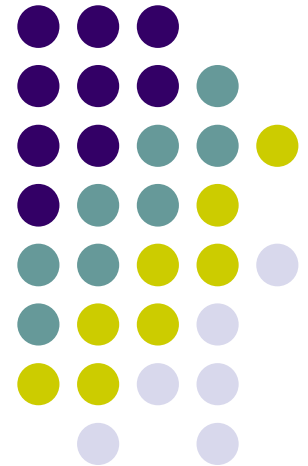


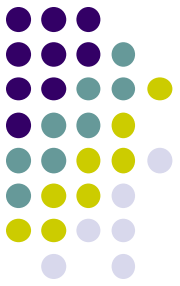
Safety Working Group FY2021 EFCOG Annual Meeting



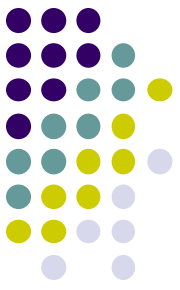
Jan Preston
Working Group Chair
June 9, 2021



Safety Working Group



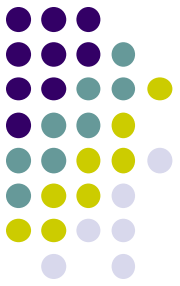
Chair	Jan Preston	Fluor
Vice-Chair	Patricia Allen	Savannah River Remediation
Secretary	Jonathan Fortkamp	Veolia Nuclear Solutions
DOE Liaison	Garrett Smith	Director, AU-30
EFCOG Sponsoring Directors	Robert Wilkinson	Hanford Mission Integration Solutions
	Jack Craig	Atkins



SWG Sub-Groups

Sub-Group	Chair	Affiliation
Engineering Practices	Grant Ryan	Hanford Mission Integration Solutions
Integrated Safety Management	Darlene Murdoch	Savannah River Nuclear Solutions
Nuclear & Facility Safety	Jeff Buczek	Orano
Quality Assurance	Vince Grosso	Mission Support and Test Services
Regulatory Enforcement	Kathy Brack Debbie Jenkins	Consolidated Nuclear Security Oak Ridge National Lab
Sustainability & Environment	Catherine Hurley	Argonne National Lab
Worker Safety & Health	Mary Flora	Savannah River Nuclear Solutions

Examples of SWG Support for EFCOG Strategic Initiatives

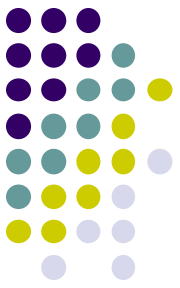


- Safe, secure, and effective operations
 - Update the EFCOG *Guide to Monitoring & Improving Safety Culture*, based on new content derived from the 2019 Safety Culture Workshop
 - Develop a DOE Laser Near Miss & Accidents Database.
- Ensuring long-term availability critical supply
 - Create a single list of approved NQA-1/ Commercial Grade suppliers for DOE-EM facilities.

Examples of SWG Support for EFCOG Strategic Initiatives

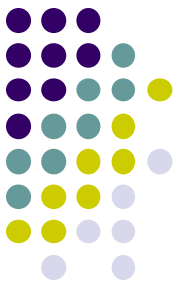


- Assuring projects completed on cost and schedule
 - Review and update (as needed) Work Planning & Control work document guidance
- Recruit, develop and maintain
 - Build consistent radiological worker training for the Complex
 - Supporting the Early Career Task Team
 - Support various DOE NTC course development efforts



FY20 Key Achievements

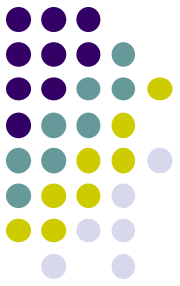
- Occupational Medicine Task Team benchmarked 32 clinical topics related to COVID-19; increased virtual meetings to 2-month due to the need for frequent discussions and medical consultations related to COVID-19
- Conducted complex-wide Laser Worker Survey
- Participated as SMEs in the DOE National Training Center's development and pilot of SBA-240, *Technical Safety Requirements Review*
- Supported the revision of DOE-HDBK-1163, *Integration of Hazard Analysis*
- Developed model for using a Contractor Assurance System (CAS) to identify DOE complex-wide issues
- Best Practice/Regulatory Summary for 10 CFR 835, *Occupational Radiation Protection*



FY20 Key Achievements (cont.)

- Three Lessons Learned on COVID-19 radiological response
- Best Practice on *Adoption of the 2020 NFPA 70*
- Best Practice on *Managing the Nuclear Facilities Code of Record*
- Best Practice on *Conduct of Engineering Training*
- White Paper on *Utilizing Technology to Reduce Human Error*
- COVID-19-focused Lessons Learned on relieving stress/anxiety in the workplace to reduce errors by employing Human Performance Improvement/physiological principles
- Guidance for DOE/Corporate Reviews of Contractor Assurance Systems
- Shared Best Practices for optimizing efficiency, safety and performance via a Smart Labs for National Labs Workshop
- Supported the first 100% virtual DOE Safety Culture Improvement Panel Annual Meeting

FY 21 Upcoming Focus Areas and Planned Achievements

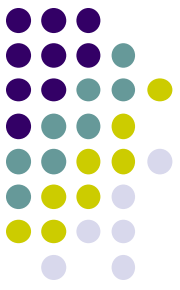


- Updated Work Planning & Control work document/package guidance
- Consolidated list of approved NQA-1/Commercial Grade suppliers for EM facilities
- Evaluate methods for performing issue investigations using Human Performance Improvement principles
- Develop a Best Practice on criticality safety calculations using Monte Carlo codes
- Develop a Best Practice to guide the effective integration of the Enforcement and Classified Information Security programs
- Pilot use of the Federal Energy Management Program Technical Resilience Navigator
- Develop a DOE Laser Near Miss & Accidents Database
- Develop guidelines for management and control of cloud-hosted software
- Develop a set of effective Quality Assurance metrics and methods
- Build consistent radiological worker training for use across the Complex
- Develop best practices for improved Industrial Hygiene/Occupational Medicine coordination

Coronavirus Impacts/ Lessons Learned



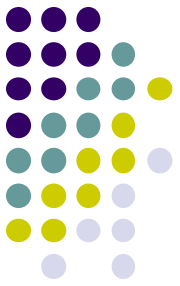
- A majority of planned SWG efforts adjusted well to remote collaboration; these effective practices will be sustained. Some initiatives are not on track.
- Some adjustments were needed, including since many SWG members' front-line mission support commitments increased:
 - Facilitating new PPE/sanitation regimes
 - Developing remote inspection/assessment strategies
 - Supporting work-from-home guidelines, remote ergonomics assessments, etc.
 - Establishing/negotiating approval/acceptance of return-to-work protocols
- The Human Factors Task Team produced a well-received Best Practice on managing the psychological impacts of COVID-19
- The Supplier Quality Task Team explored remote mechanisms for vendor qualification; the Master Approved Supplier database proved its value
- Individual SWG members contributed to EFCOG-led collaborations/initiatives/WebEx exchanges on telework, remote work personnel management policies, and other topics of interest to the Complex



Emerging Initiatives

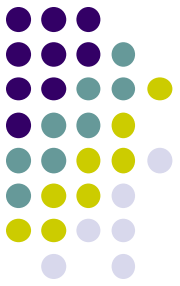
- We need to start defining “what does ‘after COVID’ look like?” – i.e., what criteria are to be used to reduce and eventually eliminate controls?
 - Community spread? (What happens if you get a “contagion cluster” anyway?)
 - Vaccination status? (How are privacy concerns managed?)
 - How do you deal with employees whose concerns can’t be resolved?
- From a sustainability perspective, how do companies determine how far to drive “return to work?”
- Which remote work and collaboration approaches do we keep and further enhance?

Issues



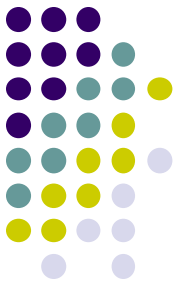
- An SWG group has proposed a standard EFCOG format for White Papers for consideration; one exists for Best Practices
 - After gaining concurrence across the SWG, we will ask the Board to support circulation for comment among the other Working Groups

Engineering Practices Subgroup



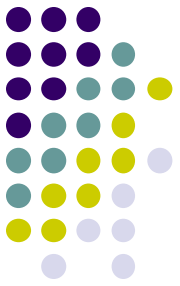
Develop Best Practice for implementing Configuration Management (CM) in a Building Information Model (BIM) environment.	This item is being discussed for the potential to develop a White Paper or Best Practice. No decision has been made whether this item will continue to be pursued by the task team or deleted.
Support multi-Subgroup/Task Team efforts in Engineered Procurement Effectiveness	Focused task in this area is being proposed related to the procurement of gloveboxes. A meeting is scheduled for 6/7/2021 to discuss interest and a path forward for this topic.
Fire Protection (EP-FP) Task Team	
Publish White Paper on fire extinguisher inspection periodicity.	ON TRACK
Support pending revision to DOE-STD-1066, Fire Protection	Task team is tracking with DOE's plans for update to DOE-STD-1066.

Integrated Safety Management Subgroup



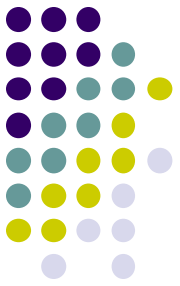
Contractor Assurance System (CAS) Task Team	
Evaluate Methods for Conducting a CAS Performance Analysis.	ON TRACK
Evaluate Methods for Performing Issue Investigations [Joint with Human Performance Improvement Task (HPI) Team].	ON TRACK
Review the status of the Hanford ICAS Process.	Provide potential applications recommendations by 9/30/21
Human Performance Improvement (HPI) Task Team	
Develop Best Practice: Using virtual capabilities or options for HPI application (to reduce errors).	COMPLETE: Uploaded to EFCOG HPI TT "Task" folder
Develop Best Practice: How to develop and utilize a "Portable HPI Lab platform" (parts list, build instructions, scenarios, etc.).	ON TRACK: Anticipated to be complete by the end of June 2021

Integrated Safety Management Subgroup (cont.)



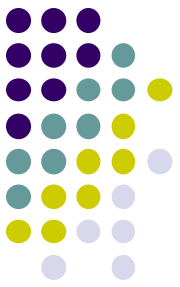
Safety Culture (SC) Task Team	
Update the EFCOG <i>Guide to Monitoring & Improving Safety Culture</i> , based on new content derived from the 2019 Safety Culture Workshop	COMPLETE
Explore safety culture metrics	Two organizations are participating, and the pilots are ongoing.
Explore methods for adapting and continuously improving safety culture in a virtual work environment	Information on best practices and initiatives piloted by sites in 2020 and 2021 is ongoing.
Work Planning & Control (WP&C) Task Team	
Identify a Lead for this Work Planning & Control (WP&C) Task Team	COMPLETE: Lead and Vice Lead identified and in place
Review and update WP&C Work Document Guidance	Review of the WP&C Work Document COMPLETE – no update recommended by Team

Nuclear & Facility Safety Subgroup



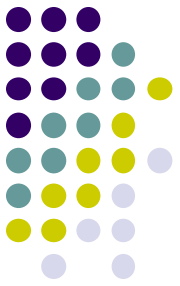
Accident Analysis (AA) Task Team	
Document new methods for calculating aircraft crash frequencies	Canceled due to ANS-2.36
Benchmark new pressurized spray leak methods within the DOE	Cancelled due to DOE report AU-30-RPT-02
Training development for DOE-HDBK-1224, <i>Hazard and Accident Analysis Handbook</i> .	Pending AU-30 evaluation of training
Continue SME support of DOE-HDBK-1224 AU-30 E-Learning technical topic	Pending AU-30 determining a path forward
Support biennial revision of DOE-HDBK-1224 with White Papers	ON TRACK
Criticality Safety (CS) Task Team	
Develop a Best Practice on criticality safety calculations using Monte Carlo codes.	LANL Staff is preparing a Best Practices paper through the ANS Nuclear Criticality Safety Division Education Committee
Develop a White Paper on fissile gram equivalent or plutonium gram equivalent, advantages and disadvantages	Scheduled to start next year with funding
Develop a guide for N&FS on how to effectively share lessons learned across the complex, specifically how similar events could happen at other sites.	Scheduled to start next year with funding
Develop a Best Practice using ANSI/ANS-8.19 as a guide.	COMPLETE

Nuclear & Facility Safety Subgroup (cont.)



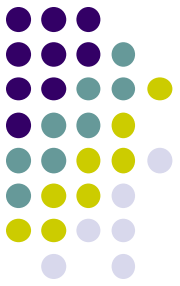
Early Career (EC) Task Team	
Implement formal mentoring program	ON TRACK
Complete fundamentals papers	VARIOUS; Some will slip into next FY
Complete a Best Practice on early career rotation programs	Will slip into next FY
Hazard Analysis (HA) Task Team	
Produce a Best Practice on the correct level of treatment of chemical hazards in the DSA and TSRs versus 10 CFR 851	Best Practice paper overcome by issuance of DOE-HDBK-1163-2020 and NNSA guidance.
White Paper on various terms used by criticality and others	IN PROCESS; at risk
Best Practice for management and control of less than HC-3 Nuclear Facilities	IN PROCESS; at risk
Best Practice on radiological deminimus values to support facility categorization	IN PROCESS; at risk
Safety Basis (SB) Task Team	
Write Guide on revised DSA annual update frequency implementation following the 10 CFR 830 rule change to DSA annual update requirements.	The guide is not anticipated to be published in time to develop the Best Practice paper by the end of this fiscal year.
Write Guide on revisions of DOE-STD-1027, <i>Hazard Categorization of DOE Nuclear Facilities</i> .	PRESENTED; PAPER IN PROCESS
White Paper on the Safety Basis portion of DOE-HDBK-1230-2019, <i>Commercial Grade Dedication Application Handbook</i>	PRESENTED; PAPER IN PROCESS
Best Practices: DSA Review Guidance, Moisture/Humidity Levels for Fires, Qualification Cards for Safety Analysts	IN PROCESS

Nuclear & Facility Safety Subgroup (cont.)



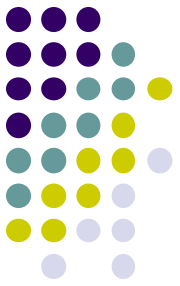
Unreviewed Safety Questions (USQ) Task Team	
Complete best practice paper on USQ awareness trainings done at Sandia.	COMPLETE
Complete Best Practice on implementation of the revised rule and DOE G 424.1-1C, <i>Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements</i>	The DOE guide is not anticipated to be published in time to develop the Best Practice paper by the end of this fiscal year.
Provide SME support for revision of the current DOE NTC USQ Training consistent with the revised rule and guide.	Supported DOE TC USQ Training development; pilot course on hold pending final comment resolution.
Complete Best Practice on PDSA change control (USQ-like) procedure based on questions in DOE-STD-1189, Integration of Safety in Design Process.	ON TRACK

Quality Assurance Subgroup



Policy and Procedures (P&P) Task Team	
Graded Approach	P&P Chair and Vice Chair both left suddenly
Guide for EFCOG White Paper Development & Release	Document in review cycle
Best Practices for QA Metrics and Methods	P&P Chair and Vice Chair both left suddenly
Procurement Engineering (PE) Task Team – NO STATUS	
Supply Chain (SC) Quality Task Team	
MSL Cost Avoidance	Under consideration
DOE EM Single Approved Supplier List	8 NNSA/7 EM/2 OOS/1 NE sites using MSL
Suspect/Counterfeit Prevention Improvement	Pending DOE document revisions
Expand NSE Supply Base	Under consideration
MSL User Guide Issued and Published	4 MSL User Guides published
HEPA Filter Test Facility (FTF) Rejections	ON HOLD
Video Assessments / Audits	DATA GATHERING STAGE
Software Quality Assurance (SQA) Task Team – NO STATUS	

Regulatory & Enforcement Subgroup



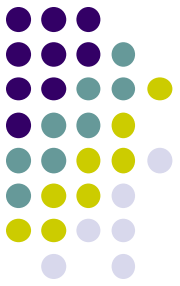
Build consensus within the contractor community on technical issues with impact to nuclear safety, worker safety & health, and security enforcement impact

Projects have been worked on individually, but there have been limited opportunities to meet/work collaboratively to reach consensus. Hope to meet deadlines.

Improve Enforcement Coordinator knowledge of the Enforcement process and expectation

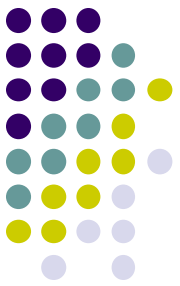
There have been numerous discussions with DOE, including communication of expectations on the Enforcement Process Overview (EPO) revisions. The changes to the EPO were substantive and have generated much discussion among the RESTG and Enforcement staff.

Sustainability & Environment Subgroup



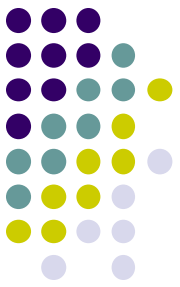
<p>Improve compliance with Guiding Principles for Sustainable Buildings across DOE Complex</p>	<p>COMPLETE. Virtual Workshop held on February 24th including more than 40 staff across 10 DOE sites. Best practices shared from ANL, PNNL, LBL, NREL and Sandia national labs.</p>
<p>Accelerate use of Smart Labs Toolkit and adoption of best practices across DOE complex.</p>	<p>COMPLETE. Virtual Workshop held on February 24th including more than 40 staff across 10 DOE sites. Best practices shared from ANL, PNNL, LBL, NREL and Sandia national labs.</p>
<p>Improve energy and water efficiency in High Performance Computing</p>	<p>ON-GOING. Cohort of DOE sites meet monthly (virtual) to share best practices and provide peer support to enable implementation of multi-disciplinary improvement teams and best practices at their sites.</p>

Sustainability & Environment Subgroup (cont.)



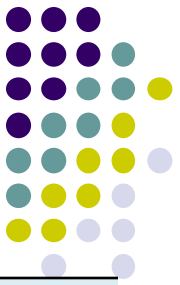
<p>Develop recommendations for AU-21's Sustainable Campus Initiative</p>	<p>On-going. Working group established and meeting monthly (virtually) since November 2020. Overall program framework recommended based on scan of other similar programs across federal and private sectors. Input session planned from SESG community on June 17th.</p>
<p>Organize "Virtual hack-a-thon" to accelerate energy analytics best practices for improving energy/water efficiency and facility operations.</p>	<p>On-going. Program introduced on December 17th at an SESG virtual meeting. Three-month "virtual hack-a-thon" formally launched in January. Monthly best practices meetings on-going and covering a variety of topics.</p>
<p>Complete a pilot of the use of the FEMP Technical Resilience Navigator at one DOE site and help support other DOE sites in leveraging the tool.</p>	<p>COMPLETE. PNNL completed a pilot on their site using the Technical Resilience Navigator. Best practices were presented in a webinar on February 18th.</p>

Worker Safety & Health Subgroup



Electrical Safety (ES) Task Team	
Develop & publish materials for May 2021 Electrical Safety Month	COMPLETE
Review and revise BP 194, DC Arc-flash Calculator for consistency with IEEE 1584-2018, Guide for Performing Arc Flash Calculations	ON TRACK
Best Practice for Capacitive System Grounding Sticks	ON TRACK
Industrial Hygiene and Safety (IH&S) Task Team	
Benchmark implementation of the new OSHA Silica Standards (continuation of FY19, #7.19)	AT RISK
Issue White Paper on lead contamination criteria: challenges; application to work planning & execution; sampling & monitoring approaches; and use of tiered levels (continuation of FY19, # 7.9)	AT RISK
Develop Physical Agents TLV Guidance for Heat Stress (continuation of FY19, # 7.6)	AT RISK
Develop Best Practices for Improved IH/Occ Med Coordination (continuation of FY19, # 7.7)	ON TRACK
Benchmark chemical storage and chemical storage training programs	ON TRACK
Provide input to DOE to update DOE-HDBK-1139 Chemical Management Volume 1	ON HOLD
Review and Provide Comments to Update DOE-HDBK-1163	ON TRACK

Worker Safety & Health Subgroup (cont.)



Laser Safety (LS) Task Team	
Benchmarking Report on High-Power Laser Operations	ON TRACK
Develop a DOE Laser Near Miss & Accidents Database	ON TRACK
Develop & Publish LSTG Performance Metrics	AT RISK
Benchmark additional control requirements from ANSI Z136.1-2014 and Revise "Guidance on Laser Safety Requirements"	ON TRACK
Benchmarking efforts for Class 1 laser enclosure requirements	ON TRACK
Benchmark laser protective eyewear (LPE)	AT RISK
Crosswalk of the ANSI Z136.1 to ANSI Z136.8	
Benchmark the impacts of COVID-19 for laser operations.	ON TRACK
Occupational Medicine (OM) Task Team	
White Paper regarding guidelines on the use of medical and recreational marijuana and cannabidiol (CBD) products at DOE	IN PROCESS
Best Practice on key medical self-assessments	ON TRACK
Develop a process for site-to-site peer reviews	REDIRECTION UNDER CONSIDERATION
Work with the IH&S Technical Task Team on the OSHA silica standards and benchmarking efforts	IN PROCESS
Work with HPI Task Team on psychological effects of COVID-19	Complexity may not allow time for completion
Radiation Protection (RP) Task Team	
recommendations to AU-11 on ICRP Lens of the Eye dose limits	ON TRACK
Assist the DOE National Training Center (NTC)	ON TRACK
Direction and support to "Air Monitoring Users Group" (AMUG)	ON TRACK
Present lessons learned presentations at EFCOG RP meetings	ON TRACK
Lessons learned from COVID-19 response	ON TRACK

